

# How to Use Simulation Games in the Classroom?

The Journal of Entrepreneurship  
1–45

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Development Institute of India

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DOI: 10.1177/09713557221107442

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## Abstract

An enhanced, new venture simulation can be a game changer within a school's entrepreneurial ecosystem, providing students with a holistic vision of a new venture and skills relevant to its potential success. The purpose of this article is to help faculty design and deliver a simulation experience that will engage, challenge, inspire and transform students into entrepreneurial enthusiasts with practical new venture knowledge and skills. Attention is given to (a) the factors to consider in choosing the right simulation, (b) the best practices for structuring a class for maximum impact and (c) the role of the instructor as an entrepreneurial coach.

## Keywords

Entrepreneurship, simulation, pedagogy, skill development

There Is a Gap Between Knowledge and Skill.

Knowledge is not skill.

What is the difference?

Knowing what to do versus the ability to do it.

Skill is not an automatic consequence of knowledge.

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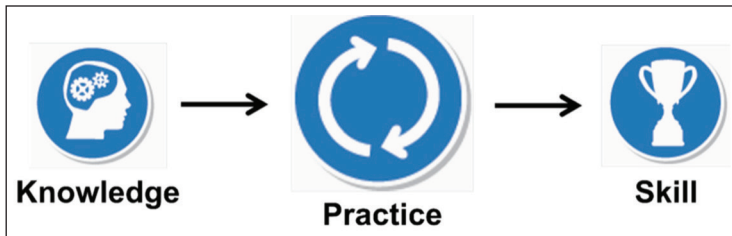
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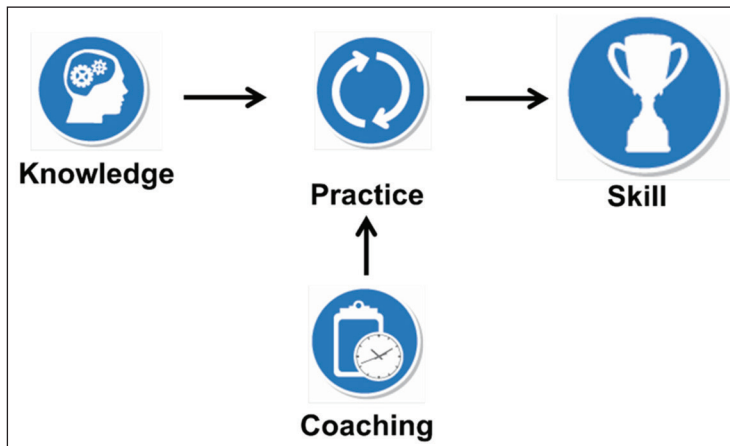
With any sport, art or other skill-based activity like entrepreneurship, practice is the only way to transform knowledge into skills.



How can we enhance the value of practice?

A good coach.

Coaching can potentially reduce the amount of practice needed to achieve the desired skill, and it can increase the skill level attained with the same level of practice.



Why do we need a coach?

We can only go so far by ourselves. We cannot easily see our strengths and weaknesses or know how to improve our performance. Coaches can observe our processes, work and performance. They can offer insights,

advice, practice drills and the like to help us reach higher levels of skill and performance.

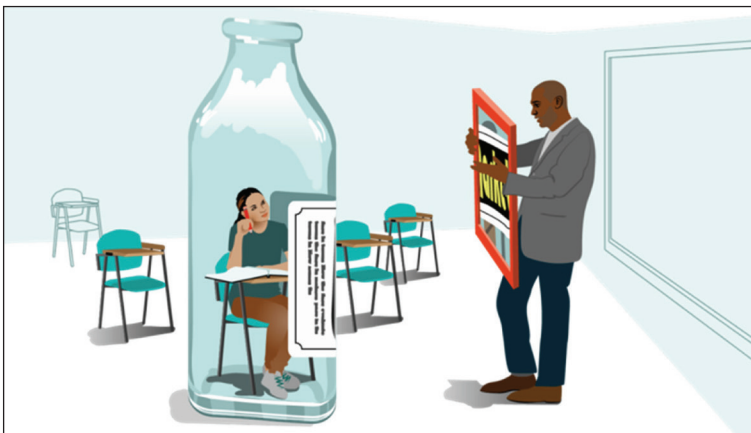
As the saying goes, 'It is hard to observe the label when you are inside the jar' (see Figure 1).

Knowledge, practice and a good coach are vital to entrepreneurial skill development and career readiness to be an entrepreneur.

Fortunately, many schools offer a comprehensive entrepreneurial ecosystem to develop entrepreneurial talent, including lectures, case studies, role playing, class projects, pitch competitions, entrepreneur mentors, community consulting, required start-up experiences and business incubators, to name a few.

A new venture simulation can be a critical addition to this mix. New venture simulations allow students to apply newly acquired theoretical knowledge in a simulated business world. Students gain hands-on managerial experience by running their own new venture in a game-like environment. As they test their skills, students become totally immersed in the learning process.

The game environment adds a new level of excitement to the classroom. Students focus on outperforming their classmates in friendly rivalry. Competitiveness drives the desire to succeed and improve performance, which results in higher engagement and better learning. When students make realistic business decisions and immediately see the results of their actions, they internalise core entrepreneurial principles better.



**Figure 1.** It Is Hard to Observe the Label When You Are Inside the Jar

**Source:** The author.

In addition to developing new venture skills, a simulation requires students to practise critical thinking, problem-solving, analytical thinking, decision-making, management by the numbers, cross-functional integration, leadership, teamwork and business acumen.

Depending upon how a course is structured, it is possible to build a complete microcosm of the new venture experience into a simulation exercise, including creating customer value, managing scarce resources, planning future tactics and cash flows, pitching to outside investors, executing plans, dealing with the unknowable and the unexpected, and being accountable to those who invest in you.

The purpose of this article is to help faculty design and deliver a simulation experience that will engage, challenge, inspire and transform students into entrepreneurial enthusiasts with practical new venture knowledge and skills.

It will begin with a discussion of the factors to consider in choosing the right simulation. Next, attention will be given to best practices for structuring a class for maximum impact. Several value-added activities will be introduced that can greatly enhance the natural learning power of a new venture simulation. The discussion will then shift to how to grade and assess student learning and simultaneously further enhance knowledge and skill development. The article will close with a discussion of the instructor's role as a coach and how this approach can greatly improve a student's business and entrepreneurial potential.

This guidance reflects 30 years of experience in designing and guiding the simulation learning experiences with tens of thousands of students and hundreds of faculty.

## **Choosing the Right Simulation**

Choosing the right simulation is critical to the success of the learning experience. It depends upon the level of education and maturity of the target audience plus the number of participants and available time for the exercise.

## **Competitive Versus Non-competitive**

Almost all simulations have a certain level of gamification. Many of the simulations offered by Harvard Business Publishing,

Interpretive Solutions and Marketplace Simulations represent knowledge development where the concepts, principles and ways of thinking are presented in a much more visual, intuitive and contextualised delivery mode as compared to lectures, readings and cases. The gamification comes in the form of practice applications, challenges and problems to solve along the way. The gamification heightens interest, attention and fun in learning. It is here that skill development begins to take hold.

These are mostly disciplinary-specific simulations rather than cross-functional. They tend to be individual exercises that run from 15 minutes to 2 hours. The shorter ones tend to focus on individual constructs that can be difficult to grasp and benefit the most from immersive learning, while the longer ones can include multiple constructs that are interconnected and need to be coordinated to perform well. Here, the ability to move multiple levers in a coordinated manner while tracking a dashboard of performance indicators is very helpful for skill development. These more sophisticated simulations can benefit from the contributions of a team of participants but can also be managed individually.

There is a special class of simulations labelled as serious games where participants compete against classmates or computer-generated competitors. Head-to-head competition is the strongest form in gamified learning. The steady challenge from competitors who make smart, surprising and responsive decisions causes the bar for success to continuously move upwards. There is no rest for an active mind. One must continuously apply previously learnt knowledge and skills and do so in new and intricate ways plus develop new knowledge and skills that were never anticipated or introduced in a formal way.

Our focus here is on serious games.

Within this classification, the simulation should require the students to apply everything they have learnt in entrepreneurship and business to develop a successful new venture.

It should not be a static exercise. The market should evolve. Their competitors should evolve. And most importantly, the players should evolve.

The winning team should need to be strategic, agile, adaptable and resourceful and, through it all, deliver substantial value to all stakeholders.

An entrepreneurial simulation should take students through a wide range of business decisions while addressing the entrepreneurial issues that will normally emerge.

## **Education, Maturity and Experience**

There are many different levels of competitive simulations, and they match up with the education, maturity and experience of the target audience, which, in turn, drive the learning goals of the educational programme.

### *Introductory Courses in Entrepreneurship*

The goal is to introduce entrepreneurship and develop awareness, interest and possibly enthusiasm for being an entrepreneur. These can occur at many levels of education such as the following:

- Grade school (13 years old and under)
- High school (14–17 years old)
- First- or second-year college, cross disciplines
- First- or second-year college, business disciplines
- First- or second-year college, entrepreneurship major

At the grade school level, the simulation should provide a light touch in all the basic business disciplines such as marketing, sales, production, human resources (HR), finance and accounting. Students would focus more on strategic planning and decision-making within the context of a new venture. Their functional decisions would focus more on resource allocation that is in line with their strategy like how much money to invest in new product development, advertising, production capacity, compensation, sales channels and so forth rather than the tactical details underlying these functional decisions. Students would get the feeling of being an entrepreneur without the hard work of actually being one.

