



University of Aberdeen
Business School

Simulating Distributed Leadership

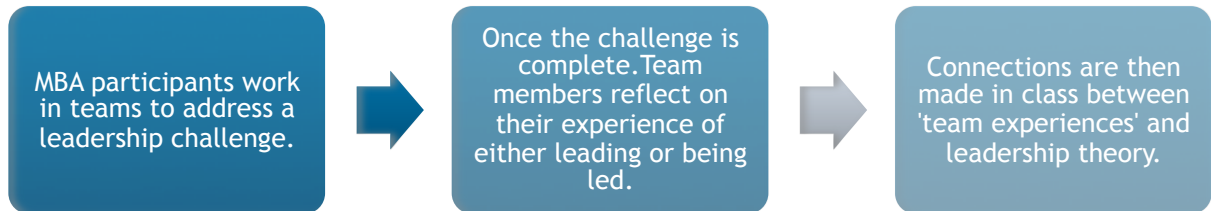
Dr Ian Heywood and Russell Williams

24th June 2013



1. Aims and Objectives

The aim of the project was to evaluate an on-line simulation designed to help MBA students explore their own leadership behaviour. One of the challenges we face in the Business School is the on-going need to blend theory with practice to ensure that our graduates leave with skills of direct relevance to their future employment. In the area of leadership the greatest challenge we face is providing students with an opportunity to explore their own leadership behaviour and the impact it has on others. The only effective way to do this is to provide them with a shared leadership challenge which they can use as a focus for debate and discussion. The commonly used approach in Business Schools is outlined below.



This approach works well when participants are able to take part in campus based group challenges. However, we recognise that as the School starts to move towards supporting distributed cohorts of learners there is a need for a different approach. One solution is to use a virtual, Internet based, leadership simulation. The purpose of this project was to trial such an approach with the objectives of:

- testing out the viability of replacing an on-campus leadership challenge with a virtual leadership simulation;
- comparing and contrasting the student experience of the two approaches;
- evaluating if the learning outcomes of the two approaches are comparable;
- identifying any additional benefits of using a virtual simulation; and
- establishing, if appropriate, a sustainable way of integrating the simulation into the MBA programme.

2. The Virtual Leadership Simulation



The leadership simulation chosen for the project was the Harvard Everest Leadership Teamwork Simulation developed by Forio for the Harvard Business School.

“The simulation story line involves a challenging expedition toward the summit of Mt. Everest, and the teaching goals pertain to leading effective team decision-making processes. Students begin the journey by logging in to assume five different roles on an assigned team. Each participant is given resources and information that his or her team must process effectively to make a series