Exploratory Studies on the use of Experiential Learning in Entrepreneurship Education*

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Abstract

The purpose of this paper is to examine the role of experiential learning in Higher Education, specifically entrepreneurship education. The paper proposes that experiential learning is best facilitated as a result of the learner's participation in practical events, which supports the creation of experiences and their subsequent reflection on these experiences. Current approaches to teaching entrepreneurship within Higher Education are analyzed, as is the role experiential learning has to play. Findings suggest that by providing suitable experiential learning opportunities, educators can develop entrepreneurial capabilities in the learners and promote an entrepreneurial ecosystem. However, it is also important from the onset, that students gain an understanding about entrepreneurship itself and the skills that are required to become more entrepreneurial. A case study of an existing real-world entrepreneurial teaching environment is provided. The educators in IADT have already spent more than 10 years focusing on embedding experience into their entrepreneurial ecosystem. Therefore, as a result of research into the role of experiential learning in entrepreneurship education, this paper allows reflection on these experiences and provides an opportunity for their (re)-evaluation and future enrichment in the area of experiential learning.

Keywords: Experiential learning, entrepreneurship education, entrepreneurial skills, entrepreneurial knowledge, entrepreneurial ecosystem.

* URL: http://ojs.aishe.org/index.php/aishe-j/article/view/253

1. Introduction

If the purpose of Higher Education is about "developing a student's mind and potential to equip them to deal with the challenges posed in the real world" as suggested by Rand (2004), cited in Lowry & Turner (2007: 108), one could logically conclude that the provision of suitable experience(s) must have a significant role to play here. This paper evaluates what is meant by experiential learning, how this concept has developed, and where and how this could be implemented. The paper also investigates one particular type of education, namely entrepreneurship education, and explores whether experiential learning could be valuable here. It subsequently provides a real world example of how the teaching of entrepreneurship has developed and evolved in one particular institute of Higher Education - Dun Laoghaire Institute of Art Design and Technology (IADT), where entrepreneurship has been taught since 1998. The paper then goes on to evaluate if or how experiential learning has figured within this teaching. Finally, some conclusions and recommendations for further study in the area of experiential learning for entrepreneurship education are proposed.

2. What Is Experiential Learning?

Experiential learning is an educational approach that has been subject to significant discussion and research within the confines of Higher Education. In order to understand more about this type of learning, it is necessary to briefly examine how the concept of experiential learning has developed, what factors are involved in its implementation, and what typical learning activities could be employed to promote this type of learning. The concept of experiential learning is not a modern day phenomenon. Dewey (1938) is often credited as laying the foundation to this paradigm, with his belief that all meaningful education comes through experience. Kolb (1984: 38) further developed this idea whereby he described experiential learning as "the process whereby knowledge is created through the transformation of experience". He proposed that there were four components within a cycle of learning - the concrete experience (feeling), reflection observation (reflection), abstract conceptualisation (thinking) and active experimentation (doing). In other words, a

student will move through this cycle by “experiencing, reflecting, abstracting and acting as they construct meaning from their experiences” (Baker et al., 2002: 52). These four components of Kolb's learning cycle have been shown to transform and internalise a student's learning process and can help promote an experiential learning experience.

Drawing on the work of additional scholars (Dewey, Piaget and Jung, among others) in the area of experiential learning, Kolb (2005) summarised that these scholars share six propositions in their theories. Firstly, learning is a process, a “continuing reconstruction of experience” (Dewey, 1916: 1). It also involves relearning ideas and beliefs in order to fundamentally question these. Thirdly, learning resolves conflicts; it is driven by disagreement and differences. The fourth proposition maintains that learing is the adaptation to the world, how a person thinks, behaves, rationalises decisions, and interprets the world around them. Fifthly, learning creates synergies between the person and their environment. Finally, learning creates knowledge, initially social knowledge which is then translated into personal knowledge. To summarise, such environments allow students to undergo experience, to question beliefs, to resolve personal conflicts, to adapt to the outside world, to interact with the outside environment and to create new knowledge. These principles could indeed provide a useful yardstick by which to evaluate proposed experiential learning environments. Therefore, in its simplest form, experiential learning provides a student with a new experience and the possibility to reflect on this experience with the outcome being a set of new skills or way of thinking in order to utilise this in a relevant situation.

As suggested by the aforementioned six principles, the presence of only a student and a teacher in this learning process is not sufficient. Beard and Wilson (2006: 2) explain that the external environment has a crucial role to play in this type of learning, i.e. “the sense-making process of active engagement between the inner world of the person and the outer world of the environment”. They further elaborate that active engagement is key in experiential learning as the “whole person” both internally and externally needs to be involved. In other words, experiential learning most likely breaks out of the classroom. It should enable the learner to draw their

own meaning, draw upon their own experiences and reflect on them. Of further interest perhaps, is the work of Moon (2004) who states that this type of learning may not even involve the studying of textbooks or even a clearly defined curriculum (Moon, 2004:165). This is certainly an interesting proposition for educators.

