

# Teaching applied business skills within the large class context: entrepreneurship models

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## Introduction

The current study seeks to investigate the issues of affording active learning experiences to students in higher education in large (and increasing) classes. For homogeneity, the study compares methods employed at one university by three different lecturers, involved in the delivery of experiential entrepreneurship education. While results are specific to applied entrepreneurship education, in the modern context of increased provision of active teaching and learning throughout the business and social science disciplines, it is intended that information provided by this study will have implications to the wider education community.

### Resourcing Applied Teaching and Learning

Communication, dialogue and active learning are noted as the best means of developing higher understanding and skills (Laurillard, 1993; Mayes and Fowler, 1999). In the globally competitive HE sector universities have the demands of increased numbers of students. As Mayes (2002) notes, "the real challenge is to find cost-effective ways of offering [education] to large numbers of learners." Rodrigues (2004) claims that resources can often dictate delivery style to a greater extent than pedagogy. Focus on student-centred, active learning and teaching has increased in recent years, but as Mayes (2002) points out, "there are too many learners and too few tutors" as "small group teaching methods are increasingly seen as an unaffordable luxury" (Mayes, 1995).

### Experiential Teaching in Large Classes

For educators there are logistical implications regarding the delivery of student-centred, experiential learning within the constraints of limited resources.

In universities the most common mode of education delivery is still the lecture. Lectures have the benefits of being highly cost-effective, particularly in the large class context. Bryans Bongey, et al. (2005: 253) note, however, "the benefit of supplementing lectures with other institutional methods." This raises the question: "with hundreds of students, how can the instructor supplement lectures to provide interactive and individualized student support?" (ibid: 252).

One method currently receiving a lot of attention is the use of Virtual Learning Environments (VLEs) (e.g, Newton, 2003). Kuster and Vila (2006:321) note that in marketing education “face-to-face tutorials were more highly rated than web-based practices.” Nonetheless, there is much evidence about the benefits of VLEs and online communications to reduce the problems associated with education delivery to large classes (e.g., Laurillard, 1998; Mayes, 2002).

Large class sizes are particularly problematic when pedagogy requires experiential learning within applied subjects. The rationale is that in order to learn applied topics, students must practice skills and competencies in a real (or simulated) scenario.

### Applied Entrepreneurship

The study of entrepreneurship commonly involves simulated business planning. Hytti and O’Gorman (2004:14) summarise the pedagogy literature: “enterprise education should take the entrepreneurship process as the starting point...and be based on the action-learning approach.” Commonly, business planning is group-based to facilitate development of communications and team-working skills, as well as meet the demands of the entrepreneurship discipline specifically. Like all applied subjects that include this type of exercise, the issue of how best to deliver this within the context of limited resources and time remains a critical one, particularly where large classes are involved.

### **The Study**

The current study is concerned with applied, experiential entrepreneurship education only. The three classes included in the current study are:

#### Class A:

Class A comprises 50 students all of whom are in the final years of an engineering degree. These students are experienced, have established relationships, and while they have little or no experience of business education, they do have much experience of working in teams. Students form groups of 4-6 and are taught via two lectures and one group session, in which they are all supervised within the lecture room at once, per week.. Team presentation and report comprise 30 percent of summative assessment. Individuals receive the group mark unless the lecturer becomes aware of disparity in contribution whereupon there is scope to reduce an individual’s mark by up to 10 percent.

#### Class B:

Class B comprises 120 students. Most are at levels 3 or 4. Students are most often studying business subjects, though many come from other disciplines, therefore there is variation in levels of business education experience. Students are grouped into teams of 4- 6. Students are taught via two lectures a week and one tutorial in which the staff:group ratio is 1:2. This module counts towards Honours classification for those in levels 3 and 4. The module is assessed 100 percent by team presentation and report. So as not to disadvantage those who aim for high ‘Honours-worthy’ marks, all attendance in tutorials is mandatory and non-attendance is penalized. Individual marks are extrapolated from the group mark by this tutorial participation measure and a peer review exercise. The peer review asks students to note the contribution of each team member as a proportion of the work undertaken. Students who have contributed more can thus identify this and those who have contributed less can in turn be identified and individual marks extrapolated accordingly.

