ENTREPRENEURSHIP EDUCATION: THE CASE FOR ADOPTING THE TEAM-BASED LEARNING APPROACH

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ABSTRACT

Entrepreneurship education makes extensive use of experiential learning, but the experiential activities are often not underpinned by established theory, or rely on a narrow base of theory informed by the research interests of the teaching staff (Fiet, 2000a). Students often resist theory classes, perceiving them as boring and irrelevant (Fiet, 2000b). Fiet argued for teaching through a combination of theory and activity, where the relevance of theory is clearly demonstrated through activities based on problems the theory purports to explain or solve. The Team-Based Learning approach (Michaelson, 2002) is a specific technique that facilitates this process, and yet has not been widely adopted by entrepreneurship educators apart from Michaelson himself. This discussion paper compares the TBL process with the pedagogical principles outlined by Fiet, reports a specific experience of using TBL in an integrative business unit, and calls for wider adoption of TBL in entrepreneurship teaching.

INTRODUCTION

If entrepreneurship is about anything, it is about doing. Entrepreneurship is a practical, not a conceptual pursuit. Entrepreneurship education, therefore, faces the challenge of teaching the theoretical concepts that inform entrepreneurship practice, while making them relevant to the day-to-day challenges that confront practising and aspiring entrepreneurs (Fiet, 2000a, 2000b).

Traditional solutions involve some degree of experiential learning, ranging from simulation games, case studies, consultancy projects, even to teams of students actually starting a business. While these may succeed in engaging students, they also frequently fail to embed any of the underlying theoretical principles, because students focus on the immediate experience rather than the theoretical concepts it illustrates. But shifting the balance to a greater focus on theoretical concepts risks students disengaging (Fiet, 2000a, 2000b).

In keeping with experiential learning, and the extensive literature demonstrating that successful entrepreneurship is a team rather than a solo pursuit, entrepreneurship education makes widespread use of team assignments. However, all educators will be aware of the shortcomings of these, where weak students may pass subjects as ‘passengers’ alongside their stronger team mates who prefer to take on an unfair proportion of the workload rather than risk a poor grade.

The technique of Team-Based Learning (TBL), developed in the late 1970s by US academic, Larry Michaelson addresses both these challenges. Theoretical concepts are studied outside of classes, tested at the beginning of a class and then immediately applied to problems that mimic the challenges of real world application. Students work in teams throughout the semester and are held both individually and collectively accountable for their performance. Dr Michaelson actually teaches entrepreneurship, having created the “Integrated Business Core” unit at University of Oklahoma where students create and operate a business. And yet, his technique has not found much favour among entrepreneurship educators, being much more widely adopted by disciplines such as medicine and engineering.

This paper provides an overview of the concepts of TBL and assesses the fit of this approach with established research on entrepreneurship education. Drawing on the experience of adopting TBL for a business capstone unit, it assesses some of the challenges involved in applying the approach in teaching entrepreneurship, concluding that overall the benefits justify the efforts and offers a way to move toward entrepreneurship education that is both theoretically and pedagogically sound.
EFFECTIVE EDUCATION FOR PRACTICE

I have previously argued (Rushworth, 2009) that the desired outcome of an education program is not just that students should know things they did not know before they commenced the program, but that they should be able to do things they did not know how to do, or lacked confidence in their ability to do, before the program: in other words, to apply their knowledge.

One term for this ability “to do” in real life circumstances, is “capability” (Stephenson, 1992) and, in keeping with the richness and complexity of what it represents, does not lend itself to simple definition. Stephenson offers the following explanation:

“Capability depends much more on our confidence that we can effectively use and develop our skills in complex and changing circumstances than on our mere possession of those skills. The following definition of capability, however, has been useful in exploring the essence of capability with academics:

Capable people have confidence in their ability to take effective and appropriate action, explain what they are about, live and work effectively with others and continue to learn from their experiences as individuals and in association with others, in a diverse and changing society.”