However, care must be afforded not to over simplify experiential learning as merely a recording of student experiences (Kolb, 2005). The process of being aware of an experience does not necessarily imply the learning has been achieved. Baker et al. (2002: 57) provide a simple analogy of the process – it is similar to breathing – it follows a rhythm of taking in, transforming and putting out. A student should take in experience, assign it some meaning and express that in some form (thought, meaning or action). Therefore, students also have some responsibility for this learning, they are not just passive participants but actively involved.

What we can deduce at that point is that experiential learning is a process (involving questioning, resolution of conflicts and reflection); it can break free from the traditional confines of classroom and curriculum and puts an onus on the student to be actively involved and take responsibility for this. The next logical step is to investigate how educators could attempt to develop this type of learning – what techniques are available to them? The open nature of experiential learning can perhaps make it difficult to decide what can be categorised as this type of learning, and what is merely participation as discussed by Chapman et al. (1995: 243):

> *"Simple participation in a prescribed set of learning experiences does not make something experiential. The experiential methodology is not linear, cyclical, or even patterned. It is a series of working principles....These principles are required no matter what activity the student is engaged in or where the learning takes place".*

Perhaps the work of Furman and Sibthorp (2013) can assist here as they venture to suggest some concrete examples of experiential techniques, including Project Based Learning, Problem Based Learning, Cooperative Learning, Service Learning and Reflective Learning. Within the context of Problem Based Learning, the students use their own interest in a problem to determine what steps to undertake to solve the

problem or decide what experiment to conduct to obtain the answer. In this way, the students engage in the process instead of merely learning the correct answers. Project Based Learning, on the other hand, also begins with the interest of the students and generates a problem to solve, using sound educational content. Cooperative Learning allows students to share and learn from each other's experiences. On a similar note, the work of Svinicki and Dixon (1987), proposes typical teaching activities that fall under each of the aforementioned aspects of Kolb's experiential learning cycle, as illustrated in Table 1 below (as cited in Bergsteiner et al., 2010: 40).

Concrete experience	Reflective observation	Abstract conceptualization	Active experimentation
Lecture examples	----------	*Lecture*	*Lecture examples*
Laboratories	----------	----------	*Laboratories*
Readings	----------	*Text readings*	----------
Fieldwork	----------	----------	*Fieldwork*
----------	----------	*Projects*	*Projects*
Simulations	Thought questions	Model building	Case studies
Observations	Brainstorming	Model critiques	Homework
Films	Discussions	Papers	
Problem sets	Logs	Analogies	
	Personal journals		

Table 1: Linking teaching activities to Kolb's experiential learning cycle

Svinicki and Dixon (1987) recommend that to successfully complete the cycle the instructor would select an activity from each aspect of the cycle and guide the students through the activities in that order.

At this point, we have examined what is meant by experiential learning and what kind of activities could potentially be employed to promote this. The final aspect to examine is where this learning should take place or how should it be facilitated. We, as humans, mainly tend to make meaning from our experiences by discussion (Kolb, 2005). People make sense of their experiences by discussing them with others; conversation is a "meaning-making process whereby understanding is achieved"

(Baker et al., 2002: 53). However, a traditional classroom is not always conducive to this type of conversation and reflective behaviour. Murphrey (2010: 219) claims that teachers must be “open to new ways of accomplishing learning goals, with a stronger emphasis on creating learner-focused environments that allow for personal experiential learning activities”. She proposes that in today’s digital age, technology can be employed to facilitate this type of learning as the types of interaction taking place between learners often mimics the interaction that takes places in social networks. By allowing students to communicate in such a method that is familiar and approved by themselves, it allows them to encourage “experiential learning by allowing students to gain ownership of their ideas and communicate their ideas clearly”. It also facilitates collaboration, which is fundamental to experiential learning by allowing students to interact with each other and share experiences. This is echoed in the works of Challis et al. (2005), where they refer to Boerner (1999) who proposed that technology can assist experiential learning in three ways: “recording the experience for later reference, creating a virtual community of participants (students, agencies, etc.), and enabling new avenues for the community to reach its goals” (Boerner, as cited in Challis et al., 2005: 22). It is important, therefore, to understand what specific electronic mechanisms can enable this type of learning. These can include “electronic portfolios and journals as tools of reflection and knowledge construction in virtual environments” (Challis et al., 2005: 34), and also but not limited to “current and emerging social networking media (such as Weblogs.., wiki, Flickr, and other self-publishing media)…” which “facilitate the formation of learning communities, foster student engagement and reflection” (Baird and Fisher, 2005).