### Class C:

Class C is a mandatory element within the Management, Finance and Economics degrees. Around 400 students are registered in this class. All students are at level 1 and are taught via two lectures a week and one tutorial in which the staff:group ratio is 1:1. Groups comprise between 16 and 25 students who are encouraged to create sub-groupings for the business planning exercise e.g., marketing subgroup, finance subgroup. Team presentation and report comprise 40 percent of summative assessment.

The make-up of each class studied in this research is summarized below in Table 1.

Table 1: Classes studied.

	No of students	Undergrad level	Discipline	No. in teams	Tutorial staff:group ratio	Prop. of summative assessment
Class A	50	4	Engineering	4-6	-	30%
Class B	120	3 and 4	Mixed	4-6	1:2	100%
Class C	400+	1	Management	16-20	1:1	40%

## Methodology

Questionnaires were distributed amongst students in Classes A, B and C during May and June 2007. For Classes A, B, and C sample size was N=22, 83 and 87 respectively. Total sample size was 192. To supplement the study seven focus groups were conducted also to follow up issues that had been identified by the quantitative instrument. Focus groups comprised two groups of 7-10 students from Classes A, B and C, and one group of 6 staff involved in the delivery of each class.

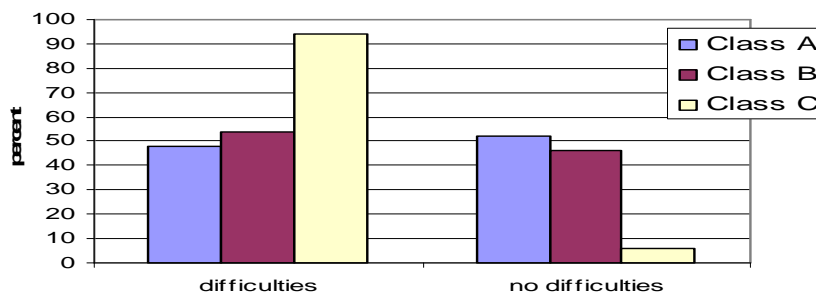
## Results

### Quantitative Data

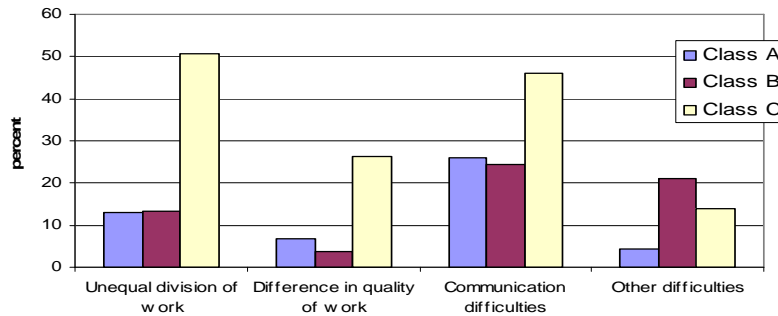
#### Teamworking

Students were asked about difficulties within teams. Graphs 1 and 2 show the distribution of those who experienced difficulties, and types of difficulties.

Graph 1: Experienced difficulties in the team



Graph 2: Type of team work difficulties experienced

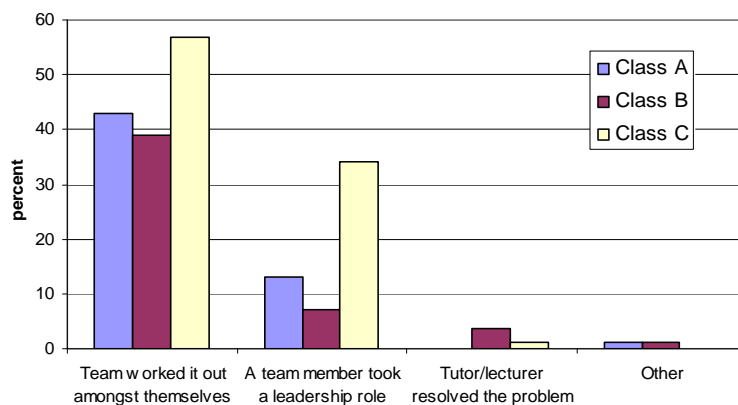


As Graph 1 shows, responses from Class C were significantly<sup>1</sup> more likely to include claims to have experienced difficulties working in a team than classes A and B. Graph 2 shows that most difficulties were more prevalent in Class C than in Classes A or B.

