

# **Technological University Dublin** ARROW@TU Dublin

**Teaching Fellowships** 

**Teaching Fellowships** 

2014

# **Towards Entrepreneurship Learning Outcomes in Business** Education and Beyond: Next Practice? Design and Guidance

Anthony Paul Buckley Technological University Dublin, anthony.buckley@tudublin.ie

Follow this and additional works at: https://arrow.tudublin.ie/fellow



Part of the Higher Education Commons

### **Recommended Citation**

Buckley, A. (2015) Towards Entrepreneurial Learning Outcomes in Business Education and Beyond - Next Practice? Design & Guidance, Poster submission for DIT Teaching Fellowships 2013/14.

This Presentation is brought to you for free and open access by the Teaching Fellowships at ARROW@TU Dublin. It has been accepted for inclusion in Teaching Fellowships by an authorized administrator of ARROW@TU Dublin. For more information, please contact arrow.admin@tudublin.ie, aisling.coyne@tudublin.ie.



This work is licensed under a Creative Commons Attribution-Noncommercial-Share Alike 4.0 License

# 2 Towards entrepreneurship learning outcomes in business education and beyond – Next practice? Design and guidance

**Tony Buckley** 

School of Marketing
Contact: anthony.buckley@dit.ie

# **Abstract**

High growth economies can be differentiated from low growth economies by their high investment in knowledge, low knowledge filter and high levels of entrepreneurial capital. These states help create entrepreneurial capital by providing their citizens with opportunities to learn to be more enterprising in their pursuit of value creation and capture. What should be taught, how and what are the appropriate learning outcomes of entrepreneurship education and training (EET) then become the relevant questions. This paper reviews the relevant EET literature, assesses current thinking and practice and concludes, in the absence of empirical evidence in favour of a particular pedagogical approach, that a portfolio of practicebased methods is an appropriate approach to developing value-based learning outcomes at this time. These pedagogical approaches focus on students' attempts to create and capture value by experiencing, playing, observing, creating and reflective thinking, and not just understanding, knowing and talking as in more traditional approaches (Neck and Greene 2011). The paper concludes by suggesting a framework for assisting the leadership group in DIT in developing appropriate entrepreneurial learning outcomes at Institute, College, School, Programme and Module levels.

Key words: business creation, entrepreneurship learning outcomes, value creation

# Introduction

High and low growth regions or sovereign states can be differentiated in terms of their high investment in knowledge, low knowledge filter and high levels of entrepreneurial capital (Acs et al. 2004). Thus in regions where high levels of entrepreneurial capital have been created, entrepreneurial learning and behaviours diffuse across other value creating areas in society such as the social, community, family, education and government sectors. Baumol (1990) reminds us that "the entrepreneur is always with us" and that entrepreneurial thinking and behaviour is determined by the opportunity and incentive structures in place in the state. Entrepreneurship therefore can be productive, unproductive or destructive. Supportive entrepreneurial and innovation ecosystems (Edquist and Hommen 2008; Lundvall 2010) encourage citizens to be more enterprising by providing them with the opportunities to develop the knowledge, skills and abilities (KSAs) (Mincer 1958; Becker 1964) relevant to value discovery, creation, capture and evaluation. Individuals living in such a supportive entrepreneurial society can therefore learn to be more enterprising (Kuratko 2005; Drucker 2007). Garavan, Birdthistle, Cinnéide and Collet note in the context of Ireland that:

Business educators and policy-makers in Ireland have evolved beyond the myth that entrepreneurs are born not made. Given that Ireland's major growth is partially explained by the creation of new ventures, the question of whether it is possible to teach entrepreneurship has become redundant. The more pertinent question focuses on what should be taught and how entrepreneurship programmes should be structured and delivered to ensure a sufficient supply of entrepreneurs and the development of entrepreneurial thinking.

