



Using E-Learning Technologies to Bridge the Gap Between International Entrepreneurship Education and Practice

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Abstract. This paper seeks to address the emergent needs of international entrepreneurship scholars and in doing so it aims to identify the needs of international firms operating in culturally dynamic market spaces. The paper conceptually deals with evolution within the disciplines associated with international entrepreneurship and in particular the development of E-learning technologies to deliver entrepreneurship education. Adopting innovative technology that allows for flexible learning is not only critical for educational institutions in striving to cope with changes in the education landscape but also an effective means for international firms to transfer entrepreneurial knowledge. Thus, E-learning offers a means of bridging the gap between entrepreneurship education and practice.

Keywords: e-learning, entrepreneurship education.

1. Introduction

The provision of entrepreneurship education has changed significantly over the last forty years (Carter and Jones-Evans 2006). There is now clear recognition of the value of entrepreneurs in all walks of life not purely associated with large businesses – the classical entrepreneurial context – but also social enterprise including hobby groups, and the promotion of oneself and one's ideas within an existing organisation or institution (See Gibb 2005). Therefore, it is not surprising management education has shifted away from traditional approaches to entrepreneurship education and capitalised on web-based opportunities through the Internet. According to Campbell (2000) business education has become increasingly reliant upon new technologies. Likewise, international firms have demanded changes in distribution channels for transferring entrepreneurial knowledge where E-learning provides a means of encouraging technology innovative behaviour. This paper questions how these paradigm shifts have impacted upon scholars and international firms.

In particular, the focus of this research examines the effectiveness of web-based provision of international entrepreneurship education and the evolution occurring within entrepreneurship programmes and in Business Schools. The area of growth in E-learning technologies is explored and its adoption by international

firms analysed. The perceptions of educators and scholars of international entrepreneurship education are examined and the implications for international firms documented. The data for this study is derived from an international entrepreneurship programme delivered solely through the medium of E-learning. The programme is the International Entrepreneurship E-module offered as part of the wider Postgraduate Diploma or Masters in International Business at the University of Ulster in Northern Ireland.

1.2. Evolution of Entrepreneurship Programmes

In the historical context, Vesper and Gartner (1997) evaluated the provision of entrepreneurship programmes globally throughout the 1990s to discover only one-third of Business Schools provided entrepreneurship education. A decade later, a systematic review of entrepreneurship education by Pittaway and Cope (2007) sought to find out the extent to which entrepreneurship education impacts on the level of graduate entrepreneurship or whether it enables graduates to become more effective entrepreneurs. Pittaway and Cope's (2007) study found a lack of consensus firstly on what entrepreneurship actually is in practice and secondly on the extent to which education influences intentionality for enterprise. The straight forward conclusion would be that there remains a certain amount of confusion as to what entrepreneurship programmes can and should realistically offer the learner. Pfeffer and Fong (2002) commended Business Schools as one of the major success stories of higher education over the last 30 years but nevertheless cautioned that they are at a crossroads in their development or worse suffer from an identity crisis. Nevertheless Business Schools are not out on their own. Coulson-Thomas (2000) suggested the same about corporate learning, pointing out that industrial and commercial training failed to develop intrapreneurs and to equip people to win business in competitive situations. Failing to bring the real business world and global thinking into the 'classroom' was one major criticism of commercial training.

In defending the Business Schools, Thomas (2007) who provides a comprehensive PEST analysis of management education cited the quest for academic rigour and pressure from governments and regulatory bodies as a factor in stagnating Business Schools. For example in the UK, the Quality Assurance Agency (QAA) with its focus on teaching quality and the Research Assessment Exercise (RAE) with its focus on research quality has aggravated the problem and if anything served to increase the gap between teaching and research with practical relevance straddling somewhere between the two twin hurdles. It seems the conflicting nature of university education has spurned Business Schools to think differently and act entrepreneurially. This has led to the onset of small-scale enterprises in specialist areas that can take on dramatically different organisational forms including externally-funded centres of excellence. These

Centres not only specialise in core and elective programmes for students but also for practicing entrepreneurs, generally under the guise of management or adult learning. Many countries have gone further with the creation of new institutions that are typically open or virtual universities that can serve either national or international markets. This shift has engaged new stakeholders such as digital media and information communications which are increasingly showing an interest in playing a role as education providers. For instance, a number of BBC education and e-university partnerships exist at local and regional level with the aim of developing resource-rich materials for the E-University (HEFCE 2001).

