Blended Learning in Entrepreneurship Education in the Asia-Pacific: A Grounded Theory Approach to Entrepreneurship Pedagogy

*Professor Howard H. Frederick

Unitec Business School, Auckland, New Zealand
hfrederick@unitec.ac.nz


ABSTRACT

Using a grounded theory approach, this pedagogical study explores “What are the key content areas and pedagogical interventions around which to build a blended learning method for Generation Y (also known as the Net Generation) entrepreneurship students (as opposed to other business students)?” The study uses a variety of “information-rich cases” and presents the argument that entrepreneurs learn differently from other students. The author develops the Etappe Method of Training Entrepreneurs, a blended learning approach for the technology-savvy generation under the motto “Teaching is best done online and learning is best done in the classroom”. Drawing upon the theory of experiential learning as concretised by learning styles inventories, this learning method provides entrepreneurs, in their unique teachable moments, with active and concrete pedagogical interventions that can be enhanced through a blended learning environment of online and face-to-face modalities leading them step-by-step through deepening learning in the theory, process and practice of entrepreneurship. In conclusion, the author presents suggestions for further research that can verify this emerging theory in an empirical fashion.

Keywords: entrepreneurship; international business education, learning environment/ climate

GROWTH OF ENTREPRENEURSHIP EDUCATION

Starting and operating a new small business involves considerable risk and effort to overcome obstacles. Education (particularly tertiary education) and entrepreneurial activity are highly correlated. Reynolds et al. (2001) and numerous yearly GEM reports show that educational achievement accounts for 40 percent of the cross-national variation in the total rate of entrepreneurial activity.

There is now great interest in how to teach entrepreneurship, nowhere more so than in the Asia-Pacific region. Known as entrepreneurship education, this field has been driven especially by academics, business leaders, entrepreneurs themselves, as well as by government officials seeking advantage in a globalised world (Achleitner 2006). “What makes entrepreneurship education distinctive is its focus

1 In this article, when we say an “Asia-Pacific perspective on entrepreneurship”, we mean the free economies China, Japan, Australia, New Zealand, the Asian NICs (Newly Industrialised Countries of Singapore, South Korea, Taiwan, and Hong Kong) and the ASEAN (Association of Southeast Asian Nations) countries of Brunei, Indonesia, Malaysia, Philippines, and Thailand as well as the island nations of Polynesia and Melanesia.
on realization of opportunity, where management education is focused on the best way to operate existing hierarchies” (Wikipedia, 2007).

This growing interest in entrepreneurship as a field is seen in the increased number of courses; majors and minors; chairs or professorships; doctoral programmes; journals on entrepreneurship; and media reports (Kuratko 2005). Recent Kauffman Foundation research shows that 90% of master’s and doctoral degree-granting institutions in the United States now offer entrepreneurship courses, and in most cases, many courses and degree options (Cone 2007, p. 78). Frederick (2007) lists 27 Australian and 5 New Zealand universities as well as 32 universities in Asia with entrepreneurship programmes. The top twenty Asian Business schools as rated by the Financial Times and Asia Week (Asia Week 2007) all have entrepreneurship programmes and centres.

**IMPACT OF ENTREPRENEURSHIP EDUCATION**

Why the interest and growth? Do students who take entrepreneurship courses differ from those who do not over the long term? Research is ongoing and shows some positive results, although as Myrah & Currie (2006) point out, the entrepreneurship curriculum is still underdeveloped and lacks standards, and its implementation at all levels is fraught with political tensions and philosophical dilemmas and resource struggles. Nonetheless, Rasheed (2001) found that students who have entrepreneurship training increased their science scores an astounding 39.0%. University of Arizona (2004) show that entrepreneurship education enhances a graduate’s ability to create wealth. Wilson et al. (2007) show that improved self-efficacy was strong for women in MBA entrepreneurship courses compared to men. Fayolle et al. (2006) demonstrate that entrepreneurship education can have positive effects depending on students’ background and initial perspectives. Menzies & Paradi (2003) found that among a 15-year cohort of engineering graduates, taking one or more courses in entrepreneurship was also a strong predictor of later reaching top management status. Lee & Wong (2003) show that a positive relationship exists between one’s attitude towards entrepreneurial education and business start-up. Anecdotal evidence, alumni and media reports validate these results.