(Garavan et al. 2010: 243)

# **Outline of Project**

The College of Business in DIT, through its Entrepreneurship Educators Strategy Group (EESG 2013), undertook a review of entrepreneurially related learning and teaching in the College of Business. The group identified diverse and innovative approaches at module level, but less coherency in College and Programme level pedagogies underpinning entrepreneurship education. From this analysis it became apparent that knowledge gaps exist in the area of entrepreneurship learning outcomes in business education. It was suggested that this might be addressed through improved course design, support for staff and appropriate assessment criteria. The fellowship objective therefore was to develop shared entrepreneurship learning outcomes that might be achieved in every undergraduate and postgraduate programme in the College of Business.

The initial question addressed therefore is: In teaching entrepreneurship, what are we trying to achieve? Is it students that understand entrepreneurship and business start-up planning? (Module level learning outcome) and/or is it students that will have an entrepreneurial orientation in the broader economic and social contexts? (Institute, College, School and Programme level learning outcome). It will be argued that entrepreneurial module level outcomes are important for undergraduate students in building

fundamental skills and confidence. The more strategically important goal is for all students to develop entrepreneurial mindsets and entrepreneurial capabilities which can lead to entrepreneurial effectiveness (Quality Assurance Agency for Higher Education 2012). Graduates possessing these entrepreneurial attributes, it is further argued, will survive and thrive "in a world characterised by increasingly greater levels of uncertainty and unknowability" (Neck and Greene 011: 67–68). The output of this project is the development of appropriate learning outcomes which can contribute to the development of entrepreneurial behaviours, skills and attributes (entrepreneurial capital) in all graduates of the College of Business and then in other Colleges within the Institute. A second objective is to develop a guide for programme teams on how to incorporate these learning outcomes into their programmes. (This guide will be developed after the completion of the fellowship.)

# **Evaluation of the Project**

The project was evaluated by firstly reviewing the literature on entrepreneurial education outcomes to identify the current state of thinking in the area. The literature is also utilised to identify possible trends in "best" and "next" practice. This literature review was followed by attendance at the International Council for Small Business (ICSB) World Conference on Entrepreneurship in Dublin, held from the 11th to 14th June (www.icsb2014.org). The author, a member of the local organising committee, participated in sessions on the "Entrepreneurship Education" track and also attended relevant sessions at the pre-conference entrepreneurship policy day and consulted with key informants in the area.

# **Literature Review**

It is important to set the context for the literature review. DIT has developed its graduate attributes for enhanced employability (the 5 Es) which were approved by Academic Council in 2013 (DIT GA Working Group 2013). These are the graduate attributes which DIT ideally would like its graduates to have upon graduation from the Institute. These are graduates who are: ENGAGED, ENTERPRISING, ENQUIRY-BASED, EFFECTIVE and EXPERT. The relevant E for this paper is ENTERPRISING. See Figure 3.1 below.

Graduates who have the skills, knowledge and attributes needed to apply creative ideas and innovations and to find practical solutions.

Creative, motivated self-starters, curiosity, discovery, entrepreneurs, well-organised, self-managers, ethical, excellent communicators, career development skills.

Since 1992 DIT Hothouse entrepreneur development programme has assisted over 250 new firms to create 1,000 jobs and has licensed over 40 new technologies to multi-nationals and Irish SMEs.

