Teaching entrepreneurship to university students through experiential learning

A case study

Colin Mason and Norin Arshed

Abstract: *The view that entrepreneurship education should be based on experiential approaches to learning is gaining ground. However, there is both little discussion in the literature on what form experiential education should take and a paucity of examples of experiential approaches to learning. This paper helps to fill these gaps. It provides a case study of an experiential learning assignment that formed an important part of a first-year entrepreneurship course in a Scottish university. It describes how the assignment was designed, what activities were undertaken by students and, using their learning reflections for evidence, identifies the learning outcomes and the effect on entrepreneurial intent, motivations and capabilities. The evidence suggests that the assignment was an effective learning experience for the students, complementing and reinforcing prior classroom learning through application. It facilitated learning about the real world of the entrepreneur, something which would otherwise not have been possible, and had a positive impact on entrepreneurial intentions.*

Keywords: *entrepreneurship education; experiential learning; entrepreneurial capabilities*

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Entrepreneurship education is tormented by four ongoing questions that challenge its legitimacy. First, what is its purpose? Second, can it be taught? Third, how should it be taught? And, finally, is it effective? Kuratko (2005, p 580) argues that ‘the question whether entrepreneurship can be taught is obsolete’. Even though this view is by no means universally accepted (and is dependent on the answer to the first question) it is nevertheless the case that this question now attracts little debate. Instead, the most intense discussion currently deals with the third question: how should entrepreneurship be taught?

Existing approaches to entrepreneurship education are the subject of two criticisms. The first is that the focus is on teaching 'about' rather than 'for' entrepreneurship. Here the emphasis is on the scholarly consideration of such topics as who is an entrepreneur, opportunity identification, the start-up process and the economic impact of entrepreneurship. The second is that these courses are not designed to address issues of entrepreneurial intent and capability and so are unlikely to influence graduate entrepreneurial activity. This contrasts with teaching 'for' entrepreneurship, where the specific objective is to stimulate entrepreneurship amongst students. However, this approach has been criticized for the dominance of management content and, specifically, the emphasis on the business plan. Critics argue that entrepreneurship education needs to be experiential, enabling students to learn through (or in) entrepreneurship (Gibb, 2002).

There is remarkably little discussion in the literature on what form experiential education should take, or even practical examples of course design, delivery and assessment. As a result, little guidance is available to nascent entrepreneurship educators. Equally significant is the lack of evidence on the learning outcomes to support the proponents of experiential approaches to entrepreneurship education. This paper, which reports on a case study of an experiential learning assignment, is intended as a contribution towards filling these gaps. It has three objectives. First, it describes the nature of the assignment and identifies the key design issues. Second, based on student learning reflections, it identifies the main learning outcomes. Third, because 'reflection is an integral component of entrepreneurship education' (Neck and Greene, 2011, p 68) the effectiveness of this experiential approach to entrepreneurship education and how it might be developed further are considered.

Teaching 'for' entrepreneurship through experiential learning

Teaching 'for' entrepreneurship aims to produce graduates with mindsets, skills and capabilities to identify and shape opportunities and develop business ventures (QAA, 2012). However, standard approaches to teach 'for' entrepreneurship are increasingly criticized for their ineffectiveness in achieving such outcomes. In Gibb's (1993) terminology, they are 'non-enterprising' in both content and delivery.

First, they have a classroom-based focus and '. . . lecture teaching methodology, basically a stand-and-deliver approach' (Neck and Greene, 2011, p 58) which misses 'the vital stimulation of the ''knowing how''' (Gibb, 1993) and discourages right-brain thinking. Pittway and Cope (2007, p 229) argue that '. . . it is not possible to convey the challenge and complexities surrounding new venture creation using only conventional pedagogies such as lectures and seminars'.

Second, the reliance on theories, content and pedagogical approaches borrowed from business management results in a failure to emphasize the distinctiveness of entrepreneurship (Solomon, 2008), defined as the discovery, evaluation and exploitation of opportunities to provide goods and services (Shane and Venkataraman, 2000). As Haase and Lautenschläger (2011, p 157) observe, '. . . many programmes still understand entrepreneurship education as an adapted management education covering all related functional areas in a quick run'. The emphasis in such courses is on the technical aspects of entrepreneurship with financial management, marketing and business plan writing all featuring prominently.

Third, the focus on the business plan which students write and then present – in the style of the UK TV programme *Dragons' Den* – to a panel of entrepreneurs is now a somewhat hackneyed approach and its effectiveness in influencing both entrepreneurial intent and subsequent business performance is questionable (Honig, 2004; Lange *et al*, 2007).[1] It is detached from the start-up process and therefore ignores the knowledge, skills and aptitude needed to launch and operate a new business venture (Dutta *et al*, 2011). Liñán *et al* (2011, p 210) argue that '. . . the business plan which is most often offered as entrepreneurship education is not enough. It may be useful to increase feasibility perceptions, but will not affect desirability'. It is also criticized for its detachment from the reality of the market place and for being based on assumptions that are mostly untested. As Jones (2011, p 132) argues, 'why are we assessing proposals for possible success when we cannot actually know if the ideas contained within the plan would succeed?'.

It is increasingly recognized that to be effective entrepreneurial learning has to be experiential (Rae and Carswell, 2000; Minniti and Bygrave, 2001; Lange *et al*, 2012). Neck and Greene (2011, p 61) argue that 'teaching entrepreneurship . . . requires going beyond understanding, knowing and talking: it requires using, applying and acting. Entrepreneurship requires practice'. Haase and Lautenschläger (2011, p 157) note that 'learning by doing and experiential learning constitute appropriate modes for instilling the entrepreneurial ''know how'''. The NCGE (2008, p 21) argues that 'experience is crucial for understanding and embedding entrepreneurial concepts', implying that it is necessary to underpin classroom teaching. Highlighting the contrast with business plan-centred teaching, Jones

(2011, p 132) argues that instead of writing a business plan 'our students could be living their actual plan through . . . working closely with customers and gaining instant feedback'. This is precisely the approach of the lean start-up methodology pioneered by Ries (2011), which is based on the idea of developing a minimal offering in order to commence a genuine conversation with the target market, with a view to building in features as the entrepreneurs engage with customers.