Whilst Business Schools have continued to experience a higher demand for enterprise and entrepreneurship education internationally over the past two decades, mounting student debt and increased competition from the high growth economies of China and India can act as limiting factors for the undergraduate market, where affordability is a key issue. Learner demographics are changing towards an older age bracket which requires relevant professional education (Thomas 2007). It has been suggested that professional education necessitates flexible curricula that seeks to produce graduates with emerging business skills. Professional education should include:

1. Cross-cultural/multinational based content that takes into consideration global competitive regulations
2. Interaction within cross-functional teams through team-based practices
3. Space for customisation of content – think global, act local
4. A greater emphasis on experiential learning
5. Consideration for lifelong learning.

If we broadly accept the above range of inputs can create emergent entrepreneurial thinkers, educators are challenged to use their own creativity to design new and improved blended learning programmes. The authors of this paper are suggesting that E-learning constitutes one legitimate option for positively contributing to practically-oriented entrepreneurship education. Moreover, if we consider universities to be major providers of continuing education, they should offer a range of lifelong learning opportunities spanning from post-doctoral studies to those who missed out on earlier opportunities for study (Osborne and Oberski 2004). Of equal importance is to increase the range of learning opportunities that are socially inclusive including E-learning to enable all learners to reach their potential.

1.3. Growth of E-Learning Technology

In his study of management education, Thomas (2007) states: “Student demand patterns and the emergence of new learning technologies will require schools to pay increasing attention to flexible learning and the blend between face-to-face campus style learning and interactive e-learning technologies” (Thomas 2007, p10). Osborne and Oberski (2004) serve a reminder that the use of communication and information technologies has the potential to reach a much wider student body, irrespective of geographical and/or social implications. There has also been a growing body of research indicating that E-learning courses are as effective if not *more* effective when compared to “in-seats” courses at university level (See Hiltz and Goldman 2005).

On the definition, E-learning activity is also known as the virtual learning environment (VLE) and is generally characterised by:

1. A repository of dedicated learning content.
2. Delivery mode is completely web-based through a secure virtual learning environment known as the distance-learning option. Note: the term has become somewhat redundant due to newer and high-speed technologies that remove the notion of distance.
3. Students are not/rarely required to attend the university ‘brick and mortar’ setting.
4. The course allows for self-directed learning with formative assessment.
5. E-learners are required to interact with E-peers and an E-tutor to discuss tasks and view points on subject matter.
6. The technology enables E-learners to interact live through synchronous chat rooms available for discourse within a secure learning environment.

Within an E-learning environment, learners can engage in Internet-based assignments, access knowledge portals and become involved in asynchronous (message posting) and synchronous (online chat rooms, instant messaging) discussions and view online materials through a host of media including video streaming and wiki. The E-learning environment allows for real-time education. There is also rich learning resource material considering the rapid growth of electronic libraries and databases external to the environment – and perhaps this lends itself to being described as a self-study programme. When the growth in academic, business and personal technology translates to the education sector it

has resulted in a changing role for faculty staff and for the learner. On a cautionary note, the majority of education providers have *traditionally* used web-based technology as an information resource only which in itself can inhibit learner perceptions towards its usage and value (Hegarty 2006). It has also been used within the entrepreneurship domain as an “additional and appropriate technology resource”, for example the TE3 Project (Technology Enhanced Enterprise Education) in the UK (See Smith 2007).

Kuratko (2005, p.588) warns that “entrepreneurship cannot be a field that succumbs to stagnation. It must recognise and apply technologies in the educational setting”. Yet, in a historical examination of entrepreneurship-type programmes in the USA, a figure as low as 21% has been cited by Solomon et al. (2002) for internet-based distance learning compared to countries such as Iceland where government enforced the right to distance learning education resulting in 80% of Icelanders having access to the Internet (Osborne and Oberski 2004). Therefore whilst European government have made strides to better integrate E-learning within the education sector through E-learning initiatives (See European Commission 2000), it remains unclear as to what is the extent of the provision of E-learning courses in entrepreneurship education. Nevertheless, education providers are clear on the need to educate graduates not for traditional sectors of manufacturing or service but for the science and knowledge-based perspective (Thomas 2007). Hence the need to link business and science faculties – as in the case at the University of Ulster – to provide entrepreneurship training for graduates from strong technical and scientific backgrounds whose ideas if properly implemented may themselves generate significant technological innovation and change.