Figure 3.1: DIT an enriched educational experience – enhancing employability

The desired graduate attributes for the enterprising graduate raises the question as to what "constructively aligned" curriculum design, learning and teaching methods and assessment strategies might be deployed to deliver an "enterprising" graduate. Using the lens of human capital theory (Mincer 1958; Becker 1964) – similarly used by the DIT "Cross-Institute" group above i.e. knowledge, skills, abilities/attributes (KSAs) – Martin, McNally and Kay (2013) undertook a meta-analytic review of the outcomes of 42 studies (N = 16,657) in the entrepreneurship education and training (EET) outcome domain. The authors were essentially examining the levels of human capital formation in entrepreneurship education. Previous work highlighted the lack of consistent evidence showing that EET helps to create more or better entrepreneurs. This study was the first quantitative review of the literature, and in the context of human capital theory, found that there is support for the value of EET and by extension entrepreneurship learning outcomes. However, it is the nature of the relationship between human capital development and EET that provides most interest for this paper. It was found that the relationship between EET and entrepreneurship outcomes is stronger for academic-focused EET interventions than for training-focused EET interventions. This indicates – once again by extension – the greater potential for deeper entrepreneurship learning outcomes in the academic setting. Whilst large unexplained variation exists and evidence of heterogeneity remains in many of the correlations, the study is significant nonetheless and sets a benchmark in the domain. Finally the Martin et al. study finds that many of the papers reviewed in the meta-analysis had low methodological rigor and that these studies tended to overstate the effects of EET. Only 6 of the 42 studies in the meta-analysis had randomised assignment.

The Martin et al. study, along with that of Unger et al. (2011) put the quality of the empirical evidence from this area in context and demonstrate that much (rigorous) research remains to be done in the area before more definitive conclusions might be drawn on the relative importance of various entrepreneurial learning outcomes. More worrying is the reliance placed by policy makers in Ireland and the UK in the past on the conclusions drawn from methodologically weak empirical studies. Many of these studies are exploratory in nature and therefore are unsuitable for generalising to wider or other populations. However the lack of rigor in the evidence assembled to date has not stopped policy makers and other interested stakeholders in the domain from producing guidelines on how HEI's might teach enterprise and entrepreneurship education. The Quality Assurance Agency for Higher Education (2012) in the UK for instance used a distinguished panel of academics and others representing their partner organisations (and the work of Gibb 2005) to produce "Guidance for UK Higher Education Providers" in enterprise and entrepreneurship education. Figure 3.2 below sets out the key inputs and expected outputs of the entrepreneurship education process.

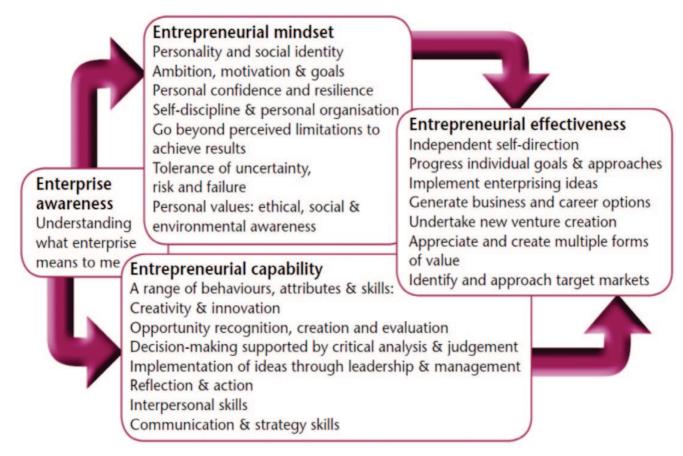


Figure 3.2: Enterprise and entrepreneurship education – Guidance for UK higher education providers Source: Quality Assurance Agency for Higher Education (2012)

This framework is an interesting conceptualisation of the proposed journey the student will take from initial enterprise awareness through developing her mindset and capabilities and on to entrepreneurial effectiveness. Indeed the desired entrepreneurial effectiveness attributes could be re-configured as desirable learning outcomes. Pittaway and Greene (2006; 2007) undertook a systematic literature review of the evidence in the UK. Their findings supported the view that EE has had an impact on student propensity and intentionality. However, it was unclear the extent to which such education impacts on the level of graduate entrepreneurship or whether it enables graduates to become more effective entrepreneurs. The findings also highlight a lack of consensus on what entrepreneurship education actually is when implemented in practice. Pittaway and Greene further highlight the many pedagogic contradictions in the domain. Their unavoidable conclusion is that there is much research to be done in tracking student careers and employers' demand for "enterprise skills". Indeed further research is also required to begin to understand how different approaches to entrepreneurship education and training achieve different things (European Commission 2008). Martin et al. (2013) broadly come to the similar conclusions in their meta-analysis on the need for more rigorous research into the impact of specific pedagogical approaches and intervening variables.