**CHARACTERISTICS OF GENERATION Y LEARNERS**

Entrepreneurship education takes place with a particular social context. For the purposes of this article, I am most interested in the “school leavers” or “high school graduates” who are now studying at universities and polytechnics in the Asia-Pacific. Labeled as "Millennials", Howe et al. (2005) use the years 1982-2000 as the birth years of Generation Y. Tapscott coined the term "Net Generation" for this group, pointing at the significance of being the first to grow up immersed in a digital—and Internet--driven world. In Growing Up Digital, Tapscott (1998) alerts employers to the fact that that Generation Y would be more inclined to strike out on their own; abandoning the workplace status quo. Self employment is a very real alternative; providing the career challenges, opportunities for skills development and personal flexibility that they crave. Referring to American Generation Yers, Carlson
described them as: More educated than their parents; Multitaskers; Smart but impatient; Like con-
structing knowledge rather than being instructed; Want to be interactive; Want to learn everywhere,
anytime; Don’t read as much / prefer gizmos; Want to customise as they choose; Have shorter atten-
tion spans; and Place great importance on relationships /sharing.

Are Asia-Pacific Generation Yers similar? Arora (2005) reports 87% of urban Gen Y Chinese have
access to computers. McEwen (2005) reports that "Gen Y" Chinese are highly active information
seekers and sharers. Chen (2007) examines risk-embracing Generation Y in Singapore. In China, Gen-
eration Y is the first generation without memories of communism or dictatorial rule. In newly rich
countries such as South Korea, Generation Y has known nothing but developed world standards of
living, while their grandparents often grew up in developing world conditions, causing considerable
social changes and inter-generational difficulties as the young reject many traditional ways of life.
Generation Y was also the first generation in countries like India and China to benefit from western
modern amenities due to liberalization of their economies.

GROUNDED THEORY AND INFORMATION-RICH CASES

This research takes a grounded theory approach orientation toward the creation and implementation of
a blended learning model for entrepreneurship education in the Asia-Pacific. According to (Glaser and
Strauss 1967: 6), in grounded theory “generating a theory from data means that most hypotheses and
concepts not only come from the data, but are systematically worked out in relation to the data during
the course of the research”. In this way, theory “emerges” directly and rigorously out of the data and is
returned to the data for verification (Glaser 1992).

The present research is dependent on a repetitive “feed-forward” approach to collecting data and form-
ing theoretical constructs that can then be repeatedly trial-tested in reality. Comparative explanation-
building and theory-building is carried out through in-depth interviews, visitations to entrepreneurship
programmes, information-rich cases and trial-testing of education interventions. The research question
underpinning this research is:

What are the key content areas and pedagogical interventions around which to build a
blended learning method for Generation Y entrepreneurship students?

Drawing upon the expertise of noted colleagues in the field of entrepreneurship education, I chose to
examine the following “information-rich cases”:

- Visitations to university-level entrepreneurship programs in Europe, North America, and the Asia-
  Pacific region to compare and contrast best-practice commonalities (reported in Frederick 2006).

---

2 Campus visited: Babson College, London Business School, Monterrey Institute of Technology, Syracuse University, Cor-
nell University, Université Paris-Dauphine, Temple University, University of Portland, University of Applied Sciences in
Jena, Wuppertal University, University of Hohenheim, Florida International University, Florida Gulf Coast University, Penn-
• Attendance at leading seminars for entrepreneurship educators: Stanford University’s “Roundtable on Entrepreneurship Education”; Syracuse University’s “Experiential Classroom”; and the Price-Babson “Symposium for Entrepreneurship Educators; National Consortium of Entrepreneurs Centres.

• Content analysis of obtainable entrepreneurship education textbooks in Spanish, German, French and English languages

• A two-year writing project to adapt the textbook *Entrepreneurship Theory Process Practice* for the Asia-Pacific market (Frederick et al. 2007), which required a 60% re-write of the prominent North American text

• Creation of a multi-mediated Moodle™ Website to launch this new method of blended learning training for entrepreneurs.

• Evaluation by student entrepreneurs who had participated in the interventions.