(Stephenson, 1992:1)

Thus a capable accountant, for example, should be able not only to manage the production of an accurate set of financial accounts for a company, but to identify issues that need attention and recommend actions, to explain to non-accountants what the figures mean, to work productively with colleagues from their own and other areas of specialisation and to keep up to date both with the knowledge and skills base of their profession and its practical application in a wide variety of circumstances.

Capability is distinguished from competency by the degree of familiarity of problems and contexts. Competent practitioners can deal confidently only with familiar problems in familiar contexts, whereas capable practitioners also have confidence to deal with unfamiliar problems in unfamiliar contexts (Stephenson, 1992: 5).

Biggs (2003) argued the importance of what he calls constructive alignment across a teaching program. This argument is based on the premise that good learning is deep learning, where the objective is to make sense of the curriculum in order to mentally file it; to retrieve it; and to apply it, not just in the classroom, but also in real life.

Good teaching is therefore that which supports deep learning and is a partnership between teacher and student to construct an environment within which the student can develop a deep approach to learning. Conceptual pre-requisites of this are (Biggs, 2003: 13):

- a shared understanding of learning objectives (“where we are supposed to be going”)
- motivation on the part of students to get there
- freedom to focus on the task (rather than the test)
- collaborative and dialogue-based learning, involving fellow students as well as teachers

Constructive alignment at the level of a unit of study (subject, module) involves designing a co-ordinated series of activities that support these conceptual elements.

Stephenson argued that teaching capability requires that students take responsibility for their own learning (1992: 8), which in turn implies a student-centred approach to teaching. This approach also favours progression in the workplace where employers increasingly rely on employees to take
responsibility for their career development (1992: 9). It has been successfully applied in an MBA program (Boyatzis et al., 1994)

Traditional learning objective frameworks, such as Bloom’s taxonomy of educational objectives (Bloom, 1956), do not distinguish well between knowing how to and being able to. For example, a student may use “synthesis” and “evaluation” (the two highest order cognitive skills in the taxonomy) to combine information from a variety of sources and disciplines to evaluate a range of options and recommend a course of action on paper; but this does not necessarily mean that they have the confidence to do so in the real world, where poor judgement may lead to loss of status, credibility, employment, income or even life.

A more useful taxonomy for the teaching of capability is Fink’s taxonomy of significant learning (Fink, 2003), illustrated in Figure 1. Whereas Bloom’s taxonomy focuses implicitly on degrees of mastery of content, Fink’s taxonomy focuses on application, relationships (between ideas and between human actors) and on the process of learning, arguably a much better preparation for success in a complex and ever-changing world.

Fink’s expertise on small group learning informs and underpins the team formation and team activities that form the core of the TBL approach to education (Fink, 2002).

![Figure 1: Fink's taxonomy of significant learning](source Fink, 2003: 30; image from Google images)

**EFFECTIVE ENTREPRENEURSHIP EDUCATION**

Experiential learning, where students learn from actual experiences rather than textbook knowledge, is strongly associated with teaching for capability (Stephenson & Weil, 1992). Unlike other disciplines where there is a clear body of knowledge to be mastered (such as accounting practices) or proven analysis techniques to be understood and applied (such as Porter’s 5 forces), entrepreneurship capability depends more on using judgement, making assumptions, analysing risks, building relationships and a large amount of trial and error. While there are areas of knowledge that can be applied (it is useful, for example, to be able to read a balance sheet), entrepreneurs habitually tread new ground and can only rely on conventions and standards to a limited extent. Indeed, their success often depends on actively challenging conventional wisdom. Experimentation and learning from
experience are important skills in the entrepreneur’s toolset. Experiential learning is, therefore, an essential component of teaching entrepreneurship.

However, students unused to experiential learning may find it confronting and a substantial part of an experiential-based unit of study can be spent accustoming students to a different mode of learning. For this reason, it works best when used consistently throughout a program. McMullen and Long (1987) found that, for this reason, entrepreneurship education (using experiential learning) worked better as a dedicated program than as a single subject elective.

Experiential learning, the principles of which were outlined by Kolb (1984), involves a heuristic approach to learning, where skills and knowledge accumulate through a cyclical process of concrete experience, reflective observation of that experience to form abstract concepts leading to active experimentation, which in turn leads to new concrete experiences. Learning styles characterise preferences for specific stages of this cycle.