In Ireland similar analyses/reviews have been undertaken ostensibly to establish the state of play in the entrepreneurship education space (Cooney and Murray 2008; HETAC 2009; Garavan et al. 2010). Key findings of the HETAC report for instance show that:

- Of undergraduate students surveyed 78% expressed an interest in starting their own business at some point in future.
- Entrepreneurship education is not readily available to all students, is fragmented and delivered mainly only in business schools.
- There is a lack of communication about, and visibility of, entrepreneurial supports and policies.
- · There is insufficient joined-up thinking between institutions, academics and practitioners.
- · Despite some initiatives, industry engagement with the third-level sector is neither widespread nor intensive in Ireland.
- Entrepreneurship education is under-resourced and lacks an articulated strategic policy.
- Higher education institutions need to adopt a framework to embed entrepreneurship education across all disciplines.
- Experiential learning, not theory-based lectures, will most benefit entrepreneurial students.

Garavan et al. (2010: 240–241) outline the characteristics of entrepreneurship education in Ireland to similar effect, highlighting the lack of coherence across the domain. The lack of coherence can be partially explained by the absence of a national entrepreneurship policy and by extension a national entrepreneurship education policy (European Commission 2012). This despite repeated calls for both (Cooney 2014).

HETAC (2009) also suggests in Section 3 a list of the possible learning outcomes as follows.

- · Entrepreneurial behaviour, attitudes and skill development
- · Creating empathy with the entrepreneurial life world
- Key entrepreneurial values
- · Motivation and entrepreneurship career
- Understanding of process of business entry and tasks
- · Generic entrepreneurship competences
- · Key minimum business how-to
- · Managing relationships

This is a generic list of possible outcomes which are further subdivided in the report into areas relating to the headingsabove. It is not immediately obvious from the listing what should take priority and unlike the Quality Assurance Agency for Higher Education (2012) report above, there appears to be little attempt to link the learning outcomes to the entrepreneurial mindset, capabilities or indeed enterprise awareness. Nevertheless tools and templates are provided to help the educator with the learning outcomes under the eight key themes identified.

Indeed the ICSB conference papers (2014) in the education track also provided some insights on practice from a variety of countries around the world; however, most papers did not focus on entrepreneurial learning outcomes per se with the majority of the empirical papers covering relatively short periods of time. Most papers were also of an exploratory nature reflecting the difficulties researchers have in accessing appropriate longitudinal datasets.

In sum it appears that the development of learning outcomes in the entrepreneurship education and training area appears to have made little progress over recent years other than to provide lists of desirable outcomes (developed intuitively or based on research lacking rigor) but the extant literature offers, in the main, little theoretical or practical guidance on how these outcomes might be achieved through curriculum design and learning and teaching methodologies. Accessing the state of play in the entrepreneurship education domain, Neck and Greene (2011) reverted to first principles and reevaluated how entrepreneurship education is taught at third level and how it might be taught in future given the increasing complex, uncertain and unknowable world inhabited by students. Taking an educator's perspective, the authors state that the responsibilities of entrepreneurship educators is to develop the discovery, reasoning and implementation skills of their students so that they can survive and thrive in uncertain and unknowable environments. Entrepreneurship is about future opportunities but many of the tools and techniques used are not fit for purpose.

Many techniques are more suited for benign and predictable environments as experienced in the past. Entrepreneurship is a multidisciplinary field – it requires knowledge of many areas by the teacher but the end goal in all cases is value creation and capture. Entrepreneurship is therefore a key engine for creating personal, economic and social value in society.