Verification research and large-scale evaluations of this method are imperative to demonstrate its generalised utility. The present study must be considered a preliminary feasibility study that must be replicated and enhanced by others.

**BLEND LEARNING AND NEW TECHNOLOGY**

The term “blended learning” is used in both academic and corporate circles. While mixed-mode educational environments are nothing new, with the advent of new technology it has reached a new dimension. In essence, blended learning is a combination of educational interactions/interventions: (1) live face-to-face (formal) (e.g. instructor-led classroom); (2) live face-to-face (informal) (e.g. work teams; role modelling); (3) virtual collaboration/synchronous (e.g. live e-learning classes); and (4) virtual collaboration/asynchronous (e.g. web learning modules, video and audio CDs/DVDs; knowledge databases). Blended learning focuses on optimizing achievement of learning objectives by applying the “right” learning technologies; to match the “right” personal learning style; to transfer the “right” skills; to the “right” person; at the “right” time. Embedded in this concept are the following principles: Adapting the method of delivery to the learning objectives rather than vice versa; accepting that not only there are many different personal learning styles, but that entrepreneurship students particularly exhibit a preference for active, concrete teaching modalities; a belief that the most effective learning strategy is “just-what-I-need, just-in-time” (again, a hallmark of entrepreneurs). See Bersin & Associates (2003); Driscoll (2002); Orey (2002); Reay (2001); Sands (2002).
As mentioned, technology has greatly enhanced our ability to deliver blended learning. The generation raised through the last few decades have experienced a rapid growth of new technologies, in particular the Internet. These people are often called the “Net Generation”. More precisely, these terms refer to people born in or after 1982. It is the advancement in technologies that differentiate this generation from previous generations, such as the “Baby Boomers” (1946-1964) or “Generation X” (1965-1981). The Net Generation has grown up with computers at home and is familiar with such things as music downloads, instant messaging and mobile phones. This makes them in touch with the digital environment in which they live. The hallmarks of these students are: 24 years or younger; more educated than their parents; multi-taskers; smart but impatient; like constructing knowledge rather than being instructed; want to be interactive; internet essential part of their daily life; want to learn everywhere, anytime; don’t read as much; prefer gizmos; want to customise as they choose; shorter attention spans; importance of relationships/sharing (Carlson 2005).

PEDAGOGICAL BASIS FOR EXPERIENTIAL LEARNING FOR ENTREPRENEURS

The new method for training entrepreneurs here demonstrated is based in the realisation that entrepreneurs actually learn differently from traditional students (even from business management students) and have different “teachable moments”. These differences have been summarised as follows (drawing on Schindehutte 2002).

- **The traditional school of business management, finance, law and accounting.** Here the emphasis is on learning large amounts of theory. They seek to verify truth by studying all information available. They want the correct answer and need the necessary time for it. The focus is on classroom learning. These students prefer evaluation through written assessment.

- **The school of innovation and entrepreneurship.** These students want less theory and data and more experience. They are like clinicians: they want to learn how to make decisions based on, not necessarily the facts. They need to develop appropriate solution under time pressure. They prefer Learning while & through doing. They prefer evaluation by judgment through direct feedback.

Corbett (2005: 489) summarises the literature on how entrepreneurs learn and how their different modes of learning influence opportunity recognition and exploitation. He concludes that courses focusing on “improvising and adapting in reaction to changes” and those that use “scenarios, role plays, and experiences” are valuable to entrepreneurship students. Entrepreneurship educators have the conviction that entrepreneurs learn differently from other students, including business management students. They prefer learning that is behaviour- or competency-based, that is focused on doing and demonstrating. In contrast, management students are focused on knowledge and “know how”. This is very similar to the seminal article of another competency-based discipline, medicine, in which George Miller (1990) introduced his famous pyramid of education. At the base is the student who simply “knows”. The next level up is the one who can demonstrate that he “knows how”. The third level of
the pyramid is one who “shows” and the highest level of medical competency is one who simply “does”.

Cooper et al. (2004) encapsulated this into a model of entrepreneurship education. Their ladder of interactive learning focuses on these students’ (1) degree of interaction in the education process (they prefer “intense”), (2) proximity to the entrepreneur as a source of learning (prefer “on the spot”), (3) the opportunity for questioning (very high), and (4) their desired involvement in structuring the learning environment (high).