Experiential learning helps students to understand their own learning style preferences; how these both help and hinder them; and to gain an appreciation of, and ability to leverage, the differing learning styles of other members of their teams.

Fiet (2000a) investigated the approach to teaching entrepreneurship by comparing syllabi and teaching styles of a number of leading practitioners in the field. He found a wide divergence in curriculum, which he attributed to the absence of a generally agreed theory of entrepreneurship. The result was curriculum driven either by ‘academic autobiography’ (the research background of teaching faculty) or ‘case and anecdote’ (an atheoretical combination of guest speakers, cases and ‘war stories’).

Fiet argued that this was unsatisfactory:

“Theory is an essential part of what we teach because we do not know any other way to help students anticipate the future, which is a key to entrepreneurial success, unless we counsel them to rely on luck or intuition.” (Fiet, 2000a: 1)

However, students tend to perceive theory as irrelevant and boring (Fiet, 2000b). This, Fiet argued, was because academics fail to teach theory effectively. Theory should pass the test of relevance by helping students to understand how to deal with real problems that they can expect to encounter (or have already encountered) in their practice of entrepreneurship.

Thus entrepreneurship education as actually practice failed to cover the full experiential learning cycle, either focusing on concrete experience while neglecting abstract concepts (the ‘case and anecdote’ approach) or focusing on a narrow set of abstract concepts that were not reinforced through relevant concrete experiences (the ‘academic autobiography’ approach).

Fiet’s solution was to take a contingent approach to teaching theory that presents multiple perspectives on core questions of entrepreneurship, explaining the assumptions that underlie each perspective, and examining the evidence to support these assumptions. This approach, he argued, was consistent both with the scientific research method of theory development, and with the practise of entrepreneurship which, in common with entrepreneurship research, seeks “to construct a more accurate, general theory about the future” (Fiet, 2000a: 22).

To overcome the issue of relevance, Fiet argued that theory should be presented in the context of explaining observed outcomes and assisting in making decisions, and always accompanied by evidence of validity. To overcome the issue of boredom, he called for teaching in the form of activities that apply and embed theoretical concepts and for students to be involved in designing these activities (2000b).

Summarising the above, entrepreneurship education should:

- Be grounded in evidence-based theory (Fiet), …
- … aimed at embedding capability rather than knowledge (Stephenson), …
- … through experiential learning (Kolb), …
• … in the form of significant learning experiences (Fink), …
• … that apply theoretical concepts to problems students expect to encounter in practice (Fiet), …
• … and ideally involving students in the design of these activities (Fiet, Stephenson, Boyatzis et al.)

I would further argue that entrepreneurship education should involve working in teams because, despite popular conception of the entrepreneur as maverick, entrepreneurship is a team rather than a solo pursuit, involving as it must, negotiation for use of others’ resources (Stevenson, 2004).

Team-based learning is a specific technique that facilitates many of these concepts.

OVERVIEW OF TEAM-BASED LEARNING

In order to understand how the TBL approach supports the ideal of entrepreneurship education outlined above, it is necessary to explain briefly what it involves. The overview that follows is a synopsis of Michaelson (2002).

Dr Larry Michaelson of the University of Oklahoma developed TBL more than 30 years ago in response to the pedagogical challenge of teaching classes of more than 100 students using group activities designed for classes of 40 or less. Rather than abandon the group-based activities and assessments, which he had found very effective at embedding learning, he adapted his teaching approach to allow the majority of the group-based activity to be done in class.

In TBL, theoretical content is studied outside of class by students working independently, allowing class time to be spent on applying those concepts through group activities carefully designed to embed the key concepts.

In order for this to work, the lecturer needs to be confident that students will have done the independent preparation and are ready to apply the skills and concepts they have studied. Therefore classes begin with a ‘Readiness Assurance Process’ (RAP) consisting of a multiple-choice test based on the set readings, which students do first individually and then as a team. As a team, this involves not only deciding on the right answer, but on working out the best process for arriving at that answer. Over multiple rounds of TBL, the latter skill improves significantly.