A further advantage of experiential learning is that it can be designed to allow failure to occur – an important source of entrepreneurial learning (Cope, 2011) – but avoiding the financial and emotional costs of failing that would be encountered in the real world (Byrne and Shepherd, 2013).

Experiential learning approaches to entrepreneurship education have important implications for the teacher, changing their role '. . . from a conveyor of knowledge to a promoter, facilitator and manager whose task lies in organizing appropriate learning experiences for students' (Haase and Lautenschläger, 2011, p 157). In particular, it requires a change from a supply-led approach to learning, in which students are taught something, expected to store it away and pull it out when required (what Handy (2003) calls 'warehoused knowledge'), to a demand-led approach to learning which supports students in ways that are unplanned, emergent, short-term and non-sequential. This requires a 'pull' model of learning resources which enables students to access a range of learning sources when required (Rae, 2012).

In summary, there is a strong case that 'entrepreneurship education needs to go beyond the classroom and incorporate field based instruction and experience' if it is to develop entrepreneurial 'know how' amongst students (Haase and Lautenschläger (2011, p 157). It is argued that this approach is effective in equipping students with the competences needed to start a business and influence their perceptions of the desirability of doing so. Others have suggested that the learning outcomes extend beyond knowledge and skills (Wong *et al*, 2012), with positive effects on self-confidence and creative capacity being additional benefits. Various experiential approaches in entrepreneurship education are now in evidence, ranging along a spectrum from consultancy projects with entrepreneurs, placements in entrepreneurial businesses, simulations and start-up businesses. However, there is little in the way of description, discussion and sharing of experiences of such approaches (Gabrielsson *et al*, 2010), the effect of which is to slow the development of good practice and create major difficulties for new entrants to entrepreneurship education.

This paper seeks to make a contribution towards filling this significant gap in the entrepreneurship education literature by reporting on one particular experience of running an experiential learning assignment. The assignment required students to start a limited duration 'activity' which would create financial value. Assessment was by means of a reflective essay because '. . . students must also reflect on their actions in order to learn' (Pittaway and Cope, 2007, p 214). The merit of this approach is that it comes closer than most other examples of experiential learning to meeting the requirement to '. . . be designed as close to reality as possible, emulating contexts similar to those in which entrepreneurs act' (Haase and Lautenschläger, 2011, p 157). Specifically, it meets the criteria suggested by Pittaway and Cope (2007, p 226) for effective entrepreneurial learning by students, namely a context characterized by 'ambiguity and uncertainty . . . [to] simulate the uncertain, dynamic and highly contextual nature of new venture creation' and involving the potential for discontinuities, critical events and crises'. We discuss the design of the activity, reflect on student learning outcomes by drawing upon students' own learning reflections and offer our own reflections on the assignment.

Methodology

The paper presents an analysis of student reflections on the assignment. Students were required to submit written group reports which described the activity that was undertaken and the critical decisions made and provide both group and individual learning reflections. These learning reflections were analysed using thematic analysis (Ryan and Bernard, 2003; Braun and Clarke, 2006), a technique for analysing and reporting patterns (themes) within data. Following Braun and Clark (2006) no quantitative measure of prevalence to define a theme was imposed, the preference instead being to define a theme as capturing something important in relation to the overall research question which, in this case, related to learning outcomes. The approach advocated by Braun and Clarke (2006) was adopted: familiarization with the data, generating initial codes, searching for and reviewing themes and, finally, defining and naming them.

This approach to data gathering is quite common in the entrepreneurship education literature (see, for example, Pittaway and Cope, 2007). Students were given little direction as to what could be written in their learning reflection. They were simply asked, 'what have you learned about entrepreneurship from this activity?', and thus they were not constrained in what they could write.

The value challenge

Context

The University of Strathclyde's Hunter Centre for Entrepreneurship (HCE), whose origins lie in the Strathclyde Entrepreneurship Initiative (Morrison, 2001; Yendell, 2001), is one of the longer established centres of entrepreneurship education in the UK. From its inauguration in 1996 until the mid-2000s its focus was on offering undergraduate courses to students from across the university and some Master's-level MBA teaching and technology commercialization courses. Since the mid-2000s its undergraduate teaching has become integrated into the BA Business Studies degree and it now offers a Business Enterprise pathway of courses from Year 1 to Year 4 (Honours year). Hence, in contrast to the early years, the Centre's classes are now mainly populated by business studies students.

The Centre's teaching has always had a strong emphasis on the need for students to 'experience entrepreneurship'. It was an early pioneer of the business consultancy course, which requires students, working in groups, to undertake a consultancy project for a local SME (Cooper *et al*, 2004). Early experience of teaching the first-year course, developed as the introduction to the Business Enterprise pathway, revealed student dissatisfaction with the strong emphasis on lecture-based teaching and indicated the need to introduce more experiential learning. However, the large number of students taking the course (initially around 150 and quickly growing to 300) posed challenges.

The Value Challenge, run by the Jim Moran Institute at the University of Florida, was identified as an appropriate model of experiential learning. The Challenge requires students, working in groups of 3 or 4 and given US$25 gift cards as start-up capital, to create an entrepreneurial activity which itself creates financial and/or social value over the course of a week (see http://www.wix.com/jmichallenge/jmichallenge).