At the high school level, students can handle a bit more tactical detail in each function. They can handle a slightly more advanced simulation where they get a glimpse of the nitty gritty of new venture creation and development, but they are not taxed intellectually or timewise.

In some colleges and universities, there is a desire to introduce all students to entrepreneurship. For the most part, these students do not have business or entrepreneurial training, and many will never receive formal training in these areas, but someday could join an entrepreneurial team or even start their own business. For this group, it is not practical to delve deeply into business concepts and decision-making but just enough

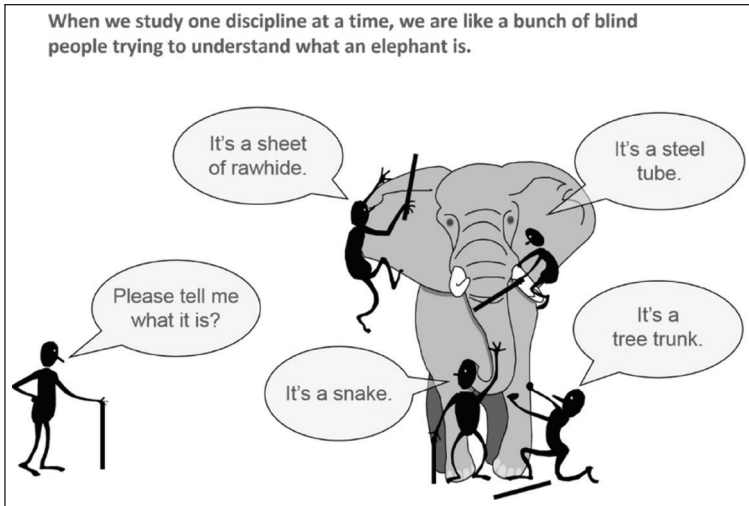
to make the work challenging, interesting and fun. Students in their late teens and early 20s have more maturity and tend to focus on longer-term knowledge and skill development, which can carry them through the unfamiliar work of starting and running a business. This simulation could be at the same level as one introduced to high school students or slightly more advanced.

An introductory course in entrepreneurship within the business school for all majors opens up more opportunities to add substance to the functional decisions and overarching new venture strategy. The participants are already preconditioned to work in the business world and even run their own departments and business someday. They will have a business major in mind that opens them up to new ideas and experiences in business and enables them to work in unfamiliar but soon-to-be experienced subject matter that they will encounter in later classes and exercises. This group has a higher potential of including entrepreneurship in their curriculum if they find the work interesting and rewarding. With the additional maturity and business mindset, a more sophisticated simulation can be employed. However, an emphasis on the fun aspects of being an entrepreneur is probably more appropriate than on the details of actually being one.

An introductory entrepreneurship course for a new venture major provides the most fertile ground to plant the seeds of what it is actually like to be an entrepreneur. This group of students has all the advantages of the previous one plus a strong proclivity to be an entrepreneur. They are likely to be very open to the experience, desiring to know what they might actually do as an entrepreneur. Here, the goal is to inspire the students to move forward with their choice of an entrepreneur emphasis or major and anticipate how their subsequent training will add to their knowledge and skills to successfully start and grow a new venture. Some substance in functional decisions is desirable because it will impress upon the students the need to have depth in multiple disciplines plus be able to work cross-functionally and in an integrated way to create a sustainable business. This simulation can be more complex, but not at a level as a capstone experience.

### *Capstone Course at the Undergraduate Level*

Once a student has had considerable training and experience in business and entrepreneurship, there is a need and opportunity to pull it all together and launch them into their career.



**Figure 2.** The Parable of the Blind Men and an Elephant

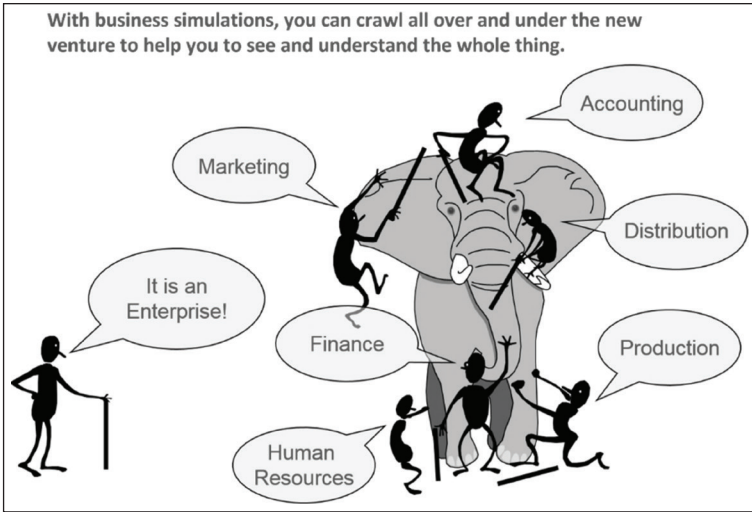
**Source:** The author.

A limitation of our educational system is that students experience business management in a piecemeal way. All the disciplinary content is parsed out for greater focus and efficiency. Students are left to put the pieces together into a coherent whole, but that is not an easy task. Think about the blind person who holds first onto the tail, then the leg, the trunk, ear and so forth. A blind person would be hard pressed to know that the creature he is touching is an elephant, if they even knew what an elephant was (see Figure 2).

Our students are like the blind person. If the students could crawl all over the business and discover how every part works by itself and in concert with the other parts, a holistic vision would emerge. Most students do not have experience in running any business, much less starting up and running a new venture (see Figure 3).

For these reasons, it would be good for them to experience a comprehensive new venture simulation. They could be there from the start when the entrepreneurs are evaluating the business opportunity, pulling together the team, formulating a strategy and investing their limited resources to get it going. They could go through the initial steps of designing brands, selecting sales channels and setting up production capacity. They could then go to test the market where they would price





**Figure 3.** The Resolution of the Parable: Being Able to Touch and Feel All Parts of the Elephant

**Source:** The author.

and advertise their products, hire staff to run their sales outlets and production facility, forecast demand, set production capacity and project cash flows and profits. They could also learn from this experience by studying how customers, competitors, employees, operations and finances were affected. They could then make tactical and strategic adjustments to improve across the board. All this experience would lead to entrepreneurial knowledge and skill development plus the desired holistic understanding of how a new venture starts out and develops.

The recommendation for a capstone undergraduate course is to employ a new venture simulation that is expansive in its coverage of all the functions and sufficiently deep in each that the students get to experience the full application of each discipline. There should be sufficient complexity that integration, coordination and teamwork are required to achieve success. These are the very things an entrepreneur needs to experience as they contemplate the launch of a new venture. They need the vision of a complete enterprise where they will personally have the responsibility of doing the work that functional specialists would do, but these specialists are not available or affordable.

### ***Capstone Course at the Graduate Level***

The above-mentioned considerations apply equally to graduate programmes. Many MBA students have spent their employment time after undergraduate graduation working within a single discipline such as marketing, supply chain, operations and so forth. Others have no business background and arrive with engineering, science and liberal arts degrees and experience. Therefore, the vast majority of graduate students can also benefit from a holistic, new venture experience as the culmination of their entrepreneurial training.

There is a major difference between the graduate and undergraduate students, in that they have more life experiences, maturity, academic abilities and native skills by virtue of the school's selection process. A simulation that might challenge an undergraduate probably will not challenge a graduate student. Therefore, a much more comprehensive and nuanced entrepreneurial simulation with a lot of moving and interconnect parts would be preferred.

### **Play Against Classmates or the Computer**

Two formats are available for an entrepreneurial exercise—play against classmates and play against the computer. The play against classmates' format is more time-consuming, but more engaging; therefore, it is recommended in high-level courses in entrepreneurship. The play against computer format is frequently used in introductory courses where there are many students, and it is difficult to coordinate activities across participants.

In the play against classmates' format, students are split into groups or teams that compete against each other. Play against classmates is commonly used in higher-level courses or smaller classes where students can see and interact with each other.

Competing with classmates is dynamic, unpredictable, stimulating and demanding. Every game is different as a result of the unique decisions of each competitor. The threshold to succeed keeps rising with each new decision round because the students are learning from each other, and good ideas get copied quickly. There is also an element of rivalry when students are competing against their classmates, which greatly adds to the motivation and drive to learn and win. It is always a challenge to figure out how to get ahead and how to stay there. As a result,

the play against classmates' format tends to keep the students motivated right to the end.

In the play against computer format, the students compete against computer-generated competitors rather than each other. Every person in the class faces an identical business situation. The market is the same, and the competitors make the same decisions in all games. This arrangement makes it possible to rank order the final performance scores because all players had the same starting conditions and resources and, therefore, an equal chance of succeeding.

A major advantage of this format is that it allows students to work independently or in small teams, and at their own pace. Also, the self-paced exercise requires the least amount of coordination for the instructor. It is the preferred format for large introductory classes.