Resolution

In all classes most difficulties were overcome. Graph 3 shows resolution was achieved most often within the group. Interestingly, in Class C there is significantly<sup>2</sup> more reporting of resolution through a team leadership role.

Graph 3: How problems were resolved

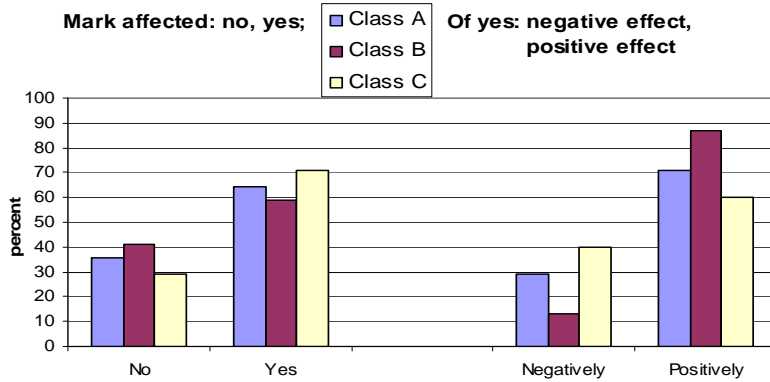


Assessment

Students were asked if they considered that their marks would be affected by working in teams. Graph 4 shows most students thought that group work had a positive effect. Despite this, a substantial proportion, particularly in Classes A and C, were less optimistic.

Graph 4: Perceived affects on marks

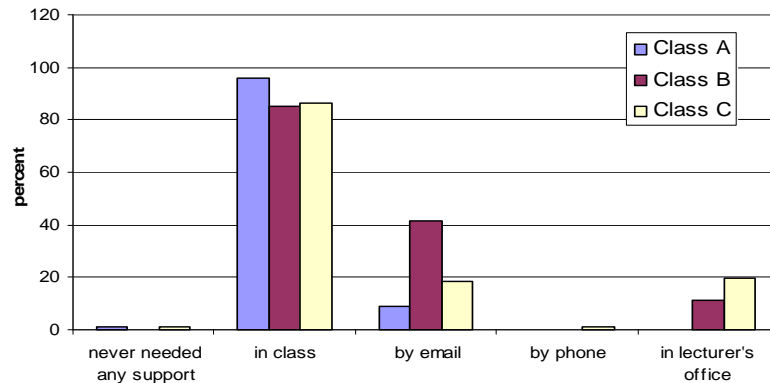
<sup>1</sup> ± 95%  
<sup>2</sup> ± 95%



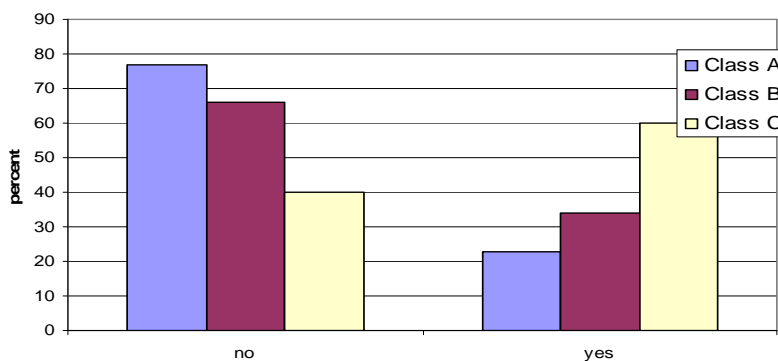
Support

Generally, most students in all modules rated quality of support positively. When asked how they accessed support and whether they would have appreciated more, responses were as illustrated in Graphs 5 and 6.

Graph 5: Access to Support



Graph 6: Would you have liked more support?