To summarise, experiential learning involves students understanding and taking responsibility for their learning. It also includes the interplay with the outside environment, the solving of problems and the changing of mind-sets. Also beneficial is understanding the four elements of the experiential learning cycle and how the selection of different learning activities can consciously lead a student through this process. In today’s technology-dominated world, it is significant to appreciate that technology can support the experiential learning process, it can be employed as a

medium where students feel comfortable to exchange information and ideas and reflect upon this.

The following section of this paper, evaluates to what extent the previously discussed experiential learning activities, participants and environment are appropriate to one specific type of education, namely entrepreneurship education.

3. The Link Between Experiential Learning And Entrepreneurship Education

One could logically assume that by its very nature, entrepreneurship education should involve some practical experience, and therefore must include experiential learning opportunities. Indeed, it is perhaps the requirement for experiential learning that makes this type of education unique and, potentially even determines its success. According to Haase and Lautenschläger (2011: 145), entrepreneurship education "should desist from simply teaching knowledge on business creation and rather focus on experiencing entrepreneurship". Bliemel (2014a) has a similar viewpoint, and refers to other commentators (Rasmussen & Sorheim, 2006; Haase & Lautenschlager, 2011; Neck & Greene, 2011; Rideout & Gray, 2013; Mason & Arshed, 2013) who all converge on this point, namely that entrepreneurship education requires experiential components in order to succeed. Bliemel maintains that the challenge resides in the students being able to "apply the core concepts or become more prepared for the reality that awaits them outside the classroom", which undoubtedly requires an experiential element. He explains that there are currently two methods of experiential learning offered to students of entrepreneurship – learning by placing the students in an actual business, and learning by working on their own ideas (with guidance from suitable mentors). His work describes a case study whereby students take part in a "flipped classroom" i.e. where coursework is evaluated at home and exercises (similar to homework) are conducted in the classroom. He maintains this is similar to a Business Accelerator model whereby mentors are assigned early in the process and their role "moves from being directive to coaching, encouraging and questioning". The student's role in the classroom moves from copying information from slides or other formats to actually *doing*; they

use the classroom hours to work on aspects of their business model, update their website, produce a product demo video, etc. The overall objective is for students to "learn entrepreneurship" in an experiential environment, and not just "learn about entrepreneurship" (Bliemel, 2014a: 127). His approach receives positive feedback and evaluation from his students.

A further method of teaching entrepreneurship which involves experiential experiences is described in the work of Cooper et al. (2004) which reports how, in the University of Strathclyde, students are given the opportunity to "see, touch and feel entrepreneurship" by working alongside entrepreneurs on a business development project. They claim that better results can be obtained outside the classroom.

There may, however, be more to the success of entrepreneurship education than just the provision of an opportunity to learn new skills under guidance of an educator; do the students also need an understanding of other aspects, for example, the context in which they are operating? Is it also important to learn about the background and theory of entrepreneurship, why it is important to society and what type of skills are typically required? According to Rasmussen and Sorheim (2006), students need to both learn about the phenomena as well as gaining the skills. As noted by Hytti (2002), entrepreneurship education should involve learning about understanding entrepreneurship as well as the skills to become more entrepreneurial. Kurczewska (2011) refers to the work of Klofsten (2000) whereby he explains that there are both static and dynamic aspects of entrepreneurial education. The static component focuses on the theory of entrepreneurship and the dynamic approach applies this knowledge. The theory of entrepreneurship can be effectively conveyed by the educator, providing the context for why and how the skills are important. Kurczewska (2011: 219) adds a third dimension to the teaching of entrepreneurship – in addition to "learning to understand entrepreneurship" (e.g. what it is, how many entrepreneurs exist, why is entrepreneurship important) and "learning to become an entrepreneur" (acting as an entrepreneur), he concludes that is also important to "learn to become more entrepreneurial" (where students take responsibility for their future career).

Interestingly, he also notes that current approaches may place insufficient emphasis on the imparting of the theory and knowledge (Kurczewska, 2011). However, in relation to this final component - the becoming more entrepreneurial, as mentioned in the discussions of experiential learning above - there is an onus on students to take responsibility for their own learning.