The HCE's Value Challenge is a fundamental assignment in the first year entrepreneurship class. The class – which is taught over two semesters through a combination of lectures and tutorials – is intended both to introduce students to entrepreneurship and to be sufficiently appealing to attract students to follow the enterprise pathway as either single or joint honours for the remainder of their course. Students make this decision at the end of their first year. The assignment was included for the first time in the 2010–11 academic year and repeated in 2011–12 with minimal changes.[2]

Assignment design

Students worked in groups of three, four or five. Because of the size of the class this meant that there was a large number of groups (51 in 2010–11 and 71 in 2011–12). Groups were allowed to invest a maximum of £20 in order to minimize the downside financial risk. Some flexibility was introduced in 2011–12 by allowing groups to reinvest profits from initial trading. There were restrictions on what the groups could do, with anything associated with food preparation, children, alcohol, sex and gambling being prohibited. Students were also warned about personal safety and not to endanger the reputation of the university or violate the Business School's Code of Professional Conduct. Any profits generated were to go to charity. The original intention was that profits would be pooled and donated to just one or two charities; however, failure to agree on appropriate recipients meant that as a default each group donated its profits to a charity of its choice. This proved to be successful, giving groups an added motivation to maximize their profits, although it did appear to have an effect on some groups' sales techniques.

Groups gave a presentation on their initial idea in their tutorial group and received feedback from their tutor and other members of the tutorial group. In a subsequent tutorial meeting, two weeks later, they presented their final idea which had to be approved by the tutor and signed off by the course leader. In 2010–11 groups also received mentoring from fourth (final) year Honours students. Feedback indicated that this worked well and it was an oversight not to continue this in 2011–12.

In response to feedback from the 2010–11 cohort that the time allocated for the Value Challenge was insufficient, in 2011–12 it was introduced in week 1 of semester 2, with the tutorial presentations in weeks 3 and 5, final presentations in week 9 and a final report deadline at the end of week 10 (end of the Spring Term).[3]

Students submitted group reports of 2,000–3,000 words and made a presentation to an audience comprising their tutorial group, tutor and the course convenor. The report was in two parts: a description of what the group did and why, and a learning reflection. Each part was equally weighted. The assignment contributed 40% of their overall mark for the course. The presentation was not separately assessed but students were told that a poor presentation, or no-show, would result in a marks penalty being applied to their report.

Activities

The activities undertaken by the students can be grouped into five categories (Table 1). The first was product-based activities.[4] This was a varied group which in 2011–12 included a student magazine, T-shirts, university-branded wristbands, key rings, a

Table 1. Group activities.

	2011–2012	2010–2011
Products	25	17
Events	18	6
Retail	11	13
Services	11	14
B2C*	(9)	(11)
B2B**	(2)	(3)
Web-based	6	1
Totals	**71**	**51**

*Business-to-Customer: **Business-to-Business.

cook book, a 'girls' night-in' guidebook, a 'girl's night-out' kit and both Mother's Day and Easter gifts. Craft-based products, notably jewellery, were particularly popular.

The second category was events. For example, several groups organized 'new band' nights. FIFA Xbox tournaments were also common. Other events included a quiz night, speed dating, a photographic competition, a race night, a clothes swap, a fashion show and a *ceilidh*.

The third category was services, also diverse in its coverage. Several offerings were aimed at the student market; for instance, a fast food collection service, a laundry service, a cleaning service and a bus service for university sports teams. Others included a private dinner party waiting service; the sale of pre-packed sandwiches; and face-painting. Business-to-Business (B2B) services were much less common: examples included a Facebook consultancy service for small businesses and a coffee delivery service to offices.

The fourth category was retail. Several groups simply bought products in bulk online and sold them at a higher price – examples included cosmetics, wrist bands, watches, iPhone covers, stationery sets, Mother's Day cards and photo frames.

The final category, which was much more significant in 2011–12 than in 2010–11, was web-based activities. This included a university smart-phone application, a website for selling second-hand books and a 'love wall' inspired by the Romeo and Juliet story. Not surprisingly, given the large class size, several of the ideas were duplicated.

In many cases the choice of activity was based on a group's assessment of its collective assets. These assets were of three types. First, there was the knowledge and experience the group members possessed: for example, two of the students in the group that sold pre-packed sandwiches worked in the hospitality industry and so had industry contacts, awareness of regulations and knowledge of where to source their product.

The second asset type was contacts that group members had: several groups used their contacts with Student's Union officers either to secure venues for events or to gain the Union's endorsement for the particular activity (such as the student newspaper). Another group, which resold the use of five-a-side football pitches provided free by Powerleague – an organization that, amongst other services, provides facilities for and supports five-a-side football events in the UK – exploited a contact that one of the group had with a local manager in the company.

Finally, the third asset type was resources to which groups had access. For instance, one group which produced a CD of new Glasgow musicians secured free access to a recording studio because one of the group members worked for the university radio station. Another group, which planned to produce a student newspaper, had access to the relevant software through a relative of one of its members.

Some groups made their choice of activity on the basis of 'passion'. For example, one group that designed and sold T-shirts with exclusive images of well-known buildings in Glasgow explained their choice of activity as follows:

> '. . . as all of the team had a strong interest in fashion, T-shirts appeared to be an ideal product as all members could be really passionate about the product.'

Those groups involved in music-related activities were passionate about music. One group was fiercely opposed to the prevalence of 'pay-to-play' events which require new bands to sell a certain number of tickets, with the proceeds going to the event promoter and the band being required to make up any shortfall. The group 'set out to prove that we could run a successful live band event without taking money from the performing acts but instead giving them the profits from the tickets they sold and promoting it as an event in which everyone gains something from the venture'. Finally, some groups based their activity on 'something we would like to have ourselves'.

Choice of activity – thematic analysis

A number of themes can be identified amongst these activities. Several groups realized that the initial critical decision was whether to offer a service, develop and sell a product or organize a one-off event. Many of the groups which organized events took the view that this would probably involve less time than making and selling a product or delivering a service and would generate the greatest financial return per hour of their input. The race night group commented that because of their previous experience ‘we knew it could make a lot of money in a short period of time’. Certainly, the financial return generated by some of the groups which offered services was extremely low when calculated on the basis of the time that they invested in the activity (less than £1 per hour).