Entrepreneurship educators also realise that entrepreneurs have different “teachable moments”, based upon their professional category and their personal stage in the new venture creation process. Drawing on Barefield (2007), these teachable moments reveal themselves when we determine where the entrepreneur/student actually is along the traditional new venture timeline – (1) unaware; (2) early stage; (3) pre-launch & launch; (4) operating start-up; (5) growth stage, and (6) harvest or exit. Business students would be at Stages 1-2; engineers and medical students at Stages 1-3; family businesses at 3-6; serial entrepreneurs at 4-6, and so forth.

As to content and pedagogy required at each stage, Stage 1 students need personality assessments, creativity boosting, seminars, guest lectures, mentoring and simulations. At Stage 2, content focuses on environmental assessment, financial preparation and business plans using additional methods of lectures, texts, and videos, face-to-face, teleconferencing, readings and outside experiences. Stage 3 entrepreneurs want block courses on marketing, legal structures, and sources of finance developed in self-paced modules. At Stage 4 content moves on to opportunity assessment, commercialization techniques, and feasibility analysis and educational techniques would be a sequence of courses and experiential learning environments with mentoring, consulting, business planning, and incubators. Stage 5 entrepreneurs are focused on growth management, legal issues, strategy, and global opportunities. At Stage 6 the emphasis should be on harvesting, exit strategies, buying and selling businesses, succession and family business and other challenges.

**Figure 1 Kolb’s Model of Experiential Learning**

Kolb (1976; 1981) and Fry (Kolb and Fry 1975) generalised this model of experiential learning and differentiated learning styles in a way that shows the need to design a balance of complementary educational activities that appeal to the different learning styles (see Figure 1). The model has four elements: concrete experience, observation and reflection, the formation of abstract concepts and testing in new situations. He represented these in the famous experiential learning circle. Learning can begin at any one of the four points - and that it should really be approached as a continuous spiral. But most students prefer (or enter the circle) at one or two of the points.

Kolb and Fry (1975: 35-6) developed a Learning Style Inventory designed to place people on the continuum between *concrete* experience and *abstract* conceptualization; and between *active* experimenta-
tion and *reflective* observation. Using this, Kolb and Fry (in Tennant 1996) proceeded to identify four basic learning styles. (see Table 1)

**Table 1 Four learning styles**

Berger (1983) and Cobos (1979) reported further that student learning styles (see Figure 2) could be grouped *by discipline* along the along the active-reflective / abstract- concrete axes. Where would students of entrepreneurship fit? According to Ulrich and Cole (1987), they would prefer one of the active learning styles, either that of the accommodator or the converger. (They are added in Figure 2 in italics and were not part of Berger’s or Cobos’ original study.)

**Figure 2 Learning Style According to Discipline**

Kolb's theory has been extremely influential in management education (Beard & Wilson 2002: 37). Yet as Tennant (1997: 91) himself comments, even though the four learning styles neatly dovetail with the different dimensions of the experiential learning model, this doesn't necessarily validate them. This research should be replicated in different contemporary cultural situations.

**THE ETAPPE METHOD**

Based upon these “rich cases” studied and previous literature, the method that I have developed is called the *Etappe Method of Training Entrepreneurs*.

_Etappe_ has two meanings. It stands for “Entrepreneurship Theory Process Practice” and comes from the title of the textbook originally written by Kuratko and Hodgetts (Kuratko & Hodgetts 2007) and now adapted for the Asia-Pacific (Frederick & Kuratko, 2007), but it also refers to the Romance root “Etappe”, which means "a step in a journey or a competition". The journey I am referring to is the entrepreneur’s journey from “mind to market”, or the process of commercialisation of ideas. On a personal level, the method also refers to the journey that entrepreneurs undertake to become “sole proprietors of the rest of their lives”.