Following the RAP, the remainder of the class is spent applying the concepts to a real problem (when classes are of short duration, this may be done in a subsequent class). Based on years of experience, activities are designed to follow four key principles: Same problem; Significant problem; Specific decision; Simultaneous reporting. Significant drives student-engagement, while Same problem and Simultaneous reporting introduce the stimulus of competition. Specific decision encourages the teams to work together, in contrast to general decisions that allow students to divide up the work and work independently.

The objective of the team-based activities is to generate significant learning experiences (Fink, 2003) that embed deep learning (Biggs, 2003)

A unit of study would start with simple problems, working toward a complex problem that the team would tackle after mastering core concepts and developing effective teamworking skills. The number of sessions involving a Readiness Assurance Process is discretionary.

A core principle of TBL is immediate and frequent feedback. In the group test, a special form is used with a thin opaque layer (like a lottery scratch ticket) covering squares representing the four possible answers. Teams agree an answer and scratch off the corresponding square. If they are correct, it will reveal a star. If not, they need to try again. If many teams make the same mistake, the lecturer can intervene to clarify misunderstandings, ensuring that core concepts are understood before continuing.

For the team tasks, after decisions are simultaneously reported, a discussion takes place where teams have to explain and defend their choices. Thus they get feedback from each other and from the discussion process on the quality of both their decision and their supporting argument.
Accompanying the tests, team activities and assessments is a process of peer review, usually carried out two or three times during the semester. This involves qualitative feedback that allows students to understand their contribution and make improvements, as well as a quantitative rating of team members’ performance against a number of agreed criteria (ideally negotiated by the students themselves).

In summary, the TBL approach offers these main benefits:

- Accountability for individual and team performance
- Efficient use of class time through emphasis on activities that can only be done as a team, leaving individual work to be done outside of class
- Embedding core discipline concepts through experiential learning
- Embedding the benefits of effective teamwork through positive experience

**TBL AND ENTREPRENEURSHIP EDUCATION**

The TBL approach facilitates achieving the objectives of effective entrepreneurship education. Each of the objectives outlined in the previous section are discussed in turn.

**Grounded in evidence-based theory (Fiet, 2000a) and applicable to problems students expect to encounter in practice (Fiet, 2000b)**

TBL cannot ensure the quality of theory or factual content presented to students, but it does force lecturers to be selective and critical about what they ask students to read and prepare for class. Not only do we have to ask whether it is necessary for our students to know and understand the concepts, but we also have to ask what problems it will help the students to solve, since we must design an activity for the students allows them to apply those concepts. The test of relevance cannot be ignored. TBL provides a mechanism for evaluating curriculum content and progressively refining it to be aligned to the learning objectives of the unit of study.

Conversely, it also allows learning objectives to be refined and sharpened so that they become outcomes that students find valuable rather than boxes to be checked by accreditation committees, while the link to theory ensures that these refined outcomes remain academically sound.

**Aimed at embedding capability rather than knowledge (Stephenson, 1992)**

TBL reinforces the foundational knowledge that is a pre-requisite for capability, but relies on the student to acquire this knowledge through independent study, thus building a capability in self-directed learning. The focus of class activities is to embed the knowledge by applying it to real problems that are relevant to the challenges students expect to face in their entrepreneurial endeavours. By attempting to apply knowledge, incomplete or incorrect understanding is quickly revealed and addressed at the time. Through solving problems, making decisions, diagnosing situations etc, students acquire a confidence in their ability to do (self-efficacy).

**Through experiential learning (Kolb, 1984) involving significant learning experiences (Fink, 2003)**

Students who are drawn to study entrepreneurship usually have a bias for action (and often a short attention span). They are drawn to active experimentation and enjoy concrete experiences, but quickly grow impatient with abstract concepts. And yet, as Fiet (2000a) argued, it is those abstract concepts (theory) that help them to decide what to do when faced with the many challenges that entrepreneurship involves. Much as they may be entertained and motivated by stories from successful entrepreneurs, they are unlikely to find those anecdotes of much practical help in their own ventures, because it is very unlikely their circumstances will be sufficiently similar.