1.4. International Firms and Technologically Innovative Behaviour

Does General Electric (GE) have the right model? When General Electric initiated their Crotonville campus in 1956, also termed ‘Harvard on the Hudson’, they sought to provide a development and training powerhouse, a ‘bricks and mortar’ environment for strengthening GE’s corporate talent which launched the idea of the corporate university (www.ge.com). Others have since commented on the value of communications and information technologies in increasing the role of multinational corporations in education (Osborne and Oberski 2004). They hint that some universities have entered into international collaborations in order to develop global markets, citing partnerships between universities from Australia, Canada, South Africa and Sweden. For instance the Intercontinental Masters Programme in Adult Learning and Global Change (Osborne and Oberski 2004, pp. 419-20 or visit: http://www.edst.educ.ubc.ca/programs/mea/ALGC_Program.pdf). It is obvious that the two traditional learning environments for entrepreneurship; the university and the organisation (Leitch and Harrison

1999) are not as distinctly removed from each other as they have been in the past which can be contributed to new technologies and the application of technologically innovative behaviour within the education sector and international firms.

The role of web-based technologies in the development of global start-up companies is widely acknowledged by both academia and practitioners (Thomas *et al.* 2008). However its importance in the growth of international firms including employee personal training and development cannot be omitted. E-learning is considered a viable option for international firms seeking to improve the skills base of the workforce which can have indirect impacts for example upon employee turnover. Ramsey (2003) cites one of the key benefits for international firms might be how learning relationships can develop into an online-linked, global knowledge community or community of practice. Thomas (2007) implies that companies require candidates to possess complex interactive skills, that is the ability to link things together and frame complex problems. This enhanced judgemental mind-set could be gained through E-learning activity where an employee is engaging in complex interactive tasks with E-peers outside the organisation. Hoare (2006) refers to a global manager as having a global mindset that embraces cultural sensitivity and integrity. In this information age, entrepreneurial individuals need to understand the opportunities being created by the greater availability and accessibility of information and knowledge and secondly how to identify and exploit market opportunities for distinctive information and knowledge products and services. The education sector thus needs to be able to satisfy the needs of employers and employees. SMEs require a dynamic and focussed response from Universities that in many ways mirrors their operational practices. In the UK, Higher Education Institutions are being directed by the Higher Education Funding Council for England (HEFCE) five-year strategy to reach out to the business community to encourage knowledge transfer and ensure relevance of programmes of teaching and research to the needs of employers and the economy (HEFCE 2001). From the employee perspective, social factors such as two-income families and lifestyle could also result in increased demand for innovative forms of life-long learning according to Thomas (2007).

2. Case Background

For over a decade, the University of Ulster has heavily promoted the use of web-based learning with many undergraduate and postgraduate programmes offered through the medium of E-learning. The University of Ulster, through Campus One, its virtual campus, has been cited as one of the world's top e-learning institutions (in the top five) and identified by WebCT as one of only twelve global "lighthouse institutions of E-learning". Under investigation in this study is the

Postgraduate Diploma or Masters in International Business by E-Learning which is an innovative programme offered by the Department of International Business within Ulster Business School. The programme offers the latest methods of on-line teaching and learning and seeks to address the needs of industry and the service sector in today's fast-changing world. The programme should enable students to acquire a knowledge and understanding of the political, social and cultural aspects of different trade blocs, particularly the European Union, Asia and the USA.

The programme is designed to provide a coherent academic progression for students who will explore the overall environment in which international business takes place, before focusing on management issues in international firms. The distance-learning nature of the course aims to enhance student leadership and management skills. By studying and interacting with E-peers and E-tutors in an international setting, a network of contacts and links to local knowledge on an international stage is created. This Masters degree is delivered through directed tutor and peer learning. Guidance and support is provided throughout the entire programme, in addition to technical assistance.

In terms of the course structure, each E-module is worth 15 credit points or 3 credit hours, with the Dissertation/Research Project, attracting 60 credit points or 12 credit hours. The modules offered include: International Business Environment, International Management, Business Research Methods, Leadership and HRM in the global context, International Marketing, Electronic business, Global Policy and Strategy, International Entrepreneurship and the Dissertation/Research project for those wishing to proceed to a Masters Qualification.