Neck and Greene therefore propose a new paradigm but not a new pedagogy for teaching in a new world. It is a conceptual approach to teaching entrepreneurship as a METHOD. This method goes beyond mere understanding, knowing and talking as in previous approaches and embraces using, applying and acting. In a word, practice becomes more important. In developing the new framework Neck and Greene were heavily influenced by effectuation principles (Sarasvathy 2008). This new approach has major implications then for learning outcomes. Table 3.1 contrasts this new approach with more traditional approaches.

	Entrepreneur World	Process World	Cognition World	Method World
World of	Heroes, myths and personality profiling	Planning and prediction	Thinking and doing	Value creation
Focus	Traits, nature v nurture	New venture creation	Decision-making to engage in Entrepreneurial activity	Portfolio of techniques to practice Entrepreneurship
Level of Analysis	Entrepreneur	Firm	Entrepreneur & Team	Entrepreneur, Team & Firm
Primary Pedagogy	Business basics, lectures, exams, assessment	Cases, business plans, business modelling	Cases, simulations, scripting	Serious games, observation, practice, reflection, co-curricular, design
Language	Locus of control, Risk taking, propensity, tolerance for ambiguity, need for achievement	Hockey stick, projections, capital markets, growth, resource allocation, performance	Expert scripts, heuristics & decision- makings, Schema, mental models, knowledge structures	Practice, self-knowledge, fit, action, do-learn, co-creation, create opportunities, expect & embrace failure
Pedagogical Implications	Description	Prediction	Decision	Action

Table 3.1: Known worlds and new frontiers
Source: Neck and Greene (2011)

The method approach applies equally to novice and expert and thus applies across student populations. It is inclusive and therefore success is both idiosyncratic and multidimensional. It requires continuous practice; do—learn and not learn—do as in traditional approaches. Reflective practice thus becomes increasingly important for learning outcomes. The method proposed is therefore suitable for unpredictable environments. The teacher is empowered to experiment with a pedagogical portfolio that emphasises diverse tools and techniques (Table 3.2). These approaches are broken down into four discrete primary pedagogies: Starting businesses (practice — experiencing/feeling); Serious games and simulations (play); Designbased learning (create, co-create) and Reflective practice (deep learning, see Marton 1975) i.e. reflection-on-practice, reflection-in-practice (Schön 1987). Expected learning outcomes then are based on the students' attempts to create value by experiencing, playing, observing, creating and thinking. Each learning outcome depends on the pedagogical approaches utilised. Learning outcomes can be stated in tangible terms. These learning outcomes can be delivered by improved Programme/Course design, support for staff and appropriate value-based assessment criteria. Table 3.3 shows how this might be applied to an entire Master's Programme in DIT.

# **Recommendations to DIT**

Based on the secondary and primary research conducted for this project and the authors' experience of programme management and teaching on entrepreneurial programmes, the following recommendations are made to DIT.

- 1. The knowledge, skills and aptitudes developed in the student in entrepreneurial education and training (EET) is a fundamental building block of economic growth in the small open state. It is therefore recommended that DIT take a lead as the entrepreneurial institute and make it a requirement that all level 6–9 courses, not only in the College of Business, but across the Institute adopt the METHOD approach to teaching Entrepreneurship at firstly College, School and then Programme level before the approach is adopted at module level.
- 2. To champion the above approach it is recommended that the Institute appoint a senior Institute manager with domain expertise to work with the Colleges to embed the entrepreneurship education agenda across the Colleges.
- 3. It is recommended that the Institute first pilot the approach in one school in the College of Business, Arts and Tourism, Engineering and Built Environment, Science and Health so that treatment and control groups can be established to allow rigorous longitudinal research to be undertaken during the embedding phase.
- 4. It is finally suggested that the output of the above-mentioned research would provide the HEA with clear evidence that DIT/TU4D is an entrepreneurial university in the making.