In addition to the responsibility of the individual student, the typical classroom setting normally involves more than one student so the overall student group may also influence the ability of each other to become more entrepreneurial. This is supported by current theories of how to become a successful entrepreneur, namely those of Aulet (2013) and Ries (2011) where they maintain that a successful entrepreneur is no longer a lone ranger, an individual on their own, but is part of a multi-faceted team. This is echoed in the work of Van de Ven (1993: 213), who proposes "entrepreneurs who run in packs will be more successful than those that go it alone to develop their innovations". This bodes well for current education models which often focus on working in groups with a view to developing teamwork skills such as effective communication, negotiation, persuasion, conflict resolution among others. O'Donnell et al. (2001) propose that the ability to network should be seen as a fundamental entrepreneurial skill. This social aspect to networking can be promoted in many ways, by the setting of group assignments, by allowing students to forge their own relationships, by enforcing self-management of conflict, the provision and acceptance of advice etc. By encouraging students to engage in such activities, this may increase the likelihood of success in developing these networking skills (Smith and Lohrke, 2008). Similarly, the work of Flack et al. (2012: 39) examines the role of interaction with likeminded peers i.e. other individuals with an entrepreneurial mind-set and concludes that "having an entrepreneurial peer group has a positive effect on an individual's entrepreneurial intentions". Gentry (1990) states that pedagogies with group interactions and assignments have increased experiential learning possibilities. This development and support of an entrepreneurial ecosystem has been important for many educators to date, as outlined in the work of Engel and Charron (2006) and Moylan et al. (2008).

In summary, the literature suggests that there are three components to entrepreneurship education: the acquisition of knowledge, the development of an entrepreneurial support system and the building of entrepreneurial skills. So, how does this marry with the conclusions above, namely that experiential learning can be achieved by the use of appropriate methods of teaching, placing the onus for learning on the participants and the provision of a suitable environment? By employing suitable learning activities (as outlined in Table 1 above) such as using concrete examples, simulations, projects, field studies etc., and by allowing students to step outside the classroom (with work experience and working alongside entrepreneurs), educators can try to provide the understanding of the context of entrepreneurism and foster the necessary skills. The suitable environment is achieved with the development of the entrepreneurial support system and by encouraging students to network and collaborate with each other (and relevant other individuals outside of the classroom). This collaboration can even occur digitally as outlined above, as this can promote thinking and reflection in a familiar environment and also stimulate experiential learning. The final aspect that the educator must also convey is the importance that the student has also a significant role to play in this learning.

Therefore, in the quest for the provision of experiential learning, entrepreneurship education should focus on employing learning activities that allow students to build a support network and relevant entrepreneurial skills within the correct environment, while understanding how and why this is placed within the context of entrepreneurship itself. In fact, Wadhwa (2013) goes as far as to suggest that timing is everything, and that “The key is to provide education at “teachable moments” – when the entrepreneur is thinking about starting a venture or ready to scale it.” In summary, perhaps the solution to successful entrepreneurship education is the use of experiential learning activities to awaken in the students the desire and mind-set to develop entrepreneurial skills as well as providing solid foundations and context (imparting knowledge about entrepreneurs and the entrepreneurial process), to facilitate collective networking opportunities and suitable environments while encouraging self-responsibility for learning. The next section describes how those

involved in the education of entrepreneurship students in IADT have approached the task of entrepreneurship education and the role experiential learning has played there.

4. Entrepreneurship Education In IADT

IADT is an Institute of Technology based in Dun Laoghaire. Relatively small by HEI standards, with a student population of 2,300, it has two faculties – a Faculty of Film, Art, and Creative Technologies, and a Faculty of Enterprise and Humanities. Inaugurated as an Institute of Technology in 1997, this new entity on the Irish HEI landscape always had entrepreneurship at the core of the business curriculum. A considerable number of the staff employed in the Enterprise and Humanities Faculty had significant industry experience, both at corporate level and within the indigenous Small and Medium Enterprise (SME) sector and, from the outset, staff development had a strong focus on entrepreneurship education. However, in the late 1990s the Institute's entrepreneurship education provision was structured in a comparatively traditional way in keeping with national norms, with an emphasis on formal exams as the main form of assessment. As a result of this approach, students were solely orientated towards learning about the phenomenon of entrepreneurship, i.e., what Klofsten (2000) refers to as the static component of entrepreneurship education.

Change was prompted by the introduction of the National Qualifications Framework in 2004, which coincided with the first Programmatic Review undertaken by the programme team and an increased engagement with emerging pedagogies on entrepreneurship education. The move toward learning outcomes was a significant driver as the programme team were required to develop programme learning outcomes under the categories specified in the Framework, i.e., knowledge, know-how and skills, and competencies. In doing so, the team seriously questioned 'what should entrepreneurship education look like'? and asked 'how does entrepreneurship education differ from business education'? The shift to learning outcomes and the emphasis on skills and competencies was particularly relevant to entrepreneurship, and the integration of skills and competencies was significant in determining the approach to entrepreneurship education.