3. Methods

For the purposes of this investigation, the qualitative data is derived solely from two consecutive cohorts selecting the E-module in International Business which is offered through a secure learning environment using WebCT and WebCT Vista technology – both are relatively similar technology platforms, WebCT Vista is the newer version of WebCT. In terms of the questions asked of the E-tutor and E-learner they included open-ended and dichotomous questions. The questions can be categorised into four broad thematic areas which include importance of novel design for entrepreneurship education, importance of entrepreneurial skill set, importance of ICT and importance of the learning environment. E-tutors were introduced to the topic of novel course design by asking them about how the course compared to e-tutoring on other e-modules or courses of study in this subject area. These investigations sought to understand the role of E-tutor in co-creating module content and their confidence in using the technology. Through these discussions E-tutors gave their views on both intrinsic and extrinsic factors

to E-learning. These factors included the appropriateness of module design for this module of study; how they felt students coped with (or receptiveness to) the course design/technology for this E-module; and how the design affected learning relationships and the learning environment. E-learners were also introduced to the topic of novel course design by asking them about how the course compared to other e-modules or courses of study. They were asked for their views of the design and delivery of this E-module and the appropriateness of the design for this module of study. Through this questioning they were made to think of the skills developed through this module and how they interacted online with their E-peers and e-tutor. Amongst the areas investigated with the E-learners were issues relating to competency in ICT, managing learning, managing learning relationships and non-learning commitments such as work or family.

Note, in addition to the formal responses received from E-tutor and E-learners, the learning environment itself provided E-learners and E-tutors throughout the duration of the E-module with a number of means to report their views and experiences of the E-module via interaction between E-tutor and E-learner and that between E-learner and E-learner. Therefore rich data of an informal nature could also be drawn from the virtual learning environment. To illustrate these included postings and mail communications within the E-learning environment. Also taken into account was feedback from key stakeholders involved in this module. These stakeholders included the course director, module co-ordinator, university technical staff and E-learning support team.

Given the relatively small size of the two cohorts there were insufficient cases to analyse the data using sophisticated software systems such as SPSS. Considering the closeness of the researchers to the research subjects the data was analysed manually and with basic software databases such as Excel. Readers should be aware that the methodological approach used is thought to provide a reflection particularly upon the postgraduate student market and/or non-traditional learner. With the greying of the MBA market, that is, attracting from the older age bracket (Hoare 2006) the data provides many insights into how to efficiently design an inclusive E-learning environment for scholars of International Business. Rather than compare E-learning with traditional Business School offerings, the study aims to better inform entrepreneurship education and in turn the practice in international firms.

3.1. Sample Profile

The research participants include two cohorts of postgraduate students enrolled on the twelve-week International Entrepreneurship E-module. The first cohort (n=10) were E-learners during the academic year 2006/07 and the second cohort (n=11) studied the following year when the University upgraded from using WebCT to WebCT Vista technology. There is no formal requirement for any of

the E-learners to attend the University setting, in this respect the course is fully delivered through distance learning. The participants have undertaken a series of web-based modules throughout the programme; however the International Entrepreneurship module is significantly different in design and for this reason is offered in the second semester of the academic year.

The E-module in International Entrepreneurship is designed broadly around three central components. Firstly the operating environment for entrepreneurship and small business ownership, secondly the various types of individuals starting and managing the firm and thirdly the various functions which have to be managed within the venture for it to survive and grow. Whilst there is a core text and specified additional readings, the innovative module design offers learners the opportunity to present, direct and manage the course content by having ownership of particular topics in international business. These topics range from defining the small business, role of government, innovation and the small firm, growth and development, the entrepreneurial process, psychology of the entrepreneur, family entrepreneurship, social entrepreneurship, technical entrepreneurship, leadership and management, networking, marketing, finance, franchising and internationalisation. E-learners can assign themselves to particular topics according to their work interests and/or desire for improvement in particular areas. Not only are learners directly involved in framing the material for discussion they are actively managing the discussion of certain topics thus providing the students with opportunities for subject breadth and depth. Since there are a number of compulsory topics to be covered and a logical structure to the presentation of the majority topics, E-learners also have to take into consideration their personal/work schedule to allow for stronger commitment to manage discussions during the week of the selected discussion topic. Thus E-learners work through a series of activities that contribute to individual learning, but as importantly, frame the course materials. This E-module differs from all the others in the programme because the E-learners have direct input into the core content – the interpretation of the content happens in real-time, rather than students interpreting the online content that has already been posted by the E-tutor. The E-learners collaborate to present the core content, and they undertake individual work that will contribute to developing a collaborative piece of research on topics that are of interest to the group. These learning experiences are shared throughout the duration of the E-module.