Year Of Programme	Primary Pedagogies/Tools/Techniques Do-Learn-Think	Programme design – Curriculum development	Support for Staff  - Learning & Teaching methodology	Assessment criteria – Formative, Summative	Learning outcomes
1	Experiencing/practice/feeling Starting businesses/Projects	Business Plan Charity Project Consultancy project	Requires teachers with business planning and consultancy skills	Dragons Den Funds raised Delivering on brief	Value Discovery, Value creation, Value capture, Value evaluation Implementation Failure
1	Playing Playing Serious games and simulations	Not on curriculum	No staff using tool/technique on programme	Competitions Win/loose	Embrace/accept success and failure
1	Observing Field trips/Experiments/field research	Consultancy project Thesis	Requires teachers with consultancy and research KSAs	Quality of research	Evaluation of value Contributing to value creation
1	Design based learning Creating, co-creating	Product Development module	Requires teachers with innovation management, product development KSAs	Innovativeness of new market offering	Value discovery Value creation
1	1 Reflective practice Thinking		Requires teachers with critical and reflective thinking skills.	Reflective journals Feedback on performance – formative/summative Presentations Thesis grade/Viva	Reflection on practice Reflection in practice

Note: M.Sc(Business & Enrtrepreneurship) in the School of Marketing, College of Business, DIT is used for illustrative purposes. The elements in the programme which go beyond understanding, knowing and talking and embrace using, applying and acting. It is important to remember that the first semester in particular contains the foundational building blocks which allow for the the more practice orientated modules on the programme.

Table 3.2: Entrepreneurship learning outcome matrix at programme level in Institute/College/School

### **Future Research**

The entrepreneurship education and training domain is an area requiring ongoing rigorous research to allow researchers to investigate the relationship between various pedagogical approaches, learning outcomes and subsequent career entrepreneurial performance. This will require robust methodological approaches, adequate samples, control groups and longitudinal data for tracking student trajectories. This is a fertile research area for student researchers at undergraduate, postgraduate and doctoral levels.

At the ICSB conference held in Dublin on the 11–14 June 2014, Jenny McDonnell, Lecturer in the College of Business and the author identified a tracking index IPE-GESt (developed for the international GESt study) for the entrepreneurial propensity of University students by Ruda et al. (2014) which was presented by one of the authors Dr Rubén Ascúa. This index may allow us to join an international consortium for tracking student entrepreneurial intentions. This would be the first step in tracking students through their career trajectory.