At this stage, using Biggs theory on constructive alignment and prompted by international literature on entrepreneurship education, in particular the work of Allan Gibb and the then National Council for Graduate Entrepreneurship (NCGE) in the UK, the IADT team adopted a '*learning by doing'* approach to curriculum design (Moylan et al., 2008). In the first iteration a number of actions were taken: Firstly, a number of practical projects were introduced – the aim was that each student would get practical, hands on experience which allowed him or her to apply classroom learning into a real world context. Secondly, there was a significant shift away from exams as the primary form of assessment. Many modules with practical projects moved to 100% continuous assessment, and the split between exams and continuous assessment (CA) was standardised at 50% Exam, 50% CA. An annual review cycle was introduced, allowing the programme team to tweak aspects of the programme in response to student and stakeholder evaluation on an ongoing basis.

The first significant experiential learning component introduced to the programme is the Stalls Project in Year 1. This began 11 years ago as a collaboration between IADT and the local municipal market. It is a trading project, and each first year student is required to participate as a 'live market trader' in the local municipal markets. Students work in groups which can be self-selected. The emphasis on teams is deliberate and reflects findings of Aulet (2013), Reiss (2011) and Van de Ven (1993) in relation to the importance of teams in building entrepreneurial ventures. This challenges the often misplaced, and somewhat mythical preconception students have as the entrepreneur as a solo superhero, and reinforces the importance of a team mindset for successful entrepreneurship. In their teams, students come up with ideas for suitable products or services to sell, and follow up with research on the market and potential customers. They then plan the operation - they organise all of the logistics – finance, product, display and merchandising, floats, etc. They sell at their appointed times, and afterwards, they are required to evaluate their financial and overall performance. A key feature of the Stalls Project has been the deliberate integration between the project and other modules – for example lecturers in accounting and marketing assess the students on developing budgets and managing finance for the project, and for developing

marketing and social media campaigns for their products and services.

Another experiential learning project is the Social Enterprise Project in Year 3. This requires students to research and develop a business proposition for a social enterprise, where the objective is to add value to society as opposed to making profit for the owners and shareholders. As well as engaging in market research and developing the value proposition, the students are charged with piloting a practical aspect of the business that they have selected. For instance, in previous years students developed a social enterprise business concept designed to educate the elderly on how to use social media. As well as developing the business case for such a venture, the students were required to teach social media classes to the local elderly. Thus, students engage in an academic learning exercise that combines the theory and processes learnt in the classroom and conforms to Kurczewska's (2011) three dimensions on teaching entrepreneurship – in this module students learn to understand social entrepreneurship, learn to act as a social entrepreneur while being encouraged to become more entrepreneurial in how they approach their project. This project has also been valuable in integrating students with the wider, local community, and has been a particularly good way of embedding and assessing the 'competence-insight' learning outcome for business as set out in the National Framework of Qualifications (Moylan, 2013).

Prior to the most recent programmatic review process, the team undertook a short survey of alumni in 2014 with a view to a reviewing their in-curriculum enterprise experiences. Open ended commentary from graduates on the perceived strengths of the programmes focuses on experiential elements, including the following:

- "overall practicality of the course and how all activities did not strictly take place in the classroom"
- "a lot of project work is very good"
- "diversity"
- "practical"
- "practical application"
- "gives you a chance to work with business as well as develop your own ideas"

- “Practical structure, good balance between theory and practical course work”
- “presentation skills”
- “it encouraged setting up your own business but also gave you skills to be an entrepreneur and an employee”
- “analysing situations through problem based learning.”

The ongoing annual review process, combined with two further formal programmatic reviews has resulted in an evolution of practice within the programme. In recent years, the Stalls Project is preceded by two other practical selling experiences – a classroom stalls and a campus stalls, designed to give the students an opportunity to test ideas before they trade live in the municipal parks. Experiential projects in selling, using social media and the in use of information technology and business have been trialled and introduced, and now assessment is making greater use of digital technology to facilitate learning. Students develop websites, social media campaigns and engage directly with a multitude of platforms to promote their business ideas or the business ideas of others. This assists with the development of networking skills which O’Donnell et al. (2001) deem to be a fundamental entrepreneurial skill.

The development of a wider entrepreneurial ecosystem which supports the programme and offers opportunities for the entrepreneurship students to avail of additional business support and to network is a continuing development. It includes guest lecturers from local and national entrepreneurs, business mentoring clinics, business plan competitions, employer forums and internship opportunities.

The proposed introduction of an Enterprise Practice module in Year Two will commence in the academic year 2015/2016, where students will be timetabled to work alongside an entrepreneur for one day a week for 20 weeks of the year, and/or be facilitated to develop their own business venture. This will be a 10 credit module and will be operational for the complete academic year 2015/ 2016.