Both cohorts of E-learners originate from diverse cultural backgrounds including India, Africa, and different parts of Europe, the UK and Ireland. They tend to currently work in corporate environments and have had at least three years experience within different sectors although some work in non-for profit organisations, there were two entrepreneurs, one in each cohort. They are mixed in gender and are mostly mature learners.

4. Results

4.1. Bridging the Gap

The findings from this study challenge the long-standing assumptions about the relationship between place, time and learning. With E-learning technologies students do not have to attend a particular place or indeed they do not have to learn at particular times or in particular ways. E-learning relies on a different sort of social interaction to those that underpin traditional university courses. To begin, the Masters in International Business E-module in International Entrepreneurship is comprehensively analysed against the requirements of such professional education as detailed above (p.3) and the QAA subject benchmarks for Master's programmes. The resulting matrix illustrates that novel design can be applied to the subject of International Entrepreneurship without compromising learner and educator needs. In order to bridge the gap between novel design for professional education and the realities of assuring quality teaching practice, Figure 1 presents an analysis of how Ulster's E-module in International Entrepreneurship satisfies firstly academic notions of what such programmes should contain (Essential learning criteria) and secondly QAA Masters Degree benchmarks in business and management. Note E-learning was removed from essential learning criteria as it is a component of the QAA benchmark and the benchmark, "Enhancement of enterprise for life skills" is also a University of Ulster benchmark [See Figure 1].

The matrix reveals that even with the novel design, the E-module in International Entrepreneurship remains academically rigorous. Whilst E-learners share their career development during the introductory parts, there is relatively little opportunity *throughout* the E-module for E-learners to critically reflect on their own professional career development and apply new knowledge in this context. The E-module has a weak score for knowledge and understanding of global competitive regulations in relation to enterprise for life skills which is reflective of the type of E-learner.

The majority of E-learners work in corporate environments. The medium rating for global competitive regulations against three benchmarks is further evidence of the role and function of E-learners within their place of work. Whilst Figure 1 shows there is space for customisation within the programme, there is not always sufficient space for sharing local examples in relation to the complex issues being discussed which can inhibit experiential learning.

Figure 1: Matrix for Masters International Entrepreneurship E-Module

<i>Essential learning criteria</i>	<i>QAA Masters Degree benchmark</i>				
	<i>Advanced study of organisations and their changing macro-environment</i>	<i>Professional career development</i>	<i>Developing ability to apply knowledge and understanding to complex issues</i>	<i>Enhancement of lifelong learning skills including E-learning capability</i>	<i>Enhancement of enterprise for life skills – personal and social contexts</i>
<i>Cross-cultural context</i>	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
<i>Multi-national-based</i>	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
<i>Global competitive regulations</i>	✓✓✓	✓✓	✓✓	✓✓	✓
<i>Interaction within cross-functional teams</i>	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
<i>Team exercises</i>	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
<i>Space for customisation</i>	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
<i>Space for localisation</i>	✓✓	✓	✓✓	✓✓✓	✓✓✓
<i>Experiential learning</i>	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓

KEY: Strong ✓✓✓ Medium ✓✓ Weak ✓

4.2. E-Module Design and Delivery

The E-module in International Entrepreneurship has a number of unique features when compared to the general characteristics of E-modules. As standard, E-learning modules have a repository of learning content dedicated by the university, however, the E-module in International Entrepreneurship relies on one E-learner each week preparing information on a designated topic and presenting the topic to their E-peers – every E-peer has interpreted the topic from the same starting text.