TBL is a technique that follows the full experiential learning cycle. In an individual class, abstract concepts are studied (and understanding of them tested) and then applied through active experimentation on a specific task, providing a concrete experience. The discussion that follows the reporting of the teams’ decisions, provides a form of reflective observation of what they have learned.
Over a series of classes, the reflective observation accumulates and the understanding of abstract concepts is refined and personalised. Students begin to see how the theory explains what they experienced and observed, and how it can help them to plan or make decisions for their own venture. Students are led toward an understanding of what each concept means for me.

The quality and significance of the learning experiences afforded by team activities obviously depend on the design of the team activities. Fink (2003) provided both the theoretical basis and practical guidelines for designing activities likely to generate significant learning. Fink argued that “In order for learning to occur, there has to be some change in the learner” (2002: 30) and unpacks this concept to identify the six types of significant learning that form his taxonomy (see Figure 1 above), all of which are centred on a form of change in the learner’s perspective.

Student-directed learning (Fiet, 2000b; Stephenson, 1992; Boyatsis et al., 1994)

Within the philosophy and structure of TBL, there is ample scope for students to design and negotiate their learning activities and objectives. Michaelson (2002) advocated involving students in the discussion of allocation of assessment weightings, for example, and in agreeing criteria for the team peer reviews.

Going beyond this to student-designed activities is no trivial matter. Numerous objectives arise:

- Student perception that they’re being asked to do the lecturer’s job for them
- Irrelevant activities (don’t apply the theoretical concepts)
- Ineffective activities (poorly designed, unexpected outcomes, not accepted by other students)
- Contribution to assessment (rewarding students who design activities or not?)
- Etc.

However, these apply equally to any teaching approach. Experimentation is required and a proportion of those experiments will be unsuccessful. However, learning can usually be extracted even from unsuccessful experiments. TBL provides a context where students are more empowered than in traditional classes and is therefore likely to be more, rather than less conducive to experimentation.

The one constraint that TBL enforces is that all students work on the same problem at the same time. Whether that problem is designed by the lecturer or students is unimportant. For example, the student-designed negotiation exercise that provided by Fiet (2000b) as an example could be used in a TBL class with only minor adaptation to allow for participation as a team rather than a pair.

Supports the value of working in teams

Why do we ask our students to work in teams? Many students hate it. Strong students dislike it because feel they have to ‘carry’ the weak or lazy students. Shy students or those with weaker language skills fear rejection by their more confident, more outspoken team members. Everyone dreads trying to organise team meetings outside of class. The overall experience is negative.

So why do we persist with team assignments? Because most work (paid or otherwise) gets done by groups of people working together rather than individuals working alone. Getting a group of people to work together effectively as a team is an extremely valuable skill, especially for entrepreneurs who are so often dependent upon the resources of others (Stevenson et al., 1994). However, if most students have negative experience of team assignments, then we are not succeeding in developing capability for teamwork.

The main reasons students dislike team assignments are:

1. The requirement for teams to meet outside of class time
2. Lack of equity: workload is not equal, yet all team members get the same mark

Both of these issues are significant. Meeting outside of class time is problematic. Full-time students may be studying four subjects per semester, each with a team assignment, and with different team
members in each subject. On top of that, they are probably working part time. Trying to find a timeslot when everyone can meet is a nightmare.

With TBL, the majority of team work is done during class time, because the majority of the independent work is done outside the class. Content and theory is covered by students doing their own independent preparation at their own convenience. Class time is spent on activities that apply this independent learning, including team assignments. ‘Class’ time does not have to be spent in the classroom, but could be anywhere that contributes to the applied learning activity that the teams are working on – in the library, on a field trip, in the high street researching a new business idea.

The lack of equity issue is something TBL was developed specifically to address. Michaelson (2002) refers to the issue of non-contributing students as ‘social loafing’ and identifies several contributing factors, which TBL is designed to neutralise.