From a staff perspective, the importance of a shared vision in terms of the overall programme aims and objectives is critical. Integration of assessment and the development of experiential projects require advance planning and considerable team work across modules. In practice, this means that the early summer months are devoted to an indepth collective planning exercise for the following academic year. A series of meetings are held in May/ June and the format of these includes a full 'warts and all' debriefing of the previous year, followed by a sequence of meetings for lecturing staff, where shared assessments and experiential projects for the forthcoming year are planned. The objective is twofold – to ensure that each member of the teaching team has a good overview of what students are experiencing year on year, and to have a full assessment calendar and schedule as well as an induction programme prepared for each year of the programme well in advance of students returning in the autumn.

The most recent programmatic review has resulted in programme design which has explicit modules on entrepreneurial practice in each year of the programme. The teaching, learning and assessment approach draws on a wide range of the learning activities that are linked to Kolb's experiential learning cycle. There is an array of business modules that perform an important role articulated by Rasmussen and Sorheim and others in providing the context within which the experiential learning is sited.

5. Evaluation

The approach to programme design at IADT contains the four components within a cycle of learning as identified by Kolb (2005), and the entrepreneurship students student will move through this cycle by "experiencing, reflecting, abstracting and acting as they construct meaning from their experiences" (Baker et al., 2002: 52). Throughout the practical elements of their studies, students undergo experiences; they often question their beliefs and regularly have to resolve personal conflict and interact with the outside environment.

In developing this approach, the teaching team in IADT has discovered that interaction with the external environment is extremely important; this concurs with Beard and Wilson's (2006) contention that the role of the outside environment has a crucial role to play in experiential learning. However, it is not possible for all of the learning to take place in the classroom, and the team has had to engage with many stakeholders in order to facilitate the project work required. In this context the role of the teacher shifts – learning in some instances moves from the confines of the classroom and the teacher becomes a facilitator more so than a lecturer. At times it echoes Moon's (2004) observation that text books are not studied – this is particularly true in relation to the Stalls Project – students will rarely consult books to check how to go about trading in a market place, and the introduction of an opportunity to trade in-class and on campus prior to the real experience has been particularly useful in assisting students to identify potential pitfalls. The conduct of this kind of project is also particularly 'messy', students come to it with different experiences and expectations, and the lecturer is required to facilitate each group through the set up process at slightly different paces; which can be demanding. This project also aligns with Bliemel's (2014) two methods for experiential entrepreneurship education – learning by placing students in an actual business, and learning by having students work on their own ideas.

It is clear that the literature on both experiential learning and entrepreneurship education allude to the importance of student responsibility; ensuring that this happens in reality can be demanding for staff. The provision of experiential opportunities for students does not guarantee a greater level of student engagement; indeed there can be some resistance to it, particularly in the earlier years as this approach often moves students out of their comfort zone. In practice, Wadhwa's (2013) 'teachable moments' can occur at different junctures for different students, and this can pose serious challenges for the lecturer who is charged with ensuring that all students meet a range of learning outcomes.

The need for students to take responsibility for their learning is also linked to the way in which we facilitate students to make meaning from the experience. Reflection on the experience is a key requirement, and from first year students are guided toward reflection on, and interrogation of their learning. However, there is undoubtedly some capacity to engage more with technology to allow students to both collaborate with other students and to share meaning and make sense of their learning, as recommended by Murphrey (2010).

From an entrepreneurship education perspective, the programme promotes the importance of team work at all levels, reflective of the findings of Aulet (2013) and Ries (2011) and others that successful entrepreneurs tend to operate in multi-disciplinary teams. Team work brings with it many issues from a student and staff perspective, but it is important to persist with it, despite its associated headaches. The approach taken by the teaching team is to continuously review the level of group work students engage in, to offer multiple approaches to assessing group work, to implement the principle of structuring the assessments in such a manner as to give individual grades and lessen the level of group work in award years.

The place of theory has also been considered and adjusted overtime in the programme design. For example, in developing an experiential learning approach, it was considered crucial not to lose sight of the importance of the background theory of entrepreneurship and, in the most recent iteration of the programme, aspects of the theory will be introduced at Year 1 in tandem with the Stalls Project; these will be incrementally built upon as the student progresses. It has also been important to keep abreast of developments in the theory of entrepreneurship to ensure that the programme is both current and relevant. The overall programme objectives are that students learn about entrepreneurship (context and knowledge about entrepreneurship), learn how to become an entrepreneur (skills), but also learn to be more entrepreneurial and take responsibility for their own learning and own career.