It is compulsory for all E-learners to contribute to the discussions as they see fit, in a self-directed manner in their own time and following the guidance of E-peers and E-tutor. For the purposes of group assessment E-learners can interact in

discussion areas that are private to the members of the group. Whilst tools were available for synchronous chat, E-learners in both cohorts tended to rely on the mail tool to communicate informally on course matters with their E-peers and/or E-tutor. The E-learners appeared to have an increased level of ongoing self-awareness, that is, awareness of their knowledge and skills was not restricted to the periods of formative assessment which is reflective of course design and delivery. Firstly in terms of design, E-learners are assessed on topic presentation and management of discussion. For the discussion to be managed relies on E-peers contributing, this forms a sense of obligation to E-peers that mimics that of work colleagues in real-life work situations. Secondly, with respect to delivery, E-learners must interact with each other – encourage participation, show agreement, constructively criticise comments and exchange views within the virtual space which can also be translated into the work environment especially relevant to electronic mail. E-learners communicated the ‘chosen’ topic through PowerPoint presentations also improving their presentation skills. As well as improving communication skills, E-learners increased familiarity with learning technologies thereby improving their IT skills.

In summary, within a rich virtual workspace, the E-learners under examination have demonstrated an ability to communicate ideas, collaborate effectively with their E-peers and E-tutors, exchange views and develop new knowledge and share experiences. The E-module thus provides E-learners with an opportunity to practice online engagement in international relationships.

4.3. Views of E-Learning

The research investigations proved that this E-module was a truly novel design for the University according to E-tutors. It was also novel for E-learners, many of whom had studied in other institutions in Europe. From the E-tutor perspective there are varied accounts of how novel course design can increase workload. Some, often less experienced E-tutors, thought workload was less because they did not have to interpret existing content or “do it by the book”. Other E-tutors insisted that the idea that, ‘it was less onerous to co-create course content’ was a myth. In fact co-creating content was a means to better involve E-tutors in module delivery. Often university procedures dictate that E-tutors will only have a limited involvement in what is learnt and instead their work will be focussed on how course content is interpreted. The advantage of co-creating the content together appeared to be linked to how the interpretation happens in real-time. A perceived disadvantage to novel design for the E-tutor was the need to be able to effectively resolve technical issues. The main advantage of the novel design applied in this course was the increased level of interaction and reliance on everyone involved in the e-learning environment. This dependency could manifest itself in very different ways from an E-peer sharing an example from their company

background, to another E-learner swapping a topic for discussion to allow someone to devote more time to their work/family during a particular week, or to an E-tutor pitching in with additional support when necessary. There is general agreement between E-tutors and E-learners that novel design increases 'experiential learning potential' for both E-tutor and E-learner.

In summarising the experience of E-learners in both cohorts, they most frequently admitted that the course was "daunting at first" given how structurally different it was to previous self-directed modules on the International Business programme. Yet, whilst it was "demanding and challenging" by the end of the E-module the E-learners cited the benefits of having more control over their own learning. A number of individual comments were made, they include:

I learnt more in this module than any other because of the way this course was structured, I had a role in devising the course content.

I was better able to progress with this module, it can be very off-putting when there are reams of information online that you must read before you think of doing anything else – by the time I've read everything and made sure I understand it, I've very little time left for critical thinking!

The way I unexpectedly coped with this module has spurred me on to think about doing the Masters dissertation – now that is success!

E-learners appreciated they could learn more about the subject of International Entrepreneurship, yet at the same time develop communication and presentation skills, as one termed it "a value for money module". In terms of the skills they thought they developed these tended to be broadly related to the E-module outcomes. As importantly some E-learners perceived that they could continue this educational experience in the workplace environment. Note that participation in e-learning can be seriously affected by technical difficulties and in some instances there were issues that were resolved by the help of the University technical team, however this relied on E-learners being confident in using the technology. When asked about their opinion on how the E-tutor coped with the technology and with operating this E-module, the feedback was highly positive which demonstrates that E-learners were engaged in learning within a dynamic space and understood the challenges of interacting and managing others in a virtual learning environment (because at times throughout the course they acted in an E-mentoring role). Of interest to course managers and directors, was the finding that E-learners provided valuable constructive criticism for this E-module, in effect they became skilled in critical analysis due to their in-depth understanding of (and involvement in) their postgraduate learning programme.