**Figure 3 Bell Rock Lighthouse, Scotland**

**Figure 4 Steps inside the lighthouse**

---

The Etappe Method of Training Entrepreneurs begins with a metaphor. This is a picture of the inside steps of the Bell Rock Lighthouse (see Figures 3 and 4) off the east coast of Scotland, scene of innumerable deaths caused by a huge reef just below the surface of the Firth of Forth in Scotland. Architect Robert Stevenson used great entrepreneurial skill to raise the money and governmental support to build the lighthouse in the middle of the ocean on rocks that were exposed only two hours a day. The gyre or vortex of the steps inside the lighthouse moves from the base progressively higher and narrower. That is a metaphor for the path of the entrepreneur. It is just an illusion that we are just retracing our steps when in reality through education we are reaching higher levels of skills and achievement.

The Etappe Method structures the discipline of entrepreneurship in a progressive step-by-step manner. Originally conceived by Kuratko and Hodgetts, this method covers three knowledge areas – Theory / Process / Practice —structured into three semester-length courses.

**Figure 5 The Etappe Model of Training Entrepreneurs**

- (1) “Foundations of Innovation and Entrepreneurship” (Theory)

  The theory is based around a course called “Foundation of Innovation and Entrepreneurship”. The first part is an overview entitled Entrepreneurship in the Twenty-First Century and introduces the emerging world of entrepreneurship. Examining the entrepreneurial revolution throughout the world, this part reveals the evolving nature of entrepreneurship and its importance to the entire world economy. It looks at entrepreneurship and national culture and overviews the entrepreneurial activity of countries in the Asia–Pacific. Finally, the concept of intrapreneurship is introduced as an emerging strategy to foster entrepreneurial creativity within a larger organisation. The second part is entitled The Entrepreneurial Perspective and addresses the entrepreneurial edge that resides within individuals. This part explores the personality of the entrepreneur, creativity, and innovation. It also focuses on the ethical and social perspective that entrepreneurs need to take in developing a more socially conscious approach to business.

- (2) “New Venture Creation” (Process)

  The process of entrepreneurship is the core of the course entitled “New Venture Creation”. It begins with the very important process of Developing the Entrepreneurial Plan. This part includes a discussion of the assessment of regulatory, competitive and local environments and their effect on new and emerging ventures. The issues of entrepreneurial marketing that affect the preparing, planning and operating of entrepreneurial start-ups as well as the financial tools that entrepreneurs need are also discussed. Finally, the development of a clear and comprehensive business plan is examined. The second part of Process examines Initiating Entrepreneurial Ventures. The methods of assessing new ventures and business opportunities are presented. The legal structures of organisations as well as critical legal
issues such as proprietary protections (patents, copyrights and trademarks) and bankruptcy laws are examined. This part concludes with a thorough examination of the sources of finance available to entrepreneurs.

- (3) “Managing Entrepreneurial Growth” (Practice)

The concept of entrepreneurship practice is the base of the course “Managing Entrepreneurial Growth”. Its first part is Growth and Development, which focuses on the growth and development of entrepreneurial ventures, which are diverse yet interrelated areas. The need for strategic planning, the challenge of managing entrepreneurial growth, and the global opportunities available to entrepreneurs are all discussed within this part. The second part of this course is called Contemporary Challenges and is devoted to some contemporary issues in the world of entrepreneurship. Challenges facing growing entrepreneurial ventures from a family business perspective are discussed. The valuation process needed to acquire a business venture (or sell an existing firm) is discussed. The critical considerations of management succession and continuity are explored. Finally, the powerful emergence of women and Indigenous entrepreneurs is examined.

PEDAGOGICAL INTERVENTIONS FOR ENTREPRENEURSHIP STUDENTS

“Teaching is best done online and learning is best done in the classroom”: This is the motto that guides my development of Etappe.

Figure 5 Home Page of the Etappe Website www.ten3.biz

To implement a blended learning approach for the technology savvy generation that satisfies the pedagogical requirements of teaching entrepreneurs, as revealed in the information-rich cases of this study, I chose the Moodle™ course management system (see Figure 5). Moodle software is used all over the world by universities, schools, companies and independent teachers. Moodle is open source and free to use (Moodle 2007). It supports any electronic content and carries advanced features such as blogging, wiki and podcasting. My implementation customises the environment with links, Asia-Pacific cases, interactive individual and class exercises, video case-ettes, and keyword-entrepreneur news feeds, games, puzzles, simulations, and role plays, prepared with the instructor in mind as much as the student. There are also numerous teaching aides and a flexible array of additional course activities such as forums, quizzes, resources, choices, surveys, assignments, chats, workshops.