# References

- Acs, Z.J., Audretsch, D.B., Braunerhjelm, P. and Carlsson, B. (2004) "The missing link: the knowledge filter and entrepreneurship in endogenous growth", CEPR Discussion paper no. 4783, London: Centre for Economic Policy Research.
- Becker, G.S. (1964) *Human Capital: A Theoretical Analysis with Special Reference to Education*, National Bureau for Economic Research, New York and London: Columbia University Press.
- Baumol, W.J. (1996) "Entrepreneurship: productive, unproductive, and destructive", Journal of Business Venturing, 11 (1): 3–22.
- Cooney, T. (2014) "Why Ireland needs an entrepreneurship education policy"; available at http://thomascooney.ie/whyireland-needs-an-entrepreneurship-education-policy (last accessed September 2014).
- Cooney, T. and Murray, T. (2008) "Entrepreneurship education in the third-level sector in Ireland", Report for the Institute of Minority Entrepreneurship, DIT; available online at <a href="http://arrow.dit.ie/cgi/viewcontent.cgi?article=1001&context=imerep">http://arrow.dit.ie/cgi/viewcontent.cgi?article=1001&context=imerep</a> (last accessed September 2014).
- DIT GA Working Group (2013) Presentation to Academic Council, 13 November.
- Drucker, P.F. (2007) Innovation and Entrepreneurship: Practice and Principles, Abingdon and New York: Routledge.
- Edquist, C. and Hommen, L. (eds) (2008) *Small Country Innovation Systems: Globalization, Change and Policy in Asia and Europe*, Cheltenham: Edward Elgar Publishing.
- EESG (2013) Entrepreneurship Education Strategy Group Report for College of Business, DIT.
- European Commission (2008) "Entrepreneurship in Higher Education, Especially within Non-business Studies", European Commission, Brussels.
- European Commission (2012) Entrepreneurship Education at School in Europe National Strategies, Curricula and Learning Outcomes, European Commission, Brussels.
- Garavan, T., Birdthistle, N., Cinnéide, B.Ó. and Collet, C. (2010) "Entrepreneurship education in the Republic of Ireland: context, opportunities and challenges", in Fayolle, A. (ed.) *Handbook of Research in Entrepreneurship Education, Vol. 3, International Perspectives*, Cheltenham: Edward Elgar Publishing, pp. 225–247.
- Gibb, A (2005) "Towards the entrepreneurial university: entrepreneurship education as a lever for change", Policy Paper for the National Council for Graduate Entrepreneurship (NCGE) UK.
- HETAC (2009) "Draft guidelines and key criteria for the review of enterprise and entrepreneurship education"; available at http://ieeponline.com/wp-content/uploads/2013/11/EEE-Draft-guidelines-B-W-for-issue-prior-to-conference.pdf (last accessed September 2014).
- Kuratko, D.F. (2005) "The emergence of entrepreneurship education: development, trends, and challenges", *Entrepreneurship Theory and Practice*, 29 (5): 577–598.
- Lundvall, B.Å. (ed.) (2010) National Systems of Innovation: Toward a Theory of Innovation and Interactive Learning (Vol. 2), London and New York:

  Anthem Press.
- Martin, B.C., McNally, J.J. and Kay, M.J. (2013) "Examining the formation of human capital in entrepreneurship: a metaanalysis of entrepreneurship education outcomes", *Journal of Business Venturing*, 28 (2): 211–224.
- Marton, F. (1975) "What does it take to learn?" In Entwistle, N.J., and Hounsell, D. (eds) *How Students Learn*, Institute for Research and Development in Post-Compulsory Education, University of Lancaster.
- Mincer, J. (1958) "Investment in human capital and personal income distribution", Journal of Political Economy: 281–302.
- Neck, H.M. and Greene, P.G. (2011) "Entrepreneurship education: known worlds and new frontiers", *Journal of Small Business Management*, 49 (1): 55–70.
- Pittaway, L. and Cope, J. (2006) "Entrepreneurship education: a systematic review of the evidence", National Council for Graduate Entrepreneurship, Working Paper no. 002/2006.
- Pittaway, L. and Cope, J. (2007) "Entrepreneurship education a systematic review of the evidence", *International Small Business Journal*, 25 (5): 479–510.
- Quality Assurance Agency for Higher Education (2012) Enterprise and Entrepreneurship Education: Guidance for UK Higher Education Providers.

  The UK Quality Code for Higher Education is available at <a href="https://www.qaa.ac.uk/">www.qaa.ac.uk/</a> assuringstandardsandquality/quality-code.

- Ruda, W., Ascúa, R., Martin, T. and Danko, B. (2014) "IPE-GESt Index of the entrepreneurial propensity of university students", 59th World Conference of International Council for Small Business, Entrepreneurship and Sustainability, 11–14 June, 2014, Dublin, Ireland.
- Sarasvathy, S.D. (2008) Effectuation: Elements of Entrepreneurial Expertise, Cheltenham: Edward Elgar Publishing.
- Schön, D.A. (1987) Educating the Reflective Practitioner: Toward a New Design for Teaching and Learning in the Professions, San Francisco: Jossey-Bass.
- Unger, J.M., Rauch, A., Frese, M. and Rosenbusch, N. (2011) "Human capital and entrepreneurial success: a meta-analytical review", *Journal of Business Venturing*, 26 (3): 341–358.