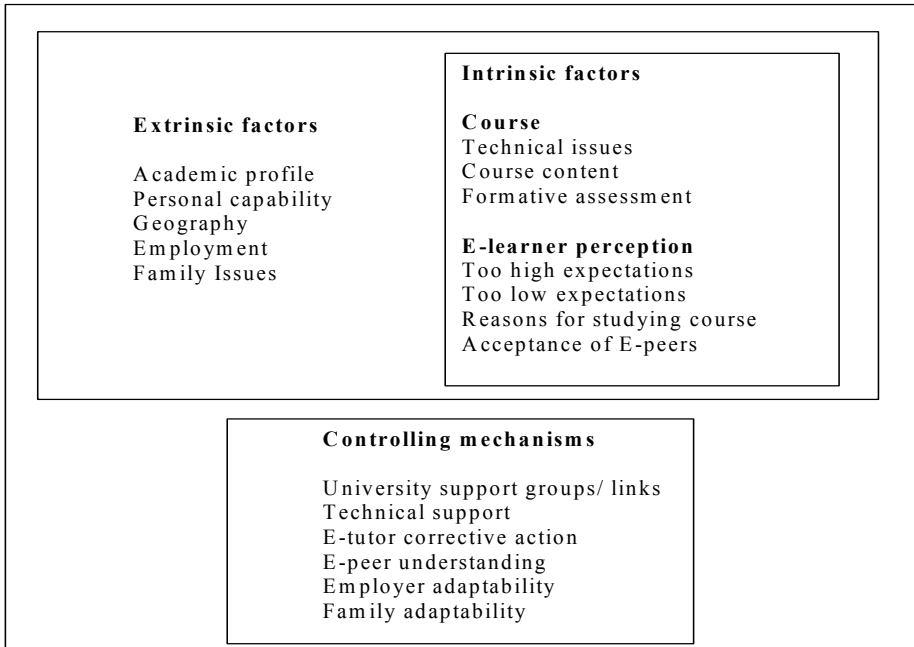
From the perspective of E-tutors, they valued the "engulfment" (rather than engagement) with learning technologies and the relevant pedagogies were seen as an added value outcome. E-tutors were aware they do not work in isolation but rather within a teaching team that enables students to register, gain the necessary

resources (for example, core textbook and readings), resolve technical issues, and ask questions about the wider programme. The findings show how important it is to have time and space for mature learners to dedicate their thoughts to the benefits of the new information received and how it applies to their operating environment. E-tutors noted that E-learners must have sufficient time to complete the course which often relies heavily on having favourable working conditions. E-learners themselves need to have realistic aspirations about the demands of the course and how they will manage them. E-learner commitment and motivation are subjective elements and are influenced by a diversity of factors not least individual learner profile, personal circumstances and the perceptions and experiences of the learner. Appropriate course design is crucial but goes hand in hand with appropriate E-tutor management. When E-learners are given more control, this is likely to necessitate the E-tutor to become more involved in a facilitator and/or team role. It is crucial that educators are trained in the use of new information technology platforms in order to maximise the learning potential by using a variety of web-based tools to accommodate individual learning style and learning preferences.

4.4. What Do We Know of the E-Learning Preferences and Outcomes?

At the outset, E-learners communicated their E-learning preferences to their E-peers and E-tutor. E-learning preferences tended to be associated with the particular time zone, workloads and personal commitments. This openness of E-learning preferences assisted in establishing good working relationships for interactive tasks. With respect to outcomes of E-learning as a mode of delivery, E-learners felt they developed a greater understanding of the concepts and subject matter using the “open model”. From investigating the data for both cohorts of E-learners, accommodating E-learner preferences is critical to the success of E-learning [See Figure 2]. The participants rated E-module success higher if they could choose their preferred E-module, choosing ownership for particular topics of content was an added bonus in the International Entrepreneurship E-module. The “hassle factor” associated with the technology was also critical, the less technical glitches experienced the better. Also intrinsically related to the success of E-learning, was the experience of conflict during periods of formative assessment. The fewer conflicts experienced and the relative ease associated with assessments impacted upon success as shown in Figure 2. E-learners need to be well-briefed for a self-directed method of delivery in advance of choosing to study the programme to avoid misconceptions (too high or low expectations) and to ensure E-learners understand the nature of the programme and its qualification. This study revealed that both E-learners and E-tutors felt “the people make the programme” hence it is vitally important to create an open learning environment where everyone can accept anyone’s ideas for discussion.