An important feature of Moodle for the present enterprise is that it is guided by “social constructionist pedagogy” (see Dalsgaard & Godsk 2007), which complements the active, concrete learning styles of typical entrepreneurs. Social constructivism maintains that people actively construct new knowledge as they interact with their environment. Moodle is based on the notion of constructing something for others to experience is an important way of acquiring knowledge and education. This extends into a
social group constructing things for one another, collaboratively creating a small culture of shared artefacts with shared meanings.

I have designed and adapted from other instructors dozens of interactive exercises, simulations, role plays and thought problems to the needs of entrepreneurs. Here are a few examples:

- “Wiki Review Questions”: Wikis allows to students to collaborate in answering review and discussions questions. They can add content, edit other people’s work, or add another page elaborating on a sub-topic. Groups of students edit each other's answer to the question until the entire group is satisfied that the question is completely answered. Only then will the questions be marked and all members of the group will receive the same grade.

- “Let’s Talk About . . .” series of videos: The Website covers the same content in different ways. There is a “Jump Start” to each chapter. Students of course read that chapter itself. Then there are accompanying video discussions about the chapters recorded in front of a live group of students. These are used to present the content in a less formal way and to promote reflection on the content.

- “Lessons from Hollywood” (adapted from Minet Schindehutte at Syracuse University): We use scenes from Hollywood films in the classroom to enhance teaching of entrepreneurial competencies. In this assignment students complete a "data form" and a "teaching note" for a scene or scenes from two movies. The innovation here is that student projects are displayed online for future use in other classes.

- “Interview with an Entrepreneur” (adapted from Jeffry Timmons at Babson College and Michael Morris at Syracuse University): Students conduct a formal interview with an entrepreneur and display the product online. A sample video interview demonstrates the correct way to carry out this exercise.

- “Live Cases” (adapted from Michael K. Morris at Syracuse University) Case studies are typically written documents that students read, analyse and solve. Separately, entrepreneurship courses frequently also feature guest entrepreneurs who discuss their experiences or address a particular issue in entrepreneurship. The “live case” combines them: the case study with the guest speaker format in the form of a “live case study”. This is a pressured situation for the students since certain presented strategic decisions must be addressed based only on a short written briefing from the entrepreneur, a series of questions from the instructor, and structured questioning from the class. The finished product is placed on the Web for later review.

These types of online modalities allow much of the “teaching” load to be put online in order to allow the precious classroom time for “learning” activities, hence my motto “Teaching is best done online
and learning is best done in the classroom”. The following in-class activities have been gleaned from the symposia for entrepreneurship educators:

- **Team Assignments** (e.g. Negotiate a Deal; Feuding Partner Buy-Out meeting; Take a Stakeholder Position role play; Venture Screening Panel)

- **Games** (e.g. “Who Wants to be an Entrepreneur?” – take off on “Who Wants to be a Millionaire?”; Elevator Pitch Competition; de Bono Thinkards and Six Thinking Hats)

- **Business Planning Competition** (e.g. Interim Review Panel; Present Business Plan to Investors; Campus-wide Competition, Evaluate Video of Final Presentations)

- **Entrepreneurs in the “Clash Room”:** (e.g. Live Cases and Problems; Guest speakers and forums; TV series; visit by graduates)

- **Fieldwork** (e.g. Interview a Banker or Investor; Meet with a “Mentor”; Field trip to Company)

- **Decision-Making Exercises** (e.g. Ethical dilemmas panel;)

- **Spreadsheet preparation and critique** (e.g. Cash Flow; Valuation Models; P&L and B/S; Break even)

- **Buy a Business:** (e.g. Structure and Price a Deal; Present Start-up investment; Term Sheet Negotiation)

- **Deal structures** (e.g. Pricing /Angel / Bank / Partnership for Same Set of Facts)

- **Financing a new firm** (e.g. Assign teams to each major financing source -- family, credit cards, bank loans, bootstrapping, corporate, VC, angels).