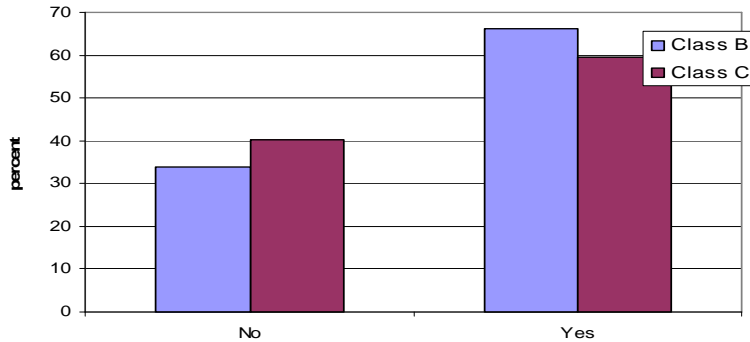


Graph 5 shows that most students had needed support. Most accessed support though class contact, some by email and in person. The slight variation in reportage by class probably concerns different characteristics of each. Class A has the highest reporting of 'in-class' contact because there were no tutorials. Class B, which encouraged the use of the VLE and email, had the highest reporting of email contact. Class C had the highest reporting of approaching the lecturer in his office. This is likely to be because of the very large number attending lectures (c400) meaning that in-class contact was unfeasible. Graph 6 identifies that the greatest need for more support/advice was expressed by Class C, with its large groups.

### Web Support

Class A provided no means of online learning. Class B used a VLE, and Class C a module website. The extent to which web support contributed to learning is shown in Graph 7.

Graph 7: Contribution of web support to learning



Graph 7 shows that for about two-thirds online support was useful. However, there remains a significant minority for whom it was not. It may be that web support is less useful in applied entrepreneurship than contact. Nevertheless, results do show that online materials are perceived as a positive contribution. Indeed, when asked if they would have used it had it been available, 56 percent of the Class A sample said yes.

### Qualitative data

#### General feedback

Overall, students were very positive about entrepreneurship classes. Students from each class claimed to have enjoyed and learned from their course:

*“Out of all my electives this is probably the most fun.”* Class B.

In particular, classes were evaluated positively on a number of counts, notably:

The marriage of theory and practice:

*“This is how you would use theory in the real world.”* Class B.

Multidisciplinary content:

*“We do accountancy and marketing, economics but in this module we bring them all together.”* Class B.

Soft skills development:

*“The best things you get out of it is core skills... working with people, solving problems and developing team-working abilities.”* Class B.

#### Team working

Major problems associated with team working centred on team dysfunction and on students' failing to make an acceptable contribution.

*“I am finding it really, really hard because my group is terrible. No one works together...I am worried that we will fail because people don't want to work.”* Class C.

Students from each class claimed to have problems with communication:

*“One guy did the wrong bit... so two of them did the same thing... communication is the biggest issue.”* Class B.

Generally, communication problems were commented on most often in Class C's focus groups:

*"There's twenty five in our tutorial group and it's hard to divide a project up into 25 different tasks... I think it is just impossible."* Class C.

It would seem that even fully functional teams in Class C found some communication problems insurmountable due to the size of the group.

*"We met together, we worked together, but I have no idea what was going on in the rest of the group. I still don't know what the product looks like!"* Class C.

The greatest problem faced by students was division of work. Participants from Class C noted these most often:

*"there's a lot of people not doing very much they are getting away with doing nothing."* Class C.

*"Some people just don't want to work and say they will do it and don't. In my group there's so many people they can get away with it."* Group C.

However, some students were philosophical about this and felt it had increased their learning:

*"It's all character building stuff."* Class C.

*"It teaches you to deal with people who really don't want to help you."* Class B.

As noted in the quantitative study most problems were resolved within teams. Some students saw this as a learning experience:

*"It improves your interpersonal skills. It is great if you can deal with difficult people."* Class B.

Others had a more direct approach:

*"I had to go to his room and start banging on the door."* Class C.

*"I had to pester someone with hourly emails."* Class C.

Overall, the most effective means of avoiding and resolving problems was via tutorials, as detailed below.

### Learning Styles and Support

Applied business can deliver in a different format to the traditional process, and many students might have a preference for this.

*"I like tutorials because in lectures I lose concentration and interest."* Class C.

Conversely, this does not suit all participants:

*"I don't like team work. I am more of a loner. I like to go to the library and read about it..."* Class B.

The majority were positive about support received:

*"It was a very high level of support."* Class A.

Students also commented on the teaching methods used in entrepreneurship classes.