6. Conclusions And Recommendations

For the duration of the life of the entrepreneurship programme in IADT, the teaching team has sought to be guided and informed by best practice. This was achieved by reading the relevant literature, taking part in Entrepreneurship Education conferences, reflecting on and presenting one's own practice and undertaking specific targeted training initiatives at national and international level. All of this has led to the development of an environment that is conducive to reflection on our own work as it relates to practice in the field. However, while there have been some attempts to capture the student and graduate experience, little has been done to record staff experience. There is undoubtedly a need to formally capture the experiences of the staff that have been central to the implementation of experiential learning opportunities and to document the practices that have evolved in terms of teaching, learning and assessment for entrepreneurship education in IADT.

From the students' perspective, anecdotally, the experiential learning initiatives have had impact. This is evidenced by their self-reporting, which is gathered on the quality assurance questionnaires each year and by the observation of the experienced educators who often note increased levels of engagement and participation in these sessions.

While evaluation takes place module by module on an annual basis, there are shortcomings in the current approach, as the evaluation tools are primarily geared at the level of standard quality assurances measurements. To date, the programme has not formally focussed on evaluating the impacts of the targeted entrepreneurship education elements of the programme, largely because the focus of the team has been on the development of suitable pedagogical approaches. There has been an increase in the entrepreneurial attitude of incoming students as evidenced by data from entrance surveys conducted over a number of years, and there is also a noticeable increase in the past 5/6 years in student enterprise activity – including an increase in the number of start-ups while in college and the establishment of a Student Enterprise Society on campus. However, it is not possible to claim a direct link in terms of the impact of experiential learning experiences and student

entrepreneurial activity, and this undoubtedly poses the next challenge for the Entrepreneurship programme team – how to measure the impact of experiential learning?

7. References

Aulet, B. (2013). *Disciplined Entrepreneurship – 24 Steps to a Successful Start Up* – Wiley.

Baker, A. C., Kolb, D. A. & Jensen, P. J. (2002). Conversation as experiential learning. *Conversational learning: An experiential approach to knowledge creation*, 51-66.

Baird, D. & Fisher, M. (2005). "Neomillennial User Experience Design Strategies: Utilizing Social Networking Media to Support "*Always on*" Learning Styles" *Journal of Educational Technology Systems*, 34:5-32, accessed 22 June 2015.

Beard, C. & Wilson, J.P. (2006). *Experiential Learning: A Handbook of Best Practice for Educators and Trainers*, Kogan Page Ltd., London, GBR. Available from: ProQuest ebrary. accessed 22 June 2015.

Bergsteiner, H., Avery, G. & Neumann, R. (2010), 'Kolb's experiential learning model: critique from a modelling perspective', *Studies In Continuing Education*, 32, 1, pp. 29-46, Academic Search Complete, EBSCO*host*, viewed 6 July 2015.

Bliemel, M.J. (2014a). 'Lessons learned from an inside-out flip in entrepreneurship education', *Small Enterprise Research*, 21, 1, pp. 117-128, Business Source Complete, EBSCO*host*, accessed 6 July 2015.

Bliemel, M.J. (2014b). 'Getting Entrepreneurship Education Out of the Classroom and into Students' Heads', *Entrepreneurship Research Journal*, 4, 2, pp. 237-260, Business Source Complete, EBSCO*host*, accessed 7 July 2015.

Challis, D., Holt, D. & Rice, M. (2005). Staff perceptions of the role of technology in experiential learning: A case study from an Australian university. *Australasian Journal of Educational Technology*, 21(1), accessed 7 July 2015.

Chapman, S., McPhee, P. & Proudman, B. (1995). What is Experiential Education?. In Warren, K. (Ed.), *The Theory of Experiential Education* (pp. 235-248). Dubuque: Kendall/Hunt Publishing Company, accessed 9 July 2015.

Cooper, S., Bottomley, C. & Gordon, J. 2004, "Stepping out of the classroom and up the ladder of learning: an experiential approach to entrepreneurship education", *Industry and Higher Education*, vol. 18, no.1, pp11-22, accessed 9 July 2015.

Corbett, A.C. (2005). 'Experiential Learning Within the Process of Opportunity Identification and Exploitation', Entrepreneurship: Theory & Practice, 29, 4, pp. 473-491, Business Source Complete, EBSCOhost, accessed 23 June 2015.

Engel, J and Charron, D. (2006). presentation at The Intel Technology Entrepreneurship Education Programme – Entrepreneurship Theory to Practice Seminars, Dublin.

Eisenhardt, K. M. & Schoonhoven, C.B. (1990). “Organizational Growth: Linking Founding
Team, Strategy, Environment, and Growth Among U.S. Semiconductor Ventures, 1978–
1988.” *Administrative Science Quarterly* 35(3):504–29, accessed 10 July 2015.

Entrepreneurship Education: A Guide for Educators, European Commission – DG Enterprise & Industry, Brussels – June (2013). p. 6, http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/files/education/entredu-manual-fv_en.pdf, accessed 14 July 2015.