Several groups initially came up with ideas which they subsequently decided not to pursue, or they encountered problems beyond their control, and so had to find alternative ideas, which lost them time. Reflecting the lean start-up ideas (Ries, 2011) that were covered in class, a few were able to ‘pivot’ when the original idea hit problems rather than seeking an entirely new idea.

The most ambitious ideas – notably web-based applications – were the most likely to fail to generate any financial return.

Many of the groups targeted other students as customers. This included university-related products, various services (described above) and the creation and distribution of menus aimed at students on behalf of local fast food establishments. The events were typically also aimed at students. The limitation here was the limited purchasing power of students.

Several of the activities were oriented to special occasions that occurred during the period of the Value Challenge, namely St Patrick’s Day, Mother’s Day and Easter. Some groups confined themselves to selling to friends and family. Deriving sales from ‘strangers’ represented a significant step-up, especially for Business-to-Customer (B2C) enterprises.

The groups all made extensive use of social media, especially Facebook, to communicate with each other, advertise and sell their products and services. The use of social media was markedly higher in 2011–12 than in the previous year.

It was disappointing, however, to observe that many of the groups did little or no prior market research. This was typically linked to limited value creation. However, most of these groups did recognize, in their learning reflections, that this was a failing.

Financial returns

The majority of groups in both years made money (Table 2). The 51 teams in 2010–11 generated around £2,500 profit while the 71 teams in 2011–12 generated over £4,000 in profit. However, the distribution of returns was highly skewed. The most successful team in 2010–11 generated £260 while its counterpart in 2011–12 generated £779. An alternative way of assessing the financial value created is in terms of investment and revenue. Looking just at the 2011–12 groups, the total investment was £2,082. Through bootstrapping some teams did not invest anything at all and most invested less than £20, the maximum allowed. Some groups reinvested profits and this investment generated a total collective revenue of £7,140 (a 3.4 times multiple on the invested amount) and a total collective net profit of £4,243 which, as noted earlier, was donated to local, national and international charities with, typically, one or more group members having a personal connection to the chosen charity.

Table 2. Financial outcomes.

Financial value created	2010–11	2011–12
Loss	0	5
£0	8	4
£1–£10	6	4
£11–£20	16	10
£21–£50	15	21
£51–£100	3	17
£101–£200	3	8
Over £200	2*	1**
Totals	**£2,560**	**£4,243**
Average per team	**£51.20**	**£59.76**

* Maximum £260; **Maximum £779.17.

It is important to note that the value created by the Value Challenge goes beyond cash profits. In addition to the financial return several groups also created social value. Typically this was achieved by partnering, something best illustrated by the various groups that organized ‘new band nights’. These events created financial value for the student groups, generated bar sales for the venue and exposure for the bands which, in most cases, performed for free. Similarly, the group that created the CD of new musicians noted that this venture

> ‘. . . could also assist aspiring song writers in achieving their ambition. Knowing that we were helping real musicians in such a manufactured industry really helped drive us on to make the sales and get as many customers as possible to buy our product.’

The ‘race night’ group worked in partnership with their local football team, which was in financial difficulties, sharing the group’s profits with the club. A group that organized a fashion show created financial value for themselves and the designer. The group that partnered with the Powerleague company to sell time slots on five-a-side football pitches noted that it benefited the company by getting it better known in the student market.

Learning outcomes

The Value Challenge has two types of learning outcomes. First, through learning by doing, students were able to understand better some of the concepts that they had learned in the classroom. Second, students encountered numerous learning situations which would have been impossible to create in the classroom. This form of experiential learning typically involved what might be termed the 'the real world of the small business start-up'.

Reinforcement of classroom learning

The Value Challenge assignment followed lectures on entrepreneurship fundamentals (for example, opportunity, creativity, liability of newness, financing and bootstrapping) and ran in parallel with others on entrepreneurial skills (including pitching, pricing, guerrilla marketing, use of social media, social capital and negotiation). As the following quotations from the group reports indicate, there was a clear view amongst students that the Value Challenge had enhanced their understanding of these concepts:

> 'I have managed to put into practice many of the concepts taught throughout the class. I have seen that a lot of the theoretical learning was directly applied by myself in our real world business.'
>
> 'The assignment has helped me understand some of the concepts of entrepreneurship better.'
>
> 'The Challenge allowed me to understand concepts that I didn't grasp from the class.'
>
> 'Putting into practice what we learned in lectures.'
>
> 'We feel the Value Challenge allowed our team to actively experience all of the lessons we had been taught in lectures and tutorials.'

These comments also serve to underline the limitations of classroom-based teaching – what Handy (2003) terms 'warehoused knowledge' (as noted earlier). Real learning needs to be underpinned by experience and reflection in order for students to appreciate better the relevance of theoretical concepts.

In terms of specific applications, several groups used creative thinking techniques and brainstorming to generate business ideas; the Hermann Brain Dominance Model (Lumsdaine and Binks, 2006) was used by some groups to evaluate the strengths and weaknesses of their members in order to decide which position in the business would be most suitable for each individual member. One group commented:

> '. . . with the use of this model each team member was better able to understand each other, which enabled the team to make key decisions effectively with very little conflict.'

Most groups confronted the reality of the liability of newness (Stinchcombe, 1965). Comments that the value challenge '. . . has helped our group to fully understand the liability of newness' and that '. . . without doubt [it] proved to us the impact of liability of newness' were typical. The consequence of liability of newness was that people 'were unsure about our products', did not 'take us seriously' and 'were not interested'.

However, groups generally did not think how they might develop strategies to overcome the problems which arose. The most interesting response to the liability of newness was a group which sold soft drinks at football matches with the cooperation and involvement of a business, owned by the parents of one of the group members, that had a food and drink concession at several football grounds. The group effectively ran its activity as a subsidiary of the concession, selling bottles and cans of soft drinks. The deal was that the group would split its profits with the 'parent' business on a 50:50 basis. The group made a well-balanced argument for this strategy:

> 'We know . . . that the liability of newness is a huge factor which can lead to the failure of a start-up business and as result we argued that paying 50% of our earnings was almost worth it just to overcome the liability of newness itself. In working under [name of company] we did not have to worry about liability of newness as we were operating as a sub-branch of their company under licence. It is clear that the advantages far outweighed the clear disadvantage of giving away 50% of our business.'