## **Team Versus Individual Play**

Depending upon the simulation, students can either play as a team or as an individual who is responsible for managing an entire firm.

When working in teams, students not only practise entrepreneurial and business concepts but also develop valuable teamwork skills. Each student takes on a certain set of responsibilities within their simulated company. They discover how their business decisions affect different parts of the firm. They learn how to make decisions as a team, resolve disagreements and handle conflicts.

Working in teams also allows students to develop leadership skills. Each student is challenged to take the lead within their area of responsibility. They pitch ideas to the team and justify their reasoning. They learn to accommodate suggestions and opposing viewpoints. Students learn how to motivate others to follow their lead and how to let others lead when needed. These conditions also help students develop their critical thinking and communication skills and deep learning in all aspects of the new venture. Finally, working in teams makes the workload more manageable, which results in better performance.

Alternatively, students can play some simulations individually. When individual students run their own simulated company, each student gains hands-on experience and a thorough understanding of the entire learning content presented in the simulation. It is also easier to benchmark students and ensure each student has invested the proper amount of time and effort into the exercise. This format works well in introductory and

mid-level simulations where the simulation work can be managed by a single person.

In large introductory courses, individual play would be preferred. Team play requires more coordination. Individual play requires the least involvement from an instructor. Assuming that the goal is to introduce students to the possibilities of being an entrepreneur rather than the actual management of a new venture, individual play against computer-generated competitors will satisfy the goal.

In a nutshell, having students play in teams and against their classmates is a better option for most small to medium-sized classes. This set-up maximises student engagement and helps develop teamwork and leadership skills. Individual students playing against the computer is the best option for a very large number of students. It offers an efficient way to add hands-on experience and increase engagement for large classes.

## **Online or In-person?**

Virtually, all competitive, new venture simulations are delivered online. The simulation software is accessible online where information, decisions and results are stored in the cloud.

Prior to the COVID-19 pandemic, simulations were primarily conducted face to face where the students, teams and professors interacted in classrooms, team rooms, offices, coffee shops, etc. Students and faculty might have been logged into the software online, but their deliberations were done face-to-face.

With COVID-19, everything went online. Simulations turned out to be the perfect experiential exercise in an online environment. Students could still meet face-to-face through meeting platforms like Zoom and could still be logged into the simulation and share information and screens.

There is no decision now between offering a course online or in-person. It can be one or the other or both as required by the instructor and educational institution.

## **Team Size**

Each competitive simulation that is built upon team play will have its own specification regarding the number of players and role

responsibilities. If there is flexibility, four- and five-person teams are recommended. The four-person team is ideal because everyone must participate to get the work done. With five-person teams, it is possible for one individual to drift into the background and not participate. Six-person teams are not recommended because there is a high probability that social loafing will occur, either because there is not enough work to do or because strong players will step in and pick up the workload. Three-person teams are okay in a pinch.

## Number of Teams in a Game

The ideal number of teams is four to six. A smaller number is better than a larger number. This is because motivation is highly correlated with the students' perceptions that they can win. If they feel they do not have a chance, then motivation drops off, as does learning.

When students feel that with a little more study, analysis, contemplation, strategizing, debating and investigation they could win or be in the top half of those competing, they will invest the time and effort. If they do that, they will learn a lot and develop the skills that are desired.

With fewer teams, there are more winners, and happier students. It is simple arithmetic. With 8 teams, the top 3 will feel good and the bottom 5 will become discouraged at some point. With 5 teams, the top 3 will still feel good and the bottom 2 still have a chance to move into the top 3 positions. Students will be happy with second and third place. They just want to feel that they could have won or been a top competitor if the game had continued.

If a simulation allows as many as eight teams to compete against each other, an instructor might feel that it would be easier to have all the teams in one game from an oversight and management point of view. In addition, some games are set up so that the cost is the same no matter if there are four or eight team teams in a game. So, it is more economical to have the largest number of teams as possible.

Even though it is easier on the instructor and potentially less expensive per student to have a single game with many teams, student satisfaction, learning and teaching evaluations will suffer.

What should be done if there are enough students to fill eight or more teams? The answer is to divide them up into multiple games.

For example, if there are 40 students divided into 8 teams in a class, it is better to break the class up into 2 games of 4 teams. If there are 7 teams,

an instructor might consider 2 games of 4 and 3 teams. Three teams will work for small classes.

If there are even more students and teams in a class, they can be broken up into multiple games or universes. Each game/universe can be managed and coached as a unit. Some schools run several hundred students through a new venture simulation course every semester, and they are all broken up into games of five or six teams.

The bottom line is that if students are motivated to win and learn, they will have a better experience. A satisfied student will give a better course evaluation than a frustrated one.

## **Team Formation**

With most competitive simulations, students will play a game against classmates. With large introductory classes, students will play against the computer. In these cases, they will either play alone or on a small team, and any random assignment protocol will work fine.

However, if the students are competing against each other, then team assignment becomes very important. Ultimately, the goal is to distribute the talent across the teams to ensure a fair competition where everyone has a chance to learn and win. It is important to have as many disciplines represented on the team as possible and to distribute equally the students that are quantitative, detail-oriented, big picture, harmony-oriented and natural leaders.

There are many methods for forming teams and distributing talent. A teacher may have their own preference. One method that works very well was developed by Ron Decker at the University of Wisconsin—Eau Claire. His system for selecting teams is based on a sports-type draft. It has been proven to be highly effective in distributing talent and reducing conflict at the undergraduate and graduate levels. It can be used with any number of teams in a class.

Here is how it works.

Prior to draft day, the students are asked to prepare a resume to apply for their two favoured executive positions in the new firm. Typical positions would be marketing, sales, manufacturing, accounting and finance, business analytics and HR. These executive positions will vary according to the simulation chosen. The students are given 3 minutes to present themselves to the class and highlight why they would be a good candidate for their first and second choice for a role in the new firm. The resumes of all students are distributed electronically to the whole class.

Prior to the day of team formation, the class is divided into draft rounds. Where possible, the draft rounds are organised by functional interest or major. For example, all the marketing people can be placed in one draft round, the finance and accounting people into the second, the operations and supply chain in a third, HR and management in the fourth and all others into the fifth. The draft rounds can be balanced by assigning students based upon their second preference if need be.

The number of people in a draft round is equal to the number of teams to be formed. If 2 games are to be formed with a total of 10 teams (5 teams in each game), the number of students in a draft round would be 10.

One of the draft rounds is selected to serve as the first president and team picker. Any group of students can fulfil this assignment, and it can be picked at random. HR and management types are good candidates to form the teams because that activity is within a role they might pick in their future employment.

On draft day:

- The presidents step into the hallway and review the resumes of the first draft of students. (Everyone should have a list of the people in each draft round prior to draft day.)
- Each president is assigned a random position in the order of picking; the order is not important.
- According to the order assigned, each president picks their first team member from the available candidates. As each person is selected, the yet-to-pick presidents will have to adjust their preference until the last person is chosen.
- The presidents then return to the class and welcome the person who is now on their team. The two then have about 3 minutes to review the resumes of the second draft round.
- The presidents alone step into the hall and pick the second person to be added to the team. For the second round, the order of picking can be reversed from the first round.
- The presidents return to the classroom and welcome the new person to the team. All three members review the candidates for the third round.
- The presidents alone step into the hall and pick the third person to be added to the team. The order of picking can start from the middle of the original order and go to the top of the list and then from the middle to the bottom.

- For the fourth round, the pickers can start with the bottom half that picked in the previous round and then go down and then from the top to the middle.
- Any random order will work in picking team members; however, the presidents all need to feel that they had an equitable chance of getting good teammates across the separate draft rounds.

This approach enables a good distribution of talent, dispositions, functional areas of interest and demographics. Super-strong teams and weak teams are less likely to be formed as are teams of friends. The students learn to work with people according to their skills and interests and not other considerations. For various reasons, there tends to be less conflict and complaining with this method than others the author has experienced.

## **Advice on How to Work Together in a Team**

Division of responsibility tends to result in higher performance than group analysis and decision-making. The best teams divide up the work, with each team member specialising in some functional area of the firm. Approximately 70% of the firm's work is done by individuals working alone; the remaining 30% is done with the team working as a whole.

This is how the best teams work together. A good team will usually start by collectively reviewing the results of the prior decision period to get an overall feeling for the firm's performance. The team will then break up by function to further analyse what went well or poorly. When this analysis is complete, the members get back together for a report-out by each person. With all the information in front of them, the team re-evaluates its performance, strategy and tactics. Collectively, the members decide what needs to be done to correct problems or to take advantage of opportunities. Each functional executive is then charged to work out the tactical details and come back with a set of tactical recommendations for the group to consider. These decisions are usually entered into the software for other team members to review as they do their own work. When the group gets back together, the team reviews the highlights of the overall strategy and key decisions and adjusts accordingly. Cross-functional decision-making is frequently the topic of detailed discussions.



Many teams will employ the group decision-making strategy. In group decision-making, one person sits at the keyboard and sequentially works through the task list. The rest of the team looks on and comments on the analysis and what needs to be done. In general, teams feel good about working together this way. Decisions are pretty much made by consensus, and so everyone buys in.