- **Consulting assignments** (e.g. Evaluation and Advice to a Small Firm; Opportunity Analysis)

- **Proposal for a Bank Loan** (e.g. Review and complete an application; Review and critique loan agreement and covenants; Simulated Bank Board meetings)

- **“Personal Entrepreneurial Strategy”** (e.g. Personality Profile Assessment; My Acquaintanceship Circles)

- **Prepare an Industry Technical Note** (e.g. What are the Industry drivers?; Industry and Competitor Analysis)
CONCLUSION

The process of transforming creative ideas into commercially viable businesses is major challenge for entrepreneurs. They require more than luck and money. Education is key for many entrepreneurs to commercialise their ideas. Drawing on the work of information-rich cases from around the world, this study with its Asia-Pacific focus aimed to review the pedagogical requirements of entrepreneurs, including their learning styles, and to design a blended learning environment of face-to-face and online modalities that would enhance their learning experience. Another aim was to simplify, condense, organise and translate a vast and sometimes complex body of knowledge into a justifiable form from the pedagogical perspective that would be useful for building commercially viable projects of all sorts. The Website (www.ten3.biz) is available.

The resulting theoretical constructs arising from this grounded approach could be summarised as follows: Drawing upon the theory of experiential learning as concretised by learning styles inventories, entrepreneurs, in their unique teachable moments, require active and concrete pedagogical interventions that can be enhanced through a blended learning environment of online and face-to-face modalities leading them step-by-step through deepening learning in the theory, process and practice of entrepreneurship.

The next stage in this research is to empirically verify these theoretical constructs in reality. The research thus far has yielded the following research questions that can now be addressed:

- Can we differentiate between the learning characteristics of ‘entrepreneurship students’ and other business students?
- Would ‘other business students” respond as positively to a ‘blended’ learning environment’ as entrepreneurship students?
- Is there an age factor in the choice of or preference for learning method? Is this truly a method for Gen Y or would it be relevant to other generations?
- The field of entrepreneurship addresses a huge range of careers opportunities ranging from sole traders to high-growth companies. Does this technique encompass the entire spectrum or only certain portions of it?

ACKNOWLEDGEMENTS

The people who have had the most influence on this study were: Donald F. Kuratko of Indiana University, and Michael K. Morris and Minet Schindehutte of Syracuse University. The author also gratefully acknowledges reviewers to date, whose comments he has worked to incorporate.
Table 1 Four Learning Styles

<table>
<thead>
<tr>
<th>Learning style</th>
<th>Learning characteristic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Diverger</td>
<td>Concrete + reflective</td>
<td>Strong in imaginative ability; good at generating ideas and seeing things from different perspectives; interested in people; broad cultural interests</td>
</tr>
<tr>
<td>II Assimilator</td>
<td>Abstract + reflective</td>
<td>Strong ability to create theoretical models; excels in inductive reasoning; concerned with abstract concepts rather than people</td>
</tr>
<tr>
<td>III Converger</td>
<td>Abstract + active</td>
<td>Strong in practical application of ideas; can focus on hypo-deductive reasoning on specific problems; unemotional has narrow interests</td>
</tr>
<tr>
<td>IV Accommodator</td>
<td>Concrete + active</td>
<td>Greatest strength is doing things; more of a risk-taker; performs well when required to react to immediate circumstances; solves problems intuitively</td>
</tr>
</tbody>
</table>

Figure 1 Kolb's Model of Experiential Learning

Figure 2 Learning Style According to Discipline

Figure 3 Bell Rock Lighthouse

Figure 4 Steps inside lighthouse

Figure 5 Etappe Model of Training Entrepreneurs

Figure 6 Home page of the Etappe Website

www.ten3.biz
REFERENCES


Cone, J. (2007) “Entrepreneurship on Campus: Why the real mission is culture change” Kauffman Thoughtbook 2007 (Ewing Marion Kauffman Foundation)

Cooper, S; Colin Bottomley; Jillian Gordon (2004). “Stepping out of the classroom and up the ladder of learning: An experiential learning approach to entrepreneurship education”. Industry & Higher Education 18(1): 11-22


Judith Cone, “Entrepreneurship on Campus: Why the real mission is culture change” Kauffman Thoughtbook 2007 (Ewing Marion Kauffman Foundation, 2007)