First of all, it looks beyond the symptom (unequal contribution) to the underlying causes. Students usually assume that lack of contribution is due to laziness or incompetence, and this may indeed be the case in some instances. However, there are other factors such as lack of confidence, language skills, intimidation by outspoken, highly confident team members and so forth.

TBL seeks to overcome these issues in several ways:

1. **Distribute the ‘assets’ and ‘liabilities’ equally within teams**

   TBL teams are not self-selecting. Lecturers allocate students to teams according to criteria defined by the set of skills (or liabilities) that are most likely to be relevant to the particular subject and the cohort of students. Rare assets (for example several years of work experience) are separated between different teams, similarly with liabilities. The aim is to have a diversity of knowledge, skills, cultural and work backgrounds.

2. **Hold students individually and collectively accountable for performance**

   The individual component of testing in the Readiness Assurance Process (RAP) ensures that weak students cannot ‘hide’ in a strong team. Their lack of preparation or weak grasp of the concepts will be revealed by the individual test. Furthermore, when the team does the test together, it will be obvious that they have little to contribute.

   However, the team negotiation of the test also shows up the over-confident contributors who are sure they know the answer, but turn out to be wrong. It exposes the quieter team member who didn’t have the confidence to speak up but turned out to have most of the right answers. It encourages the loudmouths to pipe down and the quiet mice to speak up and everyone in the team to check everybody else’s opinion. The team score is almost invariably above the highest score of any individual member.

3. **Design activities that encourage students to collaborate**

   The key here is to avoid tasks that can be divided up and worked on individually, and the way this is achieved is to design tasks that result in specific decisions. Thus the output of the task is minor – Yes/No, one of four options, an entry price for a new product – so the focus is on the process of making the decision. In particular, tasks involving significant writing are to be avoided because writing has to be delegated to one or two individuals. Simulation games could be well-suited to TBL because they usually involve a limited number of decision points, but a complex set of factors to be taken into account in arriving at the actual decisions.

   After a few weeks of working together in this way, teams develop a good sense of their individual strengths and weaknesses and how each member can contribute most effectively. Peer review about half way through the semester is a good way to get them to reflect on this. By the end of the semester, they can approach a more complex task that does require them to divide up the work in a productive way that makes the most of each team member’s abilities. Teams develop a sense of accountability to their team, rather than to the lecturer (Sweet & Pelton-Sweet, 2008), which shifts the focus from the test to the task (Biggs, 2003).
PERSONAL EXPERIENCE

For the past two semesters, I have been using the TBL approach to teach an undergraduate capstone unit. Although it is not an entrepreneurship program, it contains many of the same challenges. The unit’s purpose is to prepare students to conduct a consulting project for a real client, where they will face unfamiliar problems in unfamiliar contexts. Thus a requirement to develop capability (Stephenson 1992) is indicated.

The subject is an integrative unit of study, mandatory for all Bachelor of Commerce students and therefore classes have a range of majors (Accounting, Marketing, HRM, Entrepreneurship). Students are allocated to teams on the basis of major, gender and country of origin.

In a 12-week semester, four classes include a Readiness Assurance Process and relevant team activity (one of these is an ungraded practice run). In the second half of the semester, students work on an extended case study, which requires them to do independent research and analysis and develop a business case for their recommended solution. This represents a mini version of what they will be expected to do for the real business client in the following semester.

Relating theory to practical problems (Fiet 2000a & b)

As an integrative unit, we do not teach new content, but seek to reinforce existing knowledge, therefore it is not an objective to cover new theoretical concepts. Students are given preparation readings relevant to the team activity they will be asked to do that do not rely on specialist content, but highlight themes students should already have some knowledge of. Depending on their major, the content may be more or less familiar.

Students typically begin by treating this as a memorisation exercise (and some do not advance beyond this). Group discussion of the solution helps them to embrace the concepts. Strong teams talk about the issues when trying to choose the right answer. Weak teams talk about which option (a, b, c or d) they chose.

Intervention from the lecturer is required at the beginning to remind students how the preparatory readings relate to the task or activity they have been given, and to relate the outcomes back to the readings at the end of the class. This is consistent with Fiet’s (2000a) approach to integrating theory with application, where the theory is discussed first, then the activity takes place, and then a debrief recaps the theory and how it helped to predict, or at least make sense of, what happened.