Falck, O., Heblich, S. and Luedemann, E. (2012) Identity and entrepreneurship: do school peers shape entrepreneurial intentions? *Small Business Economics*, Vol. 39, No. 1, pp. 39-59, Springer, Available from http://www.jstor.org.iadt.idm.oclc.org/stable/41472840, accessed 13 July 2015.

Foote, M. Q. (2009) "Stepping Out of the Classroom: Building Teacher Knowledge for Developing Classroom Practice." *Teacher Education Quarterly* 36(3, Challenging Contemporary Politics—(Re)Imagining the Professionalization of Teaching and Learning): Available from https://iadt.idm.oclc.org/login?url=http://www.jstor.org/stable/10.2307/23479188?ref=no-x-route:bfb2d55051f73d1461aa1e51989cefdd, accessed 13 July 2015.

Furman, N, & Sibthorp, J 2013, 'Leveraging Experiential Learning Techniques for Transfer', New Directions For Adult & Continuing Education, 2013, 137, pp. 17-26, Academic Search Complete, EBSCOhost, accessed 22 June 2015.

Gentry, J. W. (1990). What is experiential learning. Guide to business gaming and experiential learning, 9-20.

Haase, H., and A. Lautenschläger. (2011) “The ‘Teachability Dilemma’ of Entrepreneurship.” *International Entrepreneurship and Management Journal,* 7(2):145–62, accessed 7 July 2015.

Hytti U., O’Gorman C. (2004) What is “enterprise education”? An analysis of the objectives and methods of enterprise education programmes in four European countries, “*Education + Training*, Vol. 46 Iss: 1, pp. 11–23, accessed 7 July 2015.

Hynes, B. & Richardson, I. (2007) Creating an entrepreneurial mindset: Getting the process right for information and communication technology students, in Lowry, G. (Ed.), *Information Systems and Technology Education: From the university to the workplace*, IGI Global: Hershey, PA, Chapter VI, accessed 7 July 2015.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development* (Vol. 1). Englewood Cliffs, NJ: Prentice-Hall.
Kolb, D. A. (1985). Learning styles inventory. *The Power of the 2 2 Matrix*, 267.

Kolb, A. Y., & Kolb, D. A. (2005). Learning styles and learning spaces: Enhancing experiential learning in higher education. *Academy of management learning & education*, *4*(2), 193-212, http://www.jstor.org/stable/40214287, accessed June 23 2015.

Kurczewska, A. (2011). Entrepreneurship as an Element of Academic Education-International Experiences and Lessons for Poland, *International Journal of Management and Economics*,30, accessed 6 July 2015.

Moon, J.A. (2004). *A Handbook of Reflective and Experiential Learning: Theory and Practice*. New York: RoutledgeFalmer.

Moylan, T., Heagney, C. & Byrne, O. (2008. The entrepreneurship ecosystem, presentation at The AISHE conference, Dublin

Moylan, T (2013). Articulating competence-Insight in business Education Through Social Entrepreneurship’ in Doyle, e, Buckley, P, Carroll, C *Innovative Business School Teaching; Engaging the Millennial Generation’*, New York, Routledge, 168 -178.

Murphrey, T.P. (2010. 'A Case Study of EELearning: Using Technology to Create and Facilitate Experiential Learning',*Quarterly Review Of Distance Education,* 11, 4, pp. 211-221, Academic Search Complete, EBSCOhost, accessed 24 June 2015.

O'Donnell, A., Gilmore, A., Cummins, D., & Carson, D. (2001). The network construct in entrepreneurship research: a review and critique. *Management Decision*, *39*(9), 749-760, accessed 2 July 2015.

Rasmussen E., R. Sørheim (2006), Action-based entrepreneurship education, *Technovation* 26(2), pp. 185–194, accessed 6 July 2015.

Rand, A. (2004). Retrieved from www.teachersmind.com, accessed 6 July 2015.

Ries, Eric (2011). The Lean Startup: How Constant Innovation Creates Radically Successful Businesses.

Smith, D. A. & Lohrke, F. T. (2008). Entrepreneurial network development: Trusting in the process. *Journal of Business Research*, *61*(4), 315-322, accessed 7 July 2015.

Svinicki, M.D. & N.M. Dixon. (1987). The Kolb model modified for classroom activities. College Teaching 35, no. 4: 141_6, accessed 22 June 2015.

Van de Ven, H. (1993). The development of an infrastructure for entrepreneurship. *Journal of Business venturing*, *8*(3), 211-230, accessed 7 July 2015.

Wadhwa, V. (2013). “Can Entrepreneurs Be Made?” *TechCrunch*, February 27, 2010, http://techcrunch.com/2010/02/27/can-entrepreneurs-be-made/, accessed 7 July 2015