Most groups actively bootstrapped to access resources, often through exploiting their social networks. Groups used their own possessions (for example, a karaoke machine for an event), used contacts to create spaces to sell (for example, a staff canteen, a nursery) and accessed software and printing facilities, used free websites to sell and Facebook to advertise, negotiated free distribution channels (such as campus coffee shops to sell jewellery, a gym to sell sport watches), negotiated with companies to obtain sponsorship and free products for prizes (for example, restaurant meal vouchers for a photo competition), persuaded individuals with special skills to offer services for free (for example, a sound engineer for a new bands night event) and negotiated the free use of venues to host events. Typical comments were:

> 'We found bootstrapping a very significant factor and managed to negotiate a free venue, used resources that we already had and free advertising.'
>
> 'Through bootstrapping we promoted our service through Facebook, received free face paints, painted

PR employees for [name of club] and printed our own posters advertising the service.'

> 'As [name of student] had worked full-time with [name of company] a flier was designed and printed for no cost.'

One group appeared genuinely surprised by what could be achieved through bootstrapping, commenting that 'it is possible to bootstrap pretty much anything'. From these experiences several groups reached the important insight that bootstrapping shows the importance of social capital:

> 'Who you know can be just as valuable as what you know.'
>
> 'It is not always about what you know in relation to business and entrepreneurship, but also who you know.'

Pricing was introduced into the course content in 2011–12 because in the previous year groups generally operated on the assumption that they needed to set prices low in order to compete. Some groups applied this classroom learning: for example, one group commented that 'instead of just using cost pricing . . . we decided to use customer-segments and dynamic pricing'. Some of the events groups also used dynamic pricing. One group commented as follows: 'we saw that pricing differentiation is a very effective method of attracting customers. We considered various methods of dynamic pricing and then decided that penetration pricing was the most effective so we charged less for customers who purchased tickets at least a week in advance.' Another group – selling fashion-oriented T-shirts – concluded from their experience that price was actually unimportant:

> '. . . despite having a product cheaper than many competitors we were met with attitudes of the product being too expensive at times. This emphasised to us the effects of successful branding – many would pay double the price for a well-known brand name.'

However, the majority of groups continued to set prices low but in their reflections realized that this was inappropriate:

> 'We did not realise the value of our business in terms of what the customer would get out of our service, and therefore if we were to start again we could have put more thought into pricing and priced the service higher.'
>
> 'We feel we seriously under-priced our product.'
>
> 'We learnt that pricing is a crucial factor and may determine if your business will be a success or failure.'

Experience of the 'real world' of the start-up

The second important learning outcome of the Value Challenge was that it enabled students to encounter numerous learning situations which would have been impossible to create in the classroom: there were many such examples.

Groups were immediately confronted by the reality that it is a regulated world. Food preparation, street selling and language tutorials for children were just three examples of ideas that groups had to reject because the costs of becoming regulation compliant, and the time required to do so, were too great. As one group noted, this makes it '. . . a lot harder than people think to start up a business. There are many regulations and procedures to take into account before you even get started'.

Those groups engaging with businesses realized that it was essential to find the 'right' person in the organization to negotiate with – typically this meant the person with the authority to make a spending decision. As one group observed, 'we also understood that who you talk to is very important. To begin with we wasted time talking to staff that had no authority to give us the information we needed'. Related to this was the discovery made by some groups that it was easier to do business with local firms than branches of national chains, not least because the local-firm owner was usually readily accessible. One group concluded that they should have approached independent companies for sponsorship from the outset '. . . rather than wasting our time with large companies since store managers couldn't take sponsorship decisions and we had to contact head office in writing . . .'.

For many groups one of the most significant learning experiences was negotiation – its importance, how to do it effectively and what could be achieved from doing it well. This is reflected in the following:

> 'We learnt that negotiation is an important part of business.'
>
> 'The main skill [we learnt] . . . was negotiating skills. This skill was fairly new to all of us . . .'
>
> 'We've also learnt, to an extent, how to negotiate . . . We realise that negotiation isn't about throwing a tantrum until you get your way but is about finding a middle ground that results in both parties being satisfied.'

> 'We never accepted the first offer, and by negotiating we got better deals which also led to lower costs.'

A few groups were confronted with the reality that people are often not reliable – for example, stringing them along without making a commitment or not honouring verbal agreements. One student made the following observation, with a tinge of world-weariness: 'I have also learnt that entrepreneurs cannot trust verbal agreements as guarantees . . . . People will let you down'. One group which had encountered such behaviour concluded that it was important to 'get it in writing'.

The Value Challenge gave students the experience of selling which Jones (2011, p 99) regards as 'the most fundamental of business skills because it permeates across every level of business'. One student observed, 'I have realised that selling skills are important. It has specifically improved our selling skills'. Another group commented that 'we found the most challenging area was trying expand beyond the family/friends market and sell to people we did not know'.

Many groups had to make a pitch to businesses to attract resources or engagement. This was also a new experience. One group made the following observation: 'The most important lesson we learned is pitching to potential sponsors and in particular giving an elevator pitch. None of us had pitched to businesses before and it was a great experience and crucial skill that we acquired'. Another group made the perceptive observation that impression management was critical in the pitching process: 'confidence is a key aspect when pitching your idea to people and coming across as experienced'. Having observed that 'persuasion skills were needed to argue our case . . .' one group recognized that 'different forms of persuasion had to be used when approaching different businesses . . . This led to different types of professionalism being used, such as the way we spoke and presented ourselves towards different areas of our target market'. This group – which sold jewellery – also reported learning from feedback: 'a certain shop owner . . . advised us to present the samples differently so [that] we [would be] taken more seriously.'