*"If someone else in a group doesn't understand something and you explain it to them you can learn through teaching."* Class B.

Amongst the most mentioned benefits of tutorials in Classes B and C were that they provided time to meet, opportunity for discussion, feedback and assistance. Tutors were viewed as essential and inspirational:

*"The tutorials make you think because you are asked questions on the spot."* Class C.

*"We resolved problems at our tutorial."* Class B.

The role of the tutor was also noted and tutors functioned as facilitators, role models, and coaches.

*"Our tutor was very good... she would say that we were making real progress. Just having someone say that really helps".* Class C.

Negative comments about tutorials involved the size and layout of rooms:

*"Some small classes hold ten and you physically can't move to the other side of the class to talk to them."* Tutor Group.

*I don't think the layout helped."* Class C.

#### Assessment

Grades were important to students and group grades was the most contentious issue.

*"You can finish up with a few passengers."* Tutors Group.

Students being peer assessed, as in Class B, exhibited greater levels of satisfaction:

*"...This course is brilliant because it has the review forms and gives a mark accordingly. We do some courses where people do nothing and get the same grade; its not fair."* Class B.

#### Web Support

Some students were very enthusiastic about the web support offered in Classes B and C. There was a feeling that it was under-utilised, however, and students were keen to see discussion forums being used:

*"There's a discussion board and that could be really good."* Class B.

## **Discussion**

Overall, applied entrepreneurship classes were received positively by students. The methods of teaching in the three classes aligned with many students preferred learning styles. In particular, contextualised, experiential education supported students' learning. However, there were several issues identified, and variation in delivery has afforded some understanding of these.

### Team-working issues

One of the most commonly reported difficulties was working in teams, particularly where the balance of contribution was perceived as unequal. This was most commonly reported by students of Class C, where the teams comprised up to twenty-five students. This might be resolved by restricting the size of project teams, thereby reducing the likelihood of disparity in the division of work.

Of specific concern was the effect of disparity in the division of work on marks. It appears students would prefer their individual contribution to be rewarded in summative assessment. Indeed, in Class B, where peer assessment generates individual marks, there was less concern about dysfunctional teams, and potentially less dysfunction, as individuals were aware of their inability to avoid responsibility for their own marks. Peer review is administration-heavy, but results suggest that it is a worthwhile exercise as it seems to provide better engagement and less stress for ambitious students.

### Support

Almost all students had needed advice/support during the team-working process. Tutorials positively affected students' perceptions of support. Despite general satisfaction with support in Class A tutorial support may improve satisfaction further. However, tutorial support is expensive. In Class C, very large teams are created in order to afford a manageable and affordable number of tutorials and tutors. Large teams cause problems in terms of team management, participation and communication though. To include smaller teams would require a corresponding increase in number and cost. In Class A provision of tutorials would have a smaller-scale but similar effect.

### Web Support

The use of VLEs seems justified but not at the expense of traditional contact with staff. Additionally, it may be possible to increase students' motivation to use VLEs by making content more dynamic and interactive.

## **Conclusions**

The challenge of large classes for applied subjects centres on balancing scarce contact time and finite budgets with adequate support. Compromise is necessary but should not impact unduly negatively on quality. Reducing students' needs for support and some of the known barriers to effective team work would therefore seem advantageous. The current study has identified some of the main issues for entrepreneurship education and how these might be addressed.

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## Project Resource

General outcomes of the research can be summarised as comprising the following recommendations:

1. Have teams comprise as few students as possible within the constraints of time available for teaching and budget.
2. Support students with allocated tutorials or similar where they meet with a tutor/consultant/mentor regularly and have the tutor: team ration as small as possible.
3. Where meetings or tutorials are timetabled, ensure that the accommodation and layout are as conducive to team to team and team to staff interaction as possible.
4. Set aside regular time for students to practice skills and tasks in class in order that they can receive formative feedback from staff and from each-other.
5. Have a formal and explicit means of identifying individual contribution to assignments in summative assessments, even if the team assignments comprise only a proportion of individuals' marks.
6. Encourage reflection on the part of individuals when team-working difficulties are experienced.
7. Include the use of full and iterative VLE support, but not at the expense of the opportunity for traditional staff-student contact.