Linking theory to activities would be easier in a unit of study with a stronger content focus. It has been used successfully in Accounting programs, for example.

The most promising indicator that theory was sinking in was some of the strongest students reporting that they used the readings we gave them in other subjects they were studying in the same semester.

Embedding capability rather than knowledge

Students typically enter the unit having achieved a degree of competence in their chosen major. That is, they are able to solve familiar problems in familiar contexts. They are not comfortable with unfamiliar problems or unfamiliar contexts, let alone both of these in combination. Nor are many of them comfortable with an answer that depends on judgement and educated assumptions rather than the lecturer revealing the ‘correct’ answer at the end of the class. Therefore some coaching and support is needed.

In particular, we have had to provide some coaching in the role of assumptions. Activities are based on cases or scenarios with limited information and teams interpret them differently. This has proved to be very useful in bringing out a key business (and life) skill, which is to recognise assumptions, make them explicit, understand how they influence your recommended solution, and assess the risk of them being incorrect.

The multi-discipline, multi-cultural teams are a real asset here, because it means that each team member has some knowledge or skill that none of the others possess, whether from their chosen major,
from their country of origin or cultural background, or from work experience. Therefore no student feels under pressure to be the expert, but everybody has a perspective that adds unique value. With relatively little coaching support from the lecturer, they start to debate the problem and ask for each others’ opinions.

In line with TBL philosophy, team tasks are designed to force a decision so solutions are presented in the form of a limited number of options, each of which has advantages and disadvantages, so there is no clear ‘right’ answer.

These team-based activities have been very effective in building students confidence in their ability to explain and justify their selected option. Their ability to present a concise business case for a proposed solution is vastly improved by the end of the semester.

**Experiential learning**

The TBL process inherently provides concrete experiences and abstract concepts. To reinforce the reflective observation component of experiential learning, we require students to write public (within their class) blog entries. They are asked to write about what they are learning and how they are learning it, and how this changes the way they think about their studies, their careers and society in general. A couple of team exercises with a focus on sustainability proved especially fruitful for reflection.

What one student writes in their blog can provoke another student to reflect on their own learning experience and write about it. In this way learning becomes collective as well as individual.

To encourage the active experimentation component, and to build competency in different ‘literacies’, we ask students to include images and video clips in their blogs. Some have gone as far as to create their own video clips using ‘avatar’ sites such as Xtranormal.

**Significant learning experiences**

Through the blogs, we routinely read students’ accounts of experiences that have changed the way they think. Many, many students report changes in their attitude to teamwork and to their team members. They realise their initial impressions were misleading and they learn new respect for each other. They develop skills in giving constructive feedback. They learn how to manage group dynamics more effectively.

Students begin to think of how their skills and knowledge relate to work and society. They notice news items and find YouTube clips that illustrate the ideas we have discussed in class. (“Hey, I just read this article about child care regulations – maybe we should have chosen Option 2 instead”).

**Involving students in the design of learning activities**

We have not experimented with this and I do not feel our students are ready for it yet. However, we do seek to include some activities that give them scope to use their own creativity.

**Promoting effective teamwork**

This is what TBL is for and we have found that it genuinely does deliver a positive team experience. Although there is initial resistance to not being able to choose their own team members, students quickly overcome this, supported by activities and exercises that help them get to know each other. They find common bonds and interesting differences and become interested in each other as individuals.

Every team contains surprises. Many of the Asian students have difficulty with spoken English but their reading is good and they surprise their English-speaking team mates by scoring well in the individual test. The confident, impulsive student who is sure they have the right answer turns out to be wrong. They just confident they are right next time, but the rest of the team has learnt not to be so quick to go along with them. Somebody in the team has worked in the industry the team activity is about, or in the country it is based in, or has some particular knowledge. One person is good at
organising the team and bringing them back into focus. Another may be creative and a lateral thinker, but inclined to wander off. Another is a good peacemaker and can calm things down when discussion gets overheated.

The immediate feedback from the ‘scratchy’ forms used for the group test is enormously energising and bonding. This part of the class is often noisy and playful. High Fives all round when the right answer is chosen. Groans and sighs when they get it wrong, followed by relief when the second choice turns out to be right.

Students develop loyalty to their team members. Absenteeism is low and when they can’t be there, they take care to let someone else in their team know rather than not showing up.

Routinely, strong students report that this has been their first truly positive experience of teamwork and that they are very grateful for the experience.

This process is not automatic and needs to be supported. We have found that we need to allow a couple of weeks of ‘getting to know each other’ classes before we can commence the TBL process. TBL takes students outside their comfort zone, so they need some reassurance that they are ‘safe’ in order to be able to embrace the experiment to any degree. Within a program where several units were taught in this manner, however, the process might be accelerated.

Engaging teaching staff

The capstone integrative business unit is delivered by a team of teaching staff drawn from different business disciplines, who collaborate to design the curriculum and delivery method. For this to work, regular planning and debriefing meetings are essential. This process, while labour intensive, has proved extraordinarily engaging and creative. Just like the students in their multi-disciplinary, multicultural teams, we learn from each other and we learn about each other. We work to each others skills and share the workload according to inclination and ability. Technically-oriented people manage the wikis and blogs; one person with an eye to aesthetics and professional presentation formats all teaching materials for consistent look and feel; another person coordinates printing and distribution of teaching materials.

The collaboration also facilitates exchange of knowledge on our discipline areas and teaching styles. It generates ideas for other subjects we teach and for collaboration on research, and it builds a network that extends our institutional social capital.

RESULTS AND IMPLICATIONS

The fit between Fiet’s recommended pedagogy for teaching entrepreneurship (Fiet 2000a & 2000b) and Michaelson’s (2002) team-based learning approach is strong, and supports the case for wider adoption of this technique in teaching entrepreneurship.

The efficacy of the technique in embedding theoretical concepts is strongly supported by its use in other disciplines such as medicine and engineering and a multitude of cases confirm its ability to overcome the weaknesses of traditional ‘divide and conquer’ team assignments. It is underpinned by sound theory of small group learning (Fink, 2002). My direct experience of the technique in a capstone unit confirms its efficacy in creating strong and productive bonds in student teams.

Having taught entrepreneurship units to undergraduate students before, I have encountered the frustration of trying to embed core concepts in a lecture + tutorial setting. Take Porters 5 Forces as an example, which we routinely use in opportunity evaluation and business planning. Porter has written a journal article that explains the concepts, but most of the students won’t read it. So you cover it in a lecture, which is boring and then try to get them to apply it to a case or their own business idea, but they didn’t really get the concepts in the first place because they didn’t read it and tuned out during the lecture.

How much better if they prepared the reading before the class, did a test on the main concepts, repeated that test as a group and then went on to conduct a Porter 5 Forces analysis on a selected industry. A specific decision is involved – what is the ‘strength’ of each force. Teams can report
simultaneously and then debate the answers. Team A said the barriers to entry were high; Team B
thinks they are low. Team A explains their reasoning; Team B gives their counter-argument. Robust
debate ensues and students get a better understanding not only of how a Porter 5 Forces analysis
works, but what it is useful for, and how different assumptions and interpretations lead to different
conclusions. And best of all, everybody has fun, including the lecturer. I know this is possible. I have
experienced it.

The greatest challenge of adopting the team-based learning approach to teaching entrepreneurship is
also probably the strongest argument for doing so. Team-based learning requires explicit identification
of the theory being taught. This forces academics to go beyond cases, anecdotes and tool kits to
identify the underlying theory that informs their teaching (and to highlight if such theory is lacking). In
short, it enforces academic rigour, which can only be a good thing for entrepreneurship scholarship and
teaching.

The investment in adapting content and delivery is significant, but the evident benefits of greater
student engagement and more self-directed learning, make a compelling case for exploring this
technique further.

NOTES

1. See the list of courses on the Team Based Learning web site at www.teambasedlearning.org

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