Figure 2: Classification of factors impacting upon the success of E-learning



In terms of the extrinsic factors as shown in Figure 2, the university should play a role in examining the academic profile of E-learners to ensure they would benefit from a self-directed programme. For instance, this was critical to identifying levels of support necessary at the dissertation stage. By the same token potential candidates should liaise with the university so the team can alleviate any concerns about personal capability to succeed in an E-learning programme. In this study, E-learners were geographically dispersed, yet the range of time zones made it much easier to steadily progress the work tasks because E-learners were not vying for space at the same time. This being said, broadband connections were poor in some of the developing countries in which the E-learners were studying which self-admittedly affected their ability to contribute and the means in which they contributed; this situation required management by E-tutors to ensure E-peer acceptance.

The model used in the E-module in International Entrepreneurship allows E-learners to choose/swop topics according to employment and family commitments. It is important to take these into consideration as they indirectly impact upon the success of E-learning. The university has a number of control mechanisms including subject (E-library) and technical (virtual campus) support groups, E-learners need to be made aware of their existence at the outset so they can be pro-active when faced with a problem. E-tutors also need to be *au fait* with

the role and function of each grouping to better advise E-learners and perhaps take corrective action. Within the realms of the E-module environment, E-tutors may often need to take private and/or public corrective action to ensure information is being interpreted correctly, E-learners are able to apply this new information and there is an inclusive E-learning environment so that E-peer understanding can develop. Finally, as highlighted in Figure 2, employers and family members also provide a controlling mechanism for the success of the E-learner.

5. Concluding Implications

Universities and Higher Education Institutions are undergoing a phenomenal amount of change driven by various stakeholders. Students are no longer drawn from solely the relative affluent and homogenous social background; they now have hugely varied academic profiles. This requires a multitude of pedagogic approaches and allows for different pathways into Higher Education and frames lifelong learning in the social realities of accommodating learning within other commitments such as work and family. Technology is central to enabling this change but it is not the only determining factor, politics economics and efficiency gains continue to drive the need for E-learning. E-learning technologies have become readily available, costs are decreasing and ease of use has improved, all of which cancel out the argument for out-dated, standardised in-house corporate training programmes. In addition, societal factors such as high unemployment need for re-training and multi-skilling, demand for low cost education and training programmes and shortages of funded university places attribute to the demand for E-Learning alternatives.

Not only is the way we teach different but there are implications for what we teach in international entrepreneurship. Awarding E-learners (1) more control of their own individual learning and (2) more responsibility for devising course content has been an enjoyable educational experience that can be continued in the workplace. The study implies international entrepreneurship education through E-learning can be effective for modern international firms if appropriately designed and managed. Alexander (2001) serves a reminder that Universities must afford time and effort to prepare students for the e-learning experience, especially for undergraduates. More could be achieved by broadening the role of university researches to close the gap between research and teaching pedagogy – rigour versus relevance. Business Schools or endowed entrepreneurship centres of excellence risk allowing alternative providers and/or competitors the opportunity to compete for the same niche markets by not attempting to close the gap which can be facilitated by:

1. Maximising on the potential of E-learning technologies.

2. Maximising the potential for globally-relevant perspectives to international entrepreneurship education programmes.

Very little attention has been devoted to role of E-learning in less formal learning contexts and its role in occupational learning. Couslon-Thomas (2000) suggested that the working environment in itself with its corporate cultures constrains innovation and creativity and both “the physical and social contexts observed greatly inhibit the spontaneous creation of new knowledge, value and enterprises” (p.85). The role of multinational corporations in controlling curricula necessitates monitoring to ensure firstly economic competitiveness does not threaten social inclusion and interaction and secondly to ensure this privatisation attempt does not produce a narrow version of the curricula. Instead, organisations should become incubators of fresh *intrapreneurial* activity leading to additional intellectual capital. With greater emphasis on the importance of the supply chain rather than individual companies in delivering added value, there is a need to integrate networking opportunities and co-operate in a shared learning environment along and across supply chains. Hence the need for company IT and business strategies to be developed and implemented simultaneously to ensure an alignment that produces a strategic fit for the organisation (See Smaczny 2001). There is an onus on professional and representative institutes and associations to examine how prepared their members are for operation in the knowledge economy and provide the necessary support to enable them to cope better. Whilst it is not suggested that E-learning would replace traditional methods, there remains resistance to E-learning which needs to be resolved. It needs to be resolved to facilitate greater access to E-learning opportunities and to produce networked opportunities that maximise the potential of virtual learning technologies for education providers and practicing entrepreneurial firms.

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