Finally, given that the generation of students taking the Value Challenge has often been labelled 'digital natives', it was particularly interesting to note that some groups had recognized the limitations of digital communication. One group commented that there are 'limits to what the web and social media can achieve' in terms of advertising and promotion. Another realized that face-to-face negotiation was much more effective than doing it by email or through social media: 'it is not enough just to launch a Facebook page and hope that goods are going to sell by themselves'. Another highlighted the power of word-of-mouth recommendations: 'performing a great service for customers resulted in some of them spreading positive words about us which really helped us attract some more customers'.

Entrepreneurial insights

For some groups the learning that they derived from the Value Challenge involved a higher level of insight relating to the entrepreneurial fundamentals. Four sets of observations were particularly prescient.

The first is about the importance of 'passion':

> 'You must be passionate about what you are doing.'
>
> 'Having passion in your venture is the number one key element that without it you are almost definitely going to fail.'
>
> 'I have learnt that passion is vital. An entrepreneur must be passionate about their product if they wish to succeed: a valuable lesson I will never forget.'

The second deals with the importance of being customer-centric:

> 'It is about satisfying the customer, solving their problems.'
>
> 'We learned that entrepreneurs must pay attention to the customer...'

The third covers the fact that delivering on promises is critically important:

> 'The way we have stuck to all our promises to [name of club] of what we would offer them has created a good company image. A strong company image is extremely important for a company that is looking to grow.'

The last is on the importance of time:

> 'The biggest lesson learned from the experience is that time is an entrepreneur's biggest asset and must be treated with respect and used as efficiently as possible if you are to be a success.'

Learning from failure

It is also important to note that considerable learning came from negative experiences. This underlines the importance of providing students with learning experiences which give them the freedom to make mistakes and accept the consequences; but in an environment in which the costs of failing are circumscribed, so that they can 'fail safely'.

Groups which had been disappointed by their relative lack of success made two main retrospective observations. One related to 'the importance of market research' – groups which had encountered lower levels of demand than anticipated admitted that they should have undertaken market research. The other related to distribution channels. Several groups noted that they had used inappropriate distribution channels to reach their target markets or had not used sufficient channels. For example, the group that had made a CD of new Glasgow bands reflected that they should have 'approached an independent record store'. The Glasgow T-shirt group realized in retrospect that they should have targeted the tourist market rather than the student market and sold their product through retail channels. A group selling jewellery concluded that they should have used local cafés to advertise and sell their products. The group selling five-a-side football pitches realized on reflection that the market was smaller than they had anticipated and acknowledged that they should also have regarded female students as potential customers.

Entrepreneurial intent

An important objective of the assignment was to enable students to experience some of the realities involved in starting a business so that they might have a better basis for considering this as a career option. Reactions varied: some found that '. . . it is surprisingly easy to start a business'; for others the realization was that '. . . there is so much effort and detail that goes into a small business like ours' with '. . . a lot of hard work, effort and determination . . . needed to start a business' and that '. . . it takes a lot of patience and time to start a business'.

The two viewpoints are, of course, not conflicting. One student observed that 'as a team we learnt that there is nothing unachievable. The opportunities that are out there can be used to create a new venture, even a small one. *All you need is hard work and commitment'* (emphasis added). Several groups also noted that having the business idea is not enough – the idea has to be executed effectively. Given the emphasis in the current entrepreneurship literature on opportunity identification this is an important insight. As noted above, groups typically used bootstrapping to access resources, often by drawing upon their social capital, and were able to access critical resources at zero cost. For some, this prompted the learning reflection that 'you don't require a vast amount of money to start a business' while 'even with little money great value can be created'.

Overall, as the following quotations indicate, the Value Challenge has increased the level of intent for some students:

> 'It has made me believe that I am capable of starting my own business.'
>
> 'The major thing I have learnt about myself from the Value Challenge is that I actually can start a business.'
>
> 'I was able to see what it actually means to be an entrepreneur and what kind of problems he/she faces . . . Now I feel confident that in the future I will be able to . . . convert my ideas into a real business.'
>
> 'It has increased my confidence levels greatly and made me more determined to start my own business in the future.'
>
> 'I feel the idea of becoming an entrepreneur is much more accessible than I previously thought.'

Moreover, in some cases this effect may prove to be immediate in implementation:

> 'The Value Challenge has definitely encouraged me to develop my entrepreneurial skills further and perhaps start up my own project in the next few months developing a passion of mine (painting) and turning it into something that I can both enjoy and make money out of.'
>
> 'This project has inspired me to continue with personal entrepreneurial projects I have in mind.'

Indeed, quantitative evidence from the 2010–11 cohort indicates that the overall effect on intent has been moderately positive (Table 3).

Personal development

Students also reported that the Value Challenge had enhanced their personal development skills. Many students reported that they had learnt useful organizing skills. Nearly all of the groups reported that they had learnt the importance of time and time-management. Learning how to work in teams, to trust team mates and about the importance of team communication was also widely shared. One student confided that 'this project has made me realise my weakness – I lack trust in my team mates'. Several students reported that it had enhanced their self-confidence. Some reported that the Value Challenge had enhanced their skills:

> 'My communication skills have improved.'
>
> 'Through this project I have developed my selling and communication skills.'
>
> 'It has specifically improved my selling skills.'

In some cases the Value Challenge enabled students to discover something about themselves. One reported, 'I

Table 3. Course evaluation: 2010–2011 cohort.

	Question	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Responses	Mean
1	The class has helped me to present myself with confidence.	40	90	42	5	1	178	3.92
2	My communication skills have improved.	39	98	35	7	0	179	3.94
3	As a result of the class, I feel confident in tackling unfamiliar problems.	50	96	30	2	0	178	4.09
4	I am more likely to start a business in the future as a result of taking the class.	35	64	61	15	3	178	3.67

Note: Scoring: 5 (strongly agree) to 1 (strongly disagree).

learnt numerous aspects of myself that I would never have discovered if I didn't take part in this task...The challenge helped me discover self-confidence I never knew I had. This was discovered going door-to-door selling, asking for sponsorship and prizes [from companies].' Another said, 'I've also realised that I'm more self-confident than I imagined.' Such self-discovery was typically both surprising and satisfying for the students concerned. Table 3 confirms the significant and widespread effect of the Value Challenge on the self-confidence of students.

Educator perspectives

The feedback was entirely positive, suggesting that the Value Challenge met our objective of enabling students to develop entrepreneurial capabilities and mindsets by providing them with an authentic experience of the way of life of a start-up entrepreneur. The comment of one group – '. . . we feel it was a fantastic learning experience' – was widely shared.

Nevertheless, we are aware of various deficiencies and unresolved issues that would need to be considered by anyone wishing to replicate our efforts. Accordingly, in this final section we offer our own reflections on a range of topics that need to be addressed in order to enhance further the Value Challenge as a learning experience for students.

An important issue is whether the focus of the Value Challenge should be restricted to the creation of financial value or, rather, that students should also be allowed to develop activities that create social value. In our original running of the Value Challenge, in 2010–11, activities that generated social value were permitted. However, there was no consideration in these Value Challenge assignments with a social focus on how these ventures could become sustainable and it was hard to measure outcomes. Moreover, social enterprise is a small component of the class (it is covered in other parts of the course) and there simply was not the time to cover in any detail the various business models used by social ventures. Accordingly the decision was made to drop the social value option in 2011–12. A Value Challenge type assignment where the focus was solely on creating an activity that generated social value would be appropriate for a dedicated course on social entrepreneurship.

Another central consideration is whether to continue with the requirement that students donate their profits to charity or, instead, that they should be allowed to keep their profits. Many groups were motivated by the thought that their efforts would benefit a charity; and, moreover, a charity of their choosing. However, there were also cases of what might be termed 'lazy selling', where the sales pitch was based on the fact that 'the money was going to charity', rather than on the intrinsic merit of the product or service. This is the same challenge faced by The Big Issue. This magazine is intended to be worth purchasing in its own right – but the evidence suggests that most people buy it as a 'pity purchase' to help the vendor (Hibbert *et al*, 2005).[5]

The £20 investment limit imposes constraints on what the groups can do – and was a significant difficulty for some groups. In particular, it limited the amount of advance purchasing that groups could undertake which, in turn, compromised the ability to secure bulk purchase discounts. This was a particular problem for the group intending to sell distinctive T-shirts.

Some groups resorted to persuading customers to pre-order; while this was effective in overcoming cash-flow problems, it did have the effect of reducing demand, with some customers reluctant to order without having sight of the actual product. One group in 2010–11 attempted to overcome the restrictions arising because of the £20 investment limit by initially investing its money in a low budget idea (selling discount cards). They then reinvested the profits from that venture into making jewellery to sell at an 'arts and craft' fair. These profits, in turn, were reinvested into card-making. In other words, they were investing each time in an activity with greater profit potential.

The overall effects of the £20 investment limit were the highlighting of the general issue of scale and enabling a connection to be made to 'the liability of smallness', a topic covered in the course in conjunction with the 'liability of newness'. In addition, the investment limit encourages certain types of activity, notably those requiring only low levels of investment which generate an instant profit. As a result, a lot of the activities were based upon arbitrage – buying low and selling at a higher price, sometimes adding value to the original purchase.

Arguably this does not matter. Students were experiencing entrepreneurship regardless of what activity they undertook: the limit is there to ensure that they were not exposed to significant personal financial risk. However, it is acknowledged that it may discourage students with more ambitious business ideas. Indeed, there is a tension between the natural desire for students to be ambitious, but with the attendant risk that the idea might not succeed, and the equally strong desire that the activity should have a positive financial outcome.

One possible means of overcoming the constraints of the £20 limit would be to establish a fund which could either lend to, or invest in, the groups. However, this raises problems about how the fund would be financed and how it would deal with losses. The reality is that the greater majority of commercial start-ups are funded by a combination of founder and family investment and bootstrapping – precisely the manner in which the Value Challenge groups financed themselves.

The Value Challenge lacks realism in an important respect – that students are not required to cost their own time or generate a return on the time that they invest. This means that a major cost of doing business is not considered. Not surprisingly, if instead of being donated to charity the profits were distributed to the group members on the basis of their time input, a majority of the activities would generate an extremely low hourly rate of return, well below the current UK national minimum hourly wage rate. One option for the future would be simply to ask each group to perform this calculation. This might be sufficient to emphasize the cost of labour for any enterprise.

We continue to be frustrated by our inability to convey to students the time input required and the importance of starting early. We extended the duration of the Value Challenge in 2011–12 on the basis of feedback from the previous year. In 2011–12 we reported student feedback from the previous year on the time needed to undertake the assignment. Nevertheless, many groups delayed starting and subsequently commented on time constraints that they encountered. With such an open-ended assignment as this it is perhaps inevitable that problems of time management should emerge so prominently. However, we do not want to introduce artificial progress reports in addition to the two tutorials already in place. Nevertheless, the students need to realize that a business plan, especially if it is to be used to raise debt or equity funding, would be expected to include critical milestones.

As with any learning experience that occurs outside the classroom, the Value Challenge involves Health and Safety obligations. However, unlike a fieldwork class (for example, in a geography course) where all of the students are exposed to the same risks and it is relatively straightforward for staff to assess these risks beforehand, groups in the Value Challenge undertake a variety of different activities, each with its own risks; and realistically these risks cannot all be identified and assessed in advance by staff. In subsequent discussions the university's Health and Safety department suggested that groups should be given appropriate documentation in order to undertake their own risk assessment before starting their activity. So, for example, groups that were proposing to undertake events would have to consider how to respond in the event of a fire. This incorporates an important additional element of the real world into the assignment and the risk assessment could be included as part of the overall assessment of the students concerned. It should be noted that the university administration was not consulted about whether or not the Value Challenge raised any problems with regard to insurance cover.[6]

A further question concerns the stage in the degree course at which the Value Challenge should run. The few examples of similar learning experiences that we could find generally occurred in the later stages of courses and therefore involved students with more experience, whereas the Value Challenge is intended for first-year students. Notably, Babson College also runs its experiential Foundations of Management and Entrepreneurship in Year 1.[7] Neck and Greene (2011, p 63) argue that business start-up classes should be offered at the start rather than the end of entrepreneurship programmes, on the grounds that '. . . at the undergraduate level students have little business experience and to truly develop empathy for the entrepreneur one must experience new venture creation before he or she can study business management or other disciplinary areas'. However, embedding the Value Challenge in the first year class has implications for the content of subsequent years of the programme. In particular, it raises the problem of how to ensure that classes in subsequent years are not an anti-climax after the intense hands-on experience of the Value Challenge. Equally, if the Value Challenge is offered in the final year then students have the opportunity to continue with the business idea after they graduate. In the case of first year students the questions arise about whether those groups with ideas clearly having the potential for success, if for no more than as part-time or vacation activities and able to generate at least as good a financial return as typical student jobs, should be encouraged to continue; and, if so, in what form should this encouragement take.

Finally, it should be noted that the learning outcomes of the Value Challenge have generated a feedback loop to review and revise the classroom content of the Year 1 class. While this was originally influenced by the content of entrepreneurship textbooks, we now find that it is being driven by student experience, with the content in lectures and tutorials now explicitly designed to give students the knowledge, concepts, skills and tools needed to undertake the activity effectively. For example, the experience of the Value Challenge in 2010–11 highlighted the need for content on pricing: this was included in the 2011–12 course. In its turn, the experience of the 2011–12 Value Challenge has highlighted the need for more content on the following.

- Tools to develop a register of personal 'assets' that might provide the basis for a business.
- Distribution channels and routes to market.
- Further material on selling.
- Different types of capital (social, reputational, and so on); and
- advertising for impact.

It is pertinent to note that many of these issues are not addressed, or covered only superficially, in textbooks. However, the challenge raised by Rae (2012) to support students with learning resources on an as-needed basis remains to be addressed.

Conclusions

Traditional approaches to entrepreneurship education are coming under increasing criticism on several grounds, notably the emphasis on teaching 'about' entrepreneurship, the influence of business and management on course content and reliance on the business plan as the main pedagogical approach to learning. It is argued that entrepreneurship education needs instead to be experiential. However, there is little discussion of what form this should take and there are too few examples of experiential approaches in practice. In addition, although advocates of experiential learning approaches to entrepreneurship education make bold claims about its pedagogical benefits, there is also a paucity of evidence on learning outcomes or the effect on motivation and intent (ICF GHK, 2013). As a result there is little or no sharing of practice, something that is particularly challenging for those new to entrepreneurship education.

We suggest that this paper is a first step towards filling the gaps. It provides a case study of an experiential learning assignment that formed an important part of a first year entrepreneurship course in a Scottish university. It describes how the assignment was designed, what activities were undertaken by students and, using their learning reflections for evidence, identified the learning outcomes and effects on entrepreneurial intent and motivations. The evidence suggests that the assignment is an effective learning experience for the students, complementing and reinforcing prior classroom learning through application and exposing the students to the real world of the entrepreneur, something which would not otherwise have been possible; and it appears to have had a positive effect on entrepreneurial intentions. This evidence, in our view, supports the argument for teaching entrepreneurship through experiential learning. However, there is a need for further studies which, as we have sought to do here, share experiential approaches to entrepreneurship learning and reflect on design, delivery and learning outcomes. In time this should lead to the development of more effective approaches to entrepreneurship education.

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Our late colleague and friend Dr Jason Cope had the original idea for incorporating the Value Challenge into our first-year class. He had been awarded a Fulbright Fellowship to spend some time at the University of Florida in the autumn term of 2010–11, where he intended to learn about how the Jim Moran Institute ran its Value Challenge and then implement it in the spring term following his return to Strathclyde. Tragically, he died while in Florida. Pittaway and Thorpe (2012) provide an appreciation of his intellectual contribution.

With the academic year already started, we had to convert the idea into a workable assignment, with little time to identify and learn from similar experiences elsewhere. We are extremely grateful to Dr Jim Dever at the Jim Moran Institute at Florida State University, and Professor Brock Smith, University of Victoria, Canada and an academic visitor in 2010–11 in the Hunter Centre for Entrepreneurship, University of Strathclyde, for sharing their experiences of running Value Challenge-type assignments in their own universities.

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Notes

[1] *Dragons' Den* is a so-called 'reality television' programme, broadcast by the BBC, in which budding entrepreneurs are given the opportunity to sell their business ideas to five multi-millionaires willing to invest their own cash if they find the business proposal attractive.
[2] It has continued to run under new course leadership since our departures from the Centre.
[3] It was originally intended that the deadline would be in week 11 following the Easter break, but university deadlines for reporting marks necessitated a revised timetable. Nevertheless, this is considerably longer than a number of similar activities.
[4] Product-based activities were defined as involving some kind of transformation, even as mundane as bundling separate products into packs (e.g. a Mother's Day gift bag comprising flowers, chocolate, perfume, cosmetics and a card). Activities classified as retailing involved buying and selling on with no change in the nature or packaging of the product.
[5] 'The Big Issue offers people who are homeless the opportunity to earn their own money: a livelihood.' This is achieved by selling copies of the magazine to homeless people at a discount, which the individuals then sell (on the street) at the full cover price and keep the profit generated for themselves. See also: http://www.bigissue.org.uk/.
[6] Under the Young Enterprise Scheme – a UK programme based on the US Junior Achievement programme – both secondary school pupils and university undergraduate students set up and run companies for a year with support from mentors. Institutions pay a fee per team which includes public liability insurance.
[7] See: http://www.babson.edu.

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