Group decision-making can result in good decisions. But it tends to not result in winning decisions, and it can result in weak decisions. It is very difficult to explore the many threads of a team's success or lack of success in this fashion. Analysis is short-changed in favour of detailed discussions based upon quick impressions.

Our hunch is that this group-decision approach also does not maximise learning. Anecdotal evidence suggests that the person at the keyboard has the greatest opportunity to learn. This person is in control and can decide what to focus on. He or she sees everything. The rest of the team is along for the ride.

To maximise learning and effectiveness, it is strongly recommended that every individual be responsible for some functional area of the firm. They should analyse the data and decisions in their area of responsibility and come prepared to meetings with their analysis and recommendations.

With some simulations, it is possible to see the amount of time spent by each student plus what information and decisions have been reviewed. When students show little activity, there is good cause for concern. When queried about their low activity, many students will reply that they work as a team and make decisions together. This is useful, but they should be working on their own as well. This individual activity will maximise their learning and the performance of the team.

## **Technical Considerations**

Approximately 20% of the population has one or more learning disabilities. Many countries have strict requirements on accessibility, and others are considering them. The goal is that there should be no barriers to participation, including visual, motor, cognitive and auditory. In practical terms, all students should be able to easily, equally and independently engage with the simulation. As a minimum requirement, the simulation should comply with local accessibility standards to accommodate students with disabilities or learning disorders.

Technical support from the simulation provider is highly desired for both faculty and students. Initially, the faculty might want help selecting the right simulation for the target audience. Once they have chosen a simulation, they might also want a personal tour to obtain an overview of the simulation, its learning goals, the mechanics of game play and supporting documents (syllabus, PowerPoint presentations, test bank, rubrics, grading protocols, etc.). After the simulation is in play, instructors might like to delve into coaching, including the best practices, coaching tips on how to work with troubled teams and tools for identifying problems and their potential causes. After completing the exercise, the instructor might like to check on grading guidelines and how to close out the exercise for maximum learning and appreciation.

Students will also have questions and concerns. Technical support cannot say what is the best decision to make, but it can help students access the simulation, locate and use information, explain the ramifications of decision options and so forth. It is good to check if technical support is available for students. If it is, the instructor can encourage students to contact the simulation provider rather than worry about all the technical details.

## **Value-added Activities**

A new venture simulation provides an environment within which many entrepreneurial experiences can naturally occur. These simulations have good value in their own right. They can also provide a platform upon which additional entrepreneurial learning activities and assessments can be overlaid that can enable more learning and skill development.

To the core simulation, it is possible for a teacher to add a formal leadership role, executive briefings, a formal business plan, a venture capital fair and a stockholder report. With each comes an assessment opportunity that can be of value to both the programme and the students.<sup>1</sup>

## **Leadership Development: Rotation of Presidents**

Many schools have a learning goal to develop the leadership skills of their students. The best way to develop these skills is to give students

the opportunity to take on a leadership position. Military academies have learnt that leadership rotation with constructive feedback is a very good way to develop leadership among its ranks. This can be done with any simulation by rotating the presidency throughout simulation play.

In the syllabus and on the first day, a teacher can inform students that everyone will take on the responsibility of managing a team and serve as the president of the company. The president's job is to manage the schedules and meetings, oversee the assignment of tasks, monitor overall performance and help the team in every way possible to achieve a strong performance.

Each simulation will have its own life cycle. Let us assume there is a start-up phase, a test market phase, a pitch competition phase, a growth phase and a final accounting phase. These phases make for a good rotation plan for this life cycle. Other life cycles can have their own rotation plan.

The first president can organise the start-up phase of the business, including the selection of team members and deliberations regarding team norms, decision-making process, role assignments, initial business strategy and business set-up. The second president can organise the test market phase where the team goes to the market and tests and refines its initial strategy. The third president can oversee the preparation of a business plan and its presentation to the outside investors. The fourth president can manage the implementation of the business plan. And the fifth president can organise the final presentation to the investors. If there are only four people on the team, then the last two activities can be merged into one.

The rotation of the president should be decided during the first phase of the company. However, this rotation can be changed at any time.

At the end of the exercise or after each person has completed their tour as president, the team members can provide feedback on everyone's performance. A separate leadership peer evaluation can be used for this purpose.

Learning that they will become the president of their team for a period of time can be a surprise for many students. Certain individuals are content with sitting back and letting others take the lead, while their contribution can be focused on doing their job well.

Natural leaders do not require encouragement to take the lead. Reluctant leaders need encouragement, even to the point that there is no backing out. Our experience has been that many students have found that they can lead a team if required to. Anecdotal evidence suggests that

many of these students have appreciated the experience, and it has built up their confidence to lead in the future.

## **Executive Briefings**

The executive briefing represents an opportunity to monitor the team's thought process, analytical skills, use of the tools of management, overall business acumen and communication skills over an extended period. These briefings are the single best venue for coaching students and the single best source for evaluating individual effort. They are a great way to get to know the students, challenge student thinking, provide targeted and highly relevant instructions, and keep the students motivated—all coaching activities.

The executive briefings are strongly recommended for classes where the instructor can meet with the teams online or in-person. In these executive briefings, all students must demonstrate mastery of the information and decisions within their areas of responsibility plus integrate their responsibilities with the rest of the organisation so as to maximise its total performance. These briefings simulate a professional meeting with an investor or a senior manager and are invaluable in preparing students for their careers. Given their importance to the management of the new venture and value in the development of the students' business acumen, executive briefings should be given a significant weight in the total grade.

The potential contribution of the executive briefings to learning goals is summarised in Table 1.

### ***Format***

Normally, the chairperson of the board (coach/instructor) would meet weekly with each team for 15–25 minutes. The first meeting would be during the first decision round. Usually, one executive briefing is conducted for each decision round. During these executive briefings, the team reviews its:

1. performance during the prior decision round,
2. market analysis,
3. strategy for current decision round and going forward,

**Table 1.** Contributions of the Executive Briefings to Learning Goals

Learning Goal	Means by which the Goal is Accomplished
Instructor interaction and feedback	The instructor has frequent opportunities to interact with individual students and give immediate feedback on their performance. This sets the stage for helping students to improve on their presentation skills, their preparedness, their use of business concepts, thought processes and tools of management, as well as their ability to concisely discuss trade-offs and defend a final decision.
Student involvement and engagement	Each student is assigned a role where he or she must present the analysis and logic behind his/her conclusions, decisions and plans for the company, as well as try to anticipate and deal with follow-up questions by the coach.
Reflective thinking	Students are expected to thoughtfully present the actions taken based upon a concise analysis of relevant market, operational and/or financial data, as well as a consideration of how these decisions will impact other functional areas, costs, revenues and the capabilities of the firm in the future. Moreover, students are asked far-ranging questions designed to probe their understanding, not only of their area of responsibility but also its impact on other functional areas.
Analytical skills	Effective arguments require data (management by the numbers) derived from the application of the tools of management.
Integration	To achieve the highest score, a student must demonstrate mastery of the information via decisions within his/her areas of responsibility integrated with the rest of the organisation so as to maximise the total performance of the firm.
Knowledge application	To be effective, facts, analysis and arguments must be couched in business terms, principles and ways of thinking.
Communication skills	Students must articulate a logical argument, supported by relevant information, and respond in a thoughtful manner to probing by the coach.
Financial analysis and reporting	Students must analyse the profitability of their firm and all of its activities, assess the potential return of major investments and prepare pro forma financial statements based on current tactical plans.

*(Table 1 continued)*

*(Table 1 continued)*

Learning Goal	Means by which the Goal is Accomplished
Functional knowledge and understanding	Students must demonstrate knowledge of their functional area of responsibility, including the ability to (a) assess performance based upon business metrics and (b) justify decisions relative to options, trade-offs, potential outcomes and linkages to other areas of business.
Perform to standards set by the faculty	The executive briefing rubric clarifies, for both faculty and students, those activities and thought processes that constitute each performance level.
Career preparation	The briefing simulates professional meetings with investors and senior managers. The briefings train students in professional meeting preparation and management (agenda setting, keeping to the schedule, speaker transition, etc.), preparing students for their professional future.
Leadership development	The rotating president must organise the team and agenda, as well as keep the team on track during the briefing, including assigning questions to the relevant person plus pulling together disparate ideas and issues. The president must also formulate action plans in response to the issues raised during the briefing.

**Source:** The author.

4. current decisions and
5. pro forma financial projections for current decision round.

To help organise the executive briefings, it should be led by the president, and a written agenda should be required. Furthermore, the agenda should contain each topic to be addressed, the person responsible for it and the amount of time to be devoted to it. And it should leave time for questions and answers. Finally, each and every student must be prepared to defend the analysis and the logic behind all of the team's decisions and plans. The role of the instructor is to be the devil's advocate and, when needed, coach.

Within these executive briefings, it is hard to hide behind the rest of the team when faced with point-blank questioning. It is easy for the instructor to see who knows the analysis and who has done the work.

Following each executive briefing, the instructor may wish to evaluate the contribution of each team member. Having an evaluative rubric

can be very helpful in this regard. More will be said about rubrics under the discussion on assessments.

### *Scheduling*

The key recommendation here is that executive briefings should be substituted for class time. In terms of focused and personal learning, the executive briefings are probably more effective than almost any other classroom activity that might be contemplated. If a class normally meets twice a week, 1 day could be used for lectures, cases or other normal classroom activity, and the other day could be set aside for executive briefings.

The executive briefing should be conducted just before the decisions are to be submitted for processing. The goal is to have all the analysis, discussion and decisions completed prior to the meeting so that the students perform at their maximum level of preparedness. There also should be a short time for the students to adjust their decisions if their discussion with the instructor/coach caused them to rethink some decisions.

It may be difficult to meet with all teams during the normal class time. Thus, it may be necessary to meet with some teams at other times during the day. When setting up the schedule, ask each team to provide two to three alternate times to meet so that the teacher can arrange a schedule to satisfy both the students' and your requirements.

## **Business Plan and Venture Capital Fair**

Within a new venture scenario, students can be asked to prepare a business plan and pitch it to outside investors. Even if the funding is automatic within the game scenario, it would be worthwhile to pause midway through the exercise and reflect on where they have been and where they would like to go. What have they learnt that might justify a pivot in their strategy and tactics? What are the firm's strengths, weaknesses, opportunities and threats? How should the executives plan out the future of the new venture? How will the market and competition likely respond to these plans? And what cash flows and profit projections are possible from these plans, and what funding would be required to enable them?

Even if it is not in the game scenario, it is possible to require the students to pitch their ideas to outside investors who must give their approval to the plans. This can be operationalised with a venture capital fair.

At the midpoint of this exercise, a teacher can ask teams to present their business plan to a group of independent judges who serve as venture capitalists. The judges can be drawn from the business community, other faculty, doctoral programmes and even prior students. One, two or three people can serve as investors. Following the presentation, the team must defend the plan in response to a variety of far-ranging questions from the judges. Twenty-five min is sufficient to present their plan, answer questions and convince the investors that they are worthy of a full investment.

If the simulation will allow it, the investors can decide how much to invest and the share of the company they want in return for that investment. In the graduate version of the class, the investors can have follow-up meetings with teams in order to discuss the plan in more detail and negotiate an investment. In both cases, a team may receive less money and/or give up more equity than planned. Thus, there is a fair amount of risk for the team.

Business plan preparation is very important to the development of the students' ability to think broadly and deeply about their business. They must understand how all the functional parts of the business work together across multiple planning periods. They need a vision of what they want to accomplish and then work out the details to make it happen.

The actual planning process requires a few iterations to reach a working plan. Students must set realistic goals, work the tactical details to achieve the goals, check the financial projections to make sure they have the money to do what they would like to do and then revise everything when they discover that the plan is not internally consistent, realistic and/or attractive to outside investors. To do this, they need to also consider a variety of 'what-if' scenarios and the contingency plans that follow from them.

The presentation and defence of the business plan are also important in developing a critical business skill—asking for money. Although this scenario uses venture capitalists and a venture capital fair, the fundamental challenges are how to ask for money, justify its use with a credible plan and believable results, and be able to convince critical investors that the team can do these things plus deal with surprises that will inevitably come their way. The investors are free to place conditions to receive their approval, such as investing in certain markets,



research and development (R&D) or financial initiatives, all part of the business interaction.

Another advantage of the venture capital fair is that the students must learn to communicate in a logical and persuasive manner and to be sensitive to the needs of their audience. (What is in it for the investors?) In short, it forces the students to sell their ideas to independent businesspeople. It is also a good practice for anyone who is likely to make a pitch for any project or initiative, even for raising real venture capital.

Finally, the venture capital fair takes the instructor off the hook of demanding high standards. These outside guests usually do not pull punches and can provide very instructive feedback when the exercise is over. The students tend to respond positively to the feedback they receive from outside guests, more so than they might from the instructor.

The whole exercise can be completed in an afternoon or evening for a single game. It is very realistic and energising. Although the students do not like the work leading up to the venture capital fair, both the students and the outside guests tend to enjoy the discussions and negotiations.

The potential contribution of the business plan and venture capital fair to learning goals is summarised in Table 2.

**Table 2.** Contributions of the Business Plan and Venture Capital Fair to Learning Goals

Learning Goal	Means by which the Goal is Accomplished
Instructor interaction and feedback	The business plan presentation and the detailed tactical and financial plans are submitted in advance to the instructor/coach for review and feedback in order to help students perform at their best during the venture capital fair. In addition, there is feedback via the rubric from both the instructor/coach and investors.
Student involvement	The exercise requires not only the specification of a strategy going forward but also the articulation of that strategy into detailed tactical and financial plans for several planning periods into the future. The achievement of the former is only possible through the coordination of functional decisions throughout the organisation.

(Table 2 continued)

*(Table 2 continued)*

Learning Goal	Means by which the Goal is Accomplished
Reflective thinking	Students analyse their prior performance, reconsider their initial strategic plan and decide upon the best course of action going forward. During the presentations, students are asked penetrating questions as the investors probe to understand the merits of the team's actions and rationale.
Conceptual reasoning	Students must prepare, present and defend a well-thought-out business plan to independent judges (investors) that is based upon facts, analysis, sound principles and good business logic.
Analytical skills	Effective arguments require data derived from the application of the tools of management. Investors stress management by the numbers.
Financial analysis and reporting	Financial projections are at the core of a successful business plan. Investors look for a tight correspondence among strategy, tactics and finances.
Integration	The exercise requires not only the specification of a strategy going forward but also the articulation of that strategy into detailed tactical and financial plans for several planning periods into the future. The achievement of the former is only possible through the coordination of functional decisions throughout the organisation.
Knowledge application	To be effective, facts, analysis and arguments must be couched in business terms, principles and ways of thinking.
Communication skills	Students must present persuasive arguments to sell their ideas to outside investors based upon their business merit. They must also provide thoughtful responses to critical investor questions regarding the analysis, strategic thinking, tactical details and financial returns. Their success is dependent, in part, upon the professionalism of their demeanour, communication skills and presentation material.
Career preparation	The business plan and venture capital fair simulate a financial request situation whereby a business team would make a request to start or expand a business with potential investors.

**Source:** The author.

## Stockholder Report

At the end of the exercise, there is frequently some sort of final accounting of the team's performance. Most importantly, there is an opportunity to invite back the outside evaluators who were present at the presentation of the business plan to serve as key investors or the board of directors. The stage setting may be the first shareholders' meeting or a board meeting. Most importantly, teams must look these evaluators in the eye and provide an accounting of their actions and performance in the time since the plan was initially presented.

Specifically, the teams are asked to:

1. review their financial, market, operational and HR performance during the second year;
2. assess their business strategy and performance to
  - recap their business plan,
  - compare the actions taken against the plan,
  - discuss any departures from the plan and their justification,
  - review significant events that affected the company and market and
  - explain why they did or did not achieve their goals;
3. evaluate their ability to compete in the future; and
4. reflect on the lessons learnt during the exercise.

In terms of accountability, the outside evaluators are eager to discover their return on investment and why the plan went well or badly. They often ask questions about performance, strategy, tactics, competition and the business logic behind all these issues. The stockholder report and the first stockholders' meeting have obvious parallels in the business world. That is, entrepreneurs need to account for the resources they have been given and the promises they have made. It is often uncomfortable to report performance outcomes that fall short of promises, but this kind of candid reporting is hopefully very constructive to both the students and business involved.

Finally, the reports can be made to the entire class, along with the judges. These reports provide something of a debriefing for the whole exercise. Students can better understand the strategy and thinking of their competitors. They can ask competitors why they did or did not do some things. The winners will most likely demonstrate that their success was based upon good analysis and decision-making and not luck. Those who do poorly tend to think that luck played a more important role than

decision-making. Thus, these reports help the students to put things into perspective.

The stockholder report can contribute to the learning goals as explained in Table 3.

**Table 3.** Contributions of the Stockholder Report to Learning Goals

Learning Goal	Means by Which the Goal is Accomplished
Instructor interaction and feedback	The stockholder report presentation can be submitted in advance to the business coach for review and feedback to help students perform at their best during their presentations.
Student involvement and engagement	The stockholder report event represents a full-team activity. Students review their performance since they presented their business plan, assess their strategy and tactics, explain why the team was or was not able to achieve its stated objectives, and defend their actions and analysis. They are reporting to the same outside people who invested in their firm based upon the students' promises and projections.
Reflective thinking	Students analyse their performance, rethink the rationale for their tactical choices, analyse the causes for their better or weaker-than-expected performance (what went right or wrong with their strategy and tactics) and reflect on the lessons that can be carried into the business world. During the presentations, students are asked penetrating questions as the investors probe to understand the merits of the team's actions and rationale.
Conceptual reasoning	Students must prepare, present and defend a well-thought-out report to independent judges (stockholders) that is based upon facts, analysis, sound principles and good business logic.
Analytical skills	Effective arguments require data derived from the application of the tools of management.
Financial analysis and reporting	Stockholders stress management by the numbers. Financial reports and analysis are at the core of a successful stockholder's report. Investors look for a thoughtful analysis of the firm's historical performance and how the firm's strategy, tactics and financing affected that performance.

*(Table 3 continued)*

*(Table 3 continued)*

Learning Goal	Means by Which the Goal is Accomplished
Integration	The stockholder report emphasises a seamless analysis of performance, strategy and tactics. Business functions are less important than a holistic perspective of how the firm was managed and how all the decisions were integrated to achieve superior performance.
Knowledge application	To be effective, facts, analysis and arguments must be couched in business terms, principles, and ways of thinking.
Communication skills	Students must present persuasive arguments to sell their analysis and assessment to the stockholders based upon their business merit. They must also provide thoughtful responses to critical investor questions regarding the analysis, strategic thinking, tactical details and financial returns. Their success is dependent, in part, upon the professionalism of their demeanour, communication skills and presentation material.

**Source:** The author.

## Grading and Assessment

What is measured gets managed. This old business axiom applies to education as well. Whatever the student is measured on is where their attention will focus. If it is not measured, it will become a secondary consideration. Only the best students will go beyond what is required.

Although assessments are important to grading and programme evaluation, they are more important in focusing attention on what needs to be learnt. They drive learning. In fact, the very act of measurement changes what is measured. It is typical for students to improve progressively throughout a simulation, and the assessments will document that improvement.

With that in mind, assessments should be selected or developed in ways that channel a student's energies, thought processes and reflections on what is most important to learn. Although it might be uncomfortable to consider, the more that is assessed, the more that is learnt.

Towards that end, a number of course-embedded assessments can be included in a new venture simulation. Depending upon which value-added activities are included, assessments can be created or adopted that

holistically and assiduously measure: (a) the overall performance of a team in starting up and running a simulated new venture; (b) the ability of an individual to think deeply, broadly and analytically in an executive briefing; (c) a student's teamwork and interpersonal skills; (d) a student's leadership skills; (e) a team's ability to effectively raise venture capital; and (f) how well a team can assess its performance, decision-making and lessons learnt at the conclusion of the exercise. These assessments can be described as team-based or individual-based and can help satisfy a programme's achievement of learning goals as required by accreditation bodies. Each will be described in the following sections.

## **Simulation Performance Scorecard**

There are many ways to measure how well teams do in a simulation. A common scoring approach is to measure the return on investment or the creation of wealth from the beginning to the end of the exercise. These metrics are simple to compute and simple to use for grading. They also follow the traditional axiom that the purpose of a new venture is to create wealth for the investors.

However, a global financial metric, such as profitability, return on investment or wealth creation, has limitations. First, it assumes that the owners are the only stakeholders who merit consideration. Customers and employees are only indirectly considered. Second, it can be difficult for the students to judge how their decisions precisely affect the final measure of success. The marketing person might wish to include customer satisfaction with brands, ads and prices plus market share in the target segments. The HR person might like to consider employee productivity, morale and satisfaction with compensation. The accounting person might want to consider gross margins, turnover and financial risk. These metrics are more aligned with the work individual students do and would enable them to see how their decisions are impacting the firm's total performance, and hence their grade.

The bottom line is that a performance scorecard should drive learning, logical decision-making and reflect the quality of the work being performed. It should include metrics that recognise the importance of multiple stakeholders and the work and responsibilities of each student decision-maker.

For some time, businesses have been using a critical tool to help measure performance across a myriad of dimensions and functional areas of the firm. This tool, commonly known as a balanced scorecard

(BSC; Kaplan & Norton, 1992), allows managers, and students, to take a more holistic view of the business (Atwater et al., 2008; Dilla & Steinbart, 2005), as opposed to optimising certain areas to the detriment of others. Applying a BSC would underscore the mindset of taking a balanced approach in managing a new venture.

To operationalise a BSC, the instructor would need to pick the metrics that reflect (a) the learning goals desired by the instructor, (b) the variety of functional decisions being made, (c) the relevance of each potential stakeholder group and (d) the available metrics in the game.

These individual scores can then be mathematically combined into a single overall score that can be used for self-monitoring throughout the simulation. This self-monitoring should drive the students to connect individual decisions with the outcome metrics that are included in the scorecard. Once they realise how their actions are driving departmental and overall performance, they can begin to purposely modify their decisions to take the metrics into the desired direction. This one-to-one correspondence is very difficult for students to comprehend but vital to the successful management of any new venture. It will require several decision rounds and good coaching to enable students to make these connections.

At the end of the exercise, each team can be ranked in the order of performance for the total score. A letter grade can be assigned depending upon each team's ranking and how close it is to the team(s) above or below it.

The manner in which the BSC contributes to learning goals is summarised in Table 4.

**Table 4.** Contributions of the Balanced Scorecard to Learning Goals

Learning Goal	Means by Which the Goal is Accomplished
Problem-solving and reflective thinking	Students need to drill down into the underlying criteria to determine why their performance is above or below the norm, and then develop a strategy and set of tactics to improve performance.
Adaptive abilities	The balanced scorecard provides objective metrics on performance. Current scores provide students with a baseline from which they can set goals for the future. To improve a score on any of the performance metrics typically requires significant improvements in (a) the students' analysis of the situation; (b) their interpretation of causative agents; (c) the anticipation of possible outcomes, given the decision options; and (d) follow-through on desired actions.

*(Table 4 continued)*

*(Table 4 continued)*

Learning Goal	Means by Which the Goal is Accomplished
Instructor interaction and feedback to students	The instructor is able to track each team's performance on key performance criteria. Like the students, the instructor can drill down to discover the various causes for shortcomings which can be used for troubleshooting and bring focused coaching during executive briefings.
Student involvement and engagement	Each student can take ownership of two or more of the performance criteria that make up the total score. This responsibility is usually aligned with an individual's primary and secondary areas of responsibility. Part of each person's evaluation is determined by how well the firm does in the selected areas of responsibility. Comparisons are made between individuals who have assumed similar responsibilities in different companies. Strong performance requires mastery of the information and decisions within their areas of responsibility.
Integration	Although students can take responsibility for different aspects of the balanced scorecard, the team as a whole is responsible for the entire scorecard. Therefore, each individual needs to know how the firm is performing in each functional area. More importantly, they need to know the trade-offs between functional responsibilities so that total performance can be maximised. In short, it forces students to take a balanced perspective and think multidimensionally.
Knowledge application and data-based analysis	The metrics of the scorecard are based upon data derived from the common tools of management for each functional area. Students need to apply these tools and data to better understand their current situation and how to improve it.
Career preparation	Many businesses employ a balanced scorecard and often assign responsibility for various dimensions to individuals and departments. Students have the opportunity to learn how the scorecard works and its relationship to their own evaluations in the future.

**Source:** The author.

## Rubrics

Rubrics are an excellent assessment tool for grading performance. According to Andrade (2002), a rubric is a scoring tool that lists the criteria for a piece of work or 'what counts'. Typically, a rubric lists



items like knowledge and skills that students must demonstrate to receive a certain score or rating on a particular task or project. Rubrics also specify the performance level required for several levels of quality. Rubrics can help students and teachers define ‘quality’.

In short, rubrics describe what constitutes good work in the classroom, on assignments, and in business. As such, rubrics can help students judge and revise their own work before submitting it. A particularly valuable aspect of rubrics is their formative capacity to shape mental frameworks, knowledge and entrepreneurial skills for a lasting impact on student success.

From a quality control point of view, rubrics encourage uniform grading across multiple evaluators. If the evaluators come from different disciplines, both inside and outside the university, each will apply standards based upon their experience and training. The systematic format of the rubric tends to reduce unwanted variance based upon the evaluator’s background. This format is especially helpful when a course contains many sections with many different instructors.

Rubrics should be posted prior to the start of any exercise in which they are used. Students need to understand what is required of them before they start to work on their analysis, strategy, tactics, finances and presentation—before they invest too much time in the assignment.

Finally, the rubric score should be posted within a few days of the presentations. Students respond well to immediate feedback—it also helps them to adjust their strategy and tactics for the coming decision periods if there are certain consistencies to the observations over time by the entrepreneurial coach and outside judges.

**Bottom Line:** The application of a rubric can result in much better prepared and performing students. The students learn from and respond well to it, in great part because they can clearly see what needs to be done to be successful. Importantly, many students will rise to or exceed the standard once they understand them and realise it is reasonable and achievable.

Within the context of a new venture simulation, a rubric can be created for the executive briefings, business plan and final report if they are included as value-added exercises.

### *Executive Briefings*

The rubric for the executive briefing can focus on the student’s ability to thoughtfully present their tactical decisions (depth of understanding) based on a concise analysis of relevant market, operational and/or

financial data (management by the numbers), as well as a consideration of how these decisions will impact the firm's overall strategy, other functional areas, costs, revenues and the firm's future capabilities (breadth of understanding). Students can also be evaluated in terms of their ability to think on their feet and respond to questions and challenges in a thoughtful and confident manner. As coaches complete the rubrics, they evaluate the thought processes, skill sets and critical thinking that went into the student's decisions and responses. The specifications in this rubric can be very instructive to the student as to how to conduct himself or herself during a business meeting, plus it can provide practical data for the school's assessment programme.

It is recommended that executive briefings be administered for each decision round of the simulation. The particular focus of each executive briefing will vary depending upon the events unfolding as the new venture progresses through its natural life cycle. Nonetheless, the depth of understanding, breadth of understanding and management by the numbers criteria can be applied across this entire spectrum of experiences. As such, the student is continually pushed to improve in these critical areas. They can see their scores, and they can generally improve with each decision round based upon their own self-reflection and the coaching offered by the instructor. Perhaps the most important aspect of the combined executive briefings and rubric evaluation is the attention given to the student over an extended period by a knowledgeable, experienced, objective and caring mentor. Students need and respond very well to a teacher's personal attention, resulting in impactful learning.

The executive briefings and the accompanying rubric provide much-needed practice for skill development. A teacher can tell students that they need to think deeply about their decisions within their functional responsibility, that they need to be cross-functional in their perspective and deliberations, and that they need to be very analytical and use data to make logical choices. Students will agree that these things are all necessary. However, they are difficult to execute and require a lot of practice with good coaching to achieve them. Of course, if a teacher does not require them to be done in the executive briefings and does not measure them in the rubric, they will remain intellectual guidelines and not skills.

### *Business Plan*

The business plan presentation to outside investors offers an invaluable opportunity for students to develop and demonstrate their business,

teamwork, leadership and communication skills. A business plan rubric defines what each team needs to do to perform at its best.

Here are some criteria that can be used in the rubric: executive summary, assessment of current situation (looking forward), strength of strategy, assessment of risk, assessment of return, management by the numbers, assimilation and integration (depth and breadth of understanding), business acumen, team strength, organisation, format of presentation materials, professional delivery and mechanics. A business plan rubric allows the entrepreneurial coach to provide detailed and prompt feedback to all teams on all of these dimensions.

It is desirable for the venture capitalists to also fill out the rubric. Their assessment can provide valuable feedback to both student teams and the entrepreneurial coach. Students can see how their performance was perceived by outside evaluators. The entrepreneurial coach can gauge their assessment relative to unbiased evaluators.

Although the business plan rubric can appear to be long, it is not difficult to comprehend or score. The venture capitalists take it very seriously and like it as a systematic way to give feedback to the teams. They are usually able to complete this task within a couple of minutes after the team's presentation.

The scores given by the venture capitalists may be averaged in with the entrepreneurial coach's evaluation if the evaluators are experienced judges. The preferred approach is that the ratings be used as additional information for the entrepreneurial coach to consider as he/she prepares the final evaluation and feedback for each team. In any case, they can be shared with the students so that they learn what independent evaluators think of their effort.

If the classroom technology permits, it is also a good idea to record each team's presentation and to share the recordings along with the rubric scores. In that way, students will have a myriad of tools to learn from their mistakes and to improve themselves for the subsequent presentation, the stockholder report.

### *Stockholder Report*

The rubric for the final report can contain many of the same dimensions as the business plan rubric, including executive summary, assessment of current situation, management by the numbers, assimilation and integration, business acumen, team strength, organisation, format of presentation materials, professional delivery and mechanics.

Keeping these metrics common between the two rubrics gives the students incentive to work to improve themselves, especially in areas of weakness. When the second report is released, they are able to put them side by side to judge how much they improved.

The rubric for the final report can also include criteria that focus on accountability as compared to what was promised and how well the new venture is prepared for the future (the long view), including assessment of strategy and execution and investments in the future. Given that the students made a lot of promises to obtain the investment money, the investors rightly want to know the outcome of that investment.

The last metric that is recommended for the final report is, lessons learnt. To obtain closure on the experience and underscore the skills that were practised, it is desirable to have the students reflect on their lessons learnt. Once the simulation is completed, students feel more relaxed and in a better state of mind to reflect on the value of their investment. They have experienced many aspects of business and have been required to try and try again to keep improving. Most conclude that they are substantially more business savvy than they were at the start.

Finally, this reflection tends to create a positive atmosphere in the class as team after team recounts how they have benefitted from the simulation and everything it contained. Other students take note and may think again about the benefits of the experience. Not to be undervalued, this task also helps with the end-of-course teaching evaluations. It is a good time for students to evaluate the course.

### *Peer Evaluations, Leadership Evaluations and Firing a Teammate*

One frequent learning goal of a simulation is to encourage the development of interpersonal skills. A peer evaluation can focus the students' attention on teamwork skills, team building, collaborative behaviours, and group and individual dynamics. The evaluation provides the students with feedback so they can dynamically adjust their behaviours to be more effective and helpful team members. Finally, they provide the instructor with feedback on how well the teams are working together as well as sufficient tactical information to deal with individuals not making a positive contribution to the team.

While grading and mentoring are major reasons for employing a peer evaluation, another important reason for including them is that they

signal to the student what is good professional behaviour in the workplace. Each time a student evaluates their teammates and themselves, they are reminded of how they should be conducting themselves in a business situation. To this end, a peer evaluation can address the following behaviours:

1. How effective each person was in doing their work and to what degree the individual contributed to the overall performance of the team?
2. How professional and supportive each person was in working with the student completing the peer evaluation?
3. How often each person was proactive in resolving problems, finding new solutions and helping teammates?
4. How often a teammate displayed behaviours disrupting or limiting the team's effectiveness?

Each question can include the set of behaviours that are to be encouraged or discouraged.

One peer evaluation at the end of the exercise may seem adequate. However, multiple peer evaluations will allow for feedback and corrective action if necessary. Two are better, in the middle and at the end, and three are preferred. The best times to administer three-peer evaluations are (a) at the conclusion of the start-up phase of the business, (b) right after the completion of the business plan and (c) after the last decision period and/or the completion of the report to the board.

The timing of the first peer evaluation allows the teams to settle into their roles, discover how to work together and largely progress through the forming, storming and norming phases of the team life cycle. If a team member is not pulling their weight, causing other team members stress, or otherwise not contributing, corrective action can be initiated by the instructor. Fortunately, almost all students are conscious of what they need to do to accomplish their own work well and be helpful to their teammates. This tendency can be amplified if the instructor shares the peer evaluation even before teams are formed because it will guide the students in a good way.

The second peer evaluation follows an extremely stressful and intensive work period, while the students prepare and deliver their business plan to outside evaluators. Several teams will enter or re-enter the storming phase. An improvement is typically observed from the first to the second peer evaluation for most students who were marked down on the first one.

Following the business plan work, most teams are in the performing phase of the team life cycle. They have a good understanding of their business and market, an agreed-upon strategy, a tactical plan mapping their decisions to the end of the exercise and a comparatively modest workload as they continuously evaluate their business performance and skilfully adjust their tactics from business period to business period. The results of the third peer evaluation tend to reflect this upbeat phase of the simulation. By the time of the third peer evaluation, the scores tend to be very good.

The third peer evaluation can be a hybrid evaluation and include leadership questions as well as work and interpersonal behaviour questions. Leadership feedback is especially valuable if the students have had the opportunity to be the formal leader of the new venture. It can include a reduced set of performance criteria to highlight the students' contribution towards the workload and interpersonal skills and an extensive set of leadership questions. The performance questions can be used for grading purposes, while the leadership questions should be used as feedback on how the student performed as a leader. Leadership should not become part of the grade; the goal is to encourage formative development of leaders and not to discourage individuals in any way. It is helpful if the students are reminded that leadership can be exhibited not only when there is formal authority but also any time when work is to be done and people work together.

Finally, what do you do with problematic students? Fortunately, most will respond well to the instructor's guidance on how to improve. However, some will not. There is an option that can reduce this number to very few, the ability to fire a team member. The thought of being fired seems to strike a serious chord in students. If this is possible, even the most difficult students will work to avoid it.

The firing process should be stated in the syllabus and follow the typical professional process found in business. A poor first peer evaluation can be the trigger, but it need not be. It starts with a written notification from the other team members regarding the one member's deficiencies. The student is then given an opportunity to respond in writing to the criticism and how the situation will be corrected. If there is insufficient adjustment within the next decision round or two, the student can be fired by the rest of the team. If a student is fired, the penalty is that he or she must complete the simulation and all related assignments alone. A separate simulation can be set up for the student to play. Fortunately, very few students are actually fired because the penalty and stigma are too onerous.

## The Role of the Instructor

There are many paths that an instructor can follow in using a simulation in a course. At the lowest level, an instructor can do very little, letting the simulation take on a life of its own, not providing any guidance in how to make decisions or analyse the results. This approach is often used with good success with very large introductory classes. A well-organised simulation, even at the highest difficulty level, can be on autopilot from the instructor's point of view. The natural interest in playing a game, competing against formidable opponents, seeing the results of one's actions, plotting how to win and overtake competitors, the curiosity of how a new venture operates in practice and the palpable development of business skills all drive individuals and teams towards the finish line.

A more interesting approach is to build the simulation experience into lectures and classroom discussions. Students are much more attentive if the instructor draws examples from what the students are experiencing within the simulation. Students sit up and pay attention if specific decision situations, results and teams are used to illustrate a theoretical or managerial point. The instructor is now talking about substance that pertains to the life and performance of members of the class, even oneself.

At the next level, an instructor can take on the role of a coach. This role is much more developmental and hands-on. It is encouraged for higher-level simulations and classes.

An opposing view is to let the students sink or swim on their own. A fair number of instructors take the view that it is the students' responsibility to figure things out, solve their own problems and win or lose on their own merit. The instructor will set the bar high and assign grades based upon how close the players get to the goal. Only those who get over the bar will get the top grades and the distinction of having 'won' the competition. If too many get over the bar, the bar gets set higher.

The view taken by this author is, 'no child left behind'. Every student and team deserve help in developing their knowledge, talents and skills. It is still good to set a high bar, but then help as many as possible to get over it. The number of students with high grades is not as important as the number of students who are better prepared and more confident to lead their own business.

The teacher as entrepreneurial coach can transform a classroom into a powerful learning environment. The coach has a ringside seat on everything the students know, do and think over an extended period. This familiarity can result in more personal and effective coaching and

teaching. The primary opportunities for this coaching are the executive briefings, the business plan, venture capital fair and stockholder report.

## **Executive Briefings**

The best opportunity for coaching is within an executive briefing. A coach can channel students' energies, thought processes, practice routines and feedback mechanisms to advance the level and the speed with which students attain competence.

Although ostensibly serving the role of chairperson of the board, the instructor can become both a devil's advocate and coach. As devil's advocate, the instructor's role is to challenge everything a team thinks and does. As coach, the instructor's role is to help students understand what they do not understand, think about or do. At the very least, the questions instructors ask should stimulate students to consider additional dimensions in their strategic thinking, analysis and decision-making.

When students come into executive briefings, they need to be well prepared and ready to explain, defend and support all their conclusions, decisions and expectations. This preparation not only leads to a heightened awareness of their business but also pushes their business acumen to its highest level.

This involvement makes them highly receptive to ideas, techniques and thought processes that might help them to resolve difficulties or better shape their firm's future. The current situation can thus be used to illustrate concepts, principles, theories and ways of working concerning innumerable topics. Brief chalk talks and back-of-the-envelope illustrations are very effective in developing critical knowledge and skills.

The instructional assistance comes at a highly relevant time and within a context that is germane for and unique to each student and team. It is also pedagogically efficient. There is no need to spend time on what is clearly understood and applied; only deficiencies get attention.

Here are a few guidelines to further advance an instructor's coaching potential in a new venture simulation.

Students remain motivated as long as they have a chance to win, or at least put in a strong showing in the competition. For the strong teams, the best coaching tactic is to get out of their way. For weaker teams, they may need some guidance to help them expand their thinking and consider more issues than they might naturally. Coaches cannot make decisions for teams, but they can probably see where a team is falling behind



other teams. These weak points need to be highlighted for weaker teams, which must be encouraged to deal aggressively with them.

However, the instructor's role is not to provide solutions to the team's problems but rather to raise questions and issues that have not yet been addressed. It is, in fact, counterproductive, to suggest solutions to problems or decisions for two reasons. First, students must experience the risk of making uncertain decisions. The pain and fear of pain will drive them to reduce that risk. The best way to do that is to learn more through study, analysis, contemplation and discussion.

Second, if the outcome of a suggested decision leads to unfavourable results, the students will abdicate their responsibility and forever blame the outcome on the instructor. They can become disheartened and feel that their chances of success have been diminished, thus reducing their motivation to work and learn. It is better for the instructor to help the students envision options and possible outcomes than to suggest any as a path forward. At the end of the day, the students need to know that the decisions are theirs to make, as is the responsibility.

## **Business Plans, Venture Capital Fair and Stockholder Report**

As described previously, the business plan, venture capital fair and stockholder report represent significant opportunities for learning and skill development. They also create good opportunities for coaching individuals and teams. At the very least, a coach can provide an outline of what to say and guidance with how to say it during these meetings. With a little more effort, a coach can review slide decks and offer suggestions to improve their substance and style. Highly involved coaches will go one step further and review a dress rehearsal of the presentation with constructive feedback.

The goal in all cases is to help the students to effectively communicate and interact with people who are unknown but important to their success. The emphasis here is on helping. Rather than rely on the students to do all the work on their own, the coach gets involved to improve the message and its delivery. Students will almost always perform at a higher level and be more successful with this kind of coaching. After all, virtually, none of the students have asked for an investment or reported on the success of that investment. In theory, they might know what to do. In practice, they really do not know.

The enjoyable part about this level of coaching is that the instructor takes on the role of a helpmate. The instructor as coach is not a threatening person. The goal is for the students to look as good as possible to these outside evaluators. It is in the interest of the student, instructor and school to do a good job. This level of coaching creates a bonding with the students that is very rewarding.

## **Fear of Looking Bad**

A new instructor/coach may feel uncomfortable leading an entrepreneurial simulation for the first time. There is a steep learning curve, and educators do not like to feel helpless or look like they do not know what is going on or why certain things are happening.

Fortunately, a good simulation will include instructor dashboards for side-by-side comparisons of the decisions and results of each team. With a little experience, a coach can learn to spot outliers on the high and low side. These outliers can be used as discussion points at appropriate points in an executive briefing.

Providing an outline for the executive briefing will also put the burden on the team to take the lead and provide evidence for everything they have done or expect to happen. At strategic points, the coach can jump in with targeted questions relating to anything that appears to be out of the ordinary. Also, it is always easy to ask leading questions—why did you do that? What other options did you consider? How did you arrive at this decision? Do you have any data to back you up?

It is also permissible to say, ‘I do not know, check the instructions and help file’. These resources in the simulation usually contain everything that is needed to play. The students can also be directed to the technical support staff of the simulation provider. For those who still prefer to ask the instructor for help, the syllabus can state that a student will be charged some amount of money to answer any question already addressed in the software. This tactic will all but eliminate unnecessary questions and the discomfort of potentially not knowing the answer.

## **Final Review of the Learning Experience**

The instructor’s wrap-up presentation represents one more opportunity to demonstrate good coaching. The objective is to get the students to

shift from the competitive aspects of the exercise to the educational ones.

It is good to schedule the final review immediately following the stockholder reports, which by themselves represent a good debrief of everything that happened and why. To add poignancy, the instructor can draw upon the lessons learnt that the students presented in their stockholder report and include comparative tables and graphs from the student software. Students typically love to see references to what they said or did. The goal is to recap the benefits that were promised at the outset and illustrate how they were achieved based upon the actions and outcomes that were experienced by the students. Not without merit, these things can help in the students' assessment of the learning experience and, most likely, the evaluations of the instructor and course.

## Conclusion

From our earliest age, we learn by doing. In fact, there is a well-recognised cycle of learning that can be applied to new venture development and simulation learning. Consider the following adaptation of Kolb's theory of experiential learning (1984):

- Assess: What is the situation?
- Reflect: How do I apply what I know?
- Decide: What is the best course of action?
- Act: Do what I believe is best.
- Assess: How did it go?
- Reflect: Update what I know and figure out what to do next.
- Decide: What is the best course of action?
- Act: Do what I believe is best.
- Assess: How did it go?
- Reflect: Update what I know and figure out what to do next.
- Repeat, endlessly

There is a corollary to the theory of experiential learning:

What we know [the importance of the acquisition of knowledge], influences what we think [our conclusions, attitudes, values, and intentions].

What we think, determines what we want to do.

Our skills determine what we can do.

All of the aforementioned examples underscore the importance of gathering knowledge, putting it to the test and learning from the experience. Within this cycle is where skills get developed.

As students complete their formal education, they could greatly benefit from a holistic experience that puts all the pieces together across disciplines and across the development cycle of a new venture. Our educational system mostly follows a piecemeal approach where students learn many aspects of business and entrepreneurship but are left to figure out how they all go together and evolve over time in starting up and running a business. They are indeed like the blind person holding onto many parts of the new venture elephant. Without some knowledge of what an elephant is, it is hard to know how they all come together into a powerful, smart beast that is a dominant player in the jungle of business. A longitudinal, full-enterprise, new venture simulation can fulfil that role.

What is more, the learning experience can be greatly enhanced by adding salient activities such as the rotation of the president, executive briefings, business plan preparation, a pitch to outside investors and a report to the investors accounting for the money received and what was achieved.

Furthermore, several relevant assessment tools can be included for grading and programme feedback. More importantly, these tools can help shape the mindset and mental frameworks of students by clearly indicating better ways to think and act as a business professional and entrepreneur.

Finally, the transformation of the instructor into an entrepreneurial coach can multiply and solidify all these natural benefits. Having a mentor, helpmate and developmental coach at their side will motivate students to try harder, think and act smarter and achieve more. It is certainly better than navigating the new venture world alone.

To paraphrase Thomas Edison, entrepreneurship is 1% inspiration and 99% perspiration. An entrepreneurial simulation with relevant enhancements, assessments and a good coach can make that 99% even more productive and enjoyable. The instructor's reward from all this work is being able to engage, challenge, inspire and transform students into better people and more successful entrepreneurs.

### **Declaration of Conflicting Interests**

The author declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

## Funding

The author received no financial support for the research, authorship and/or publication of this article.

## Note

1. Additional details regarding these value-added activities, assessment tools and evaluation procedures can be found in Riley et al. (2013) and Cadotte (2014a, 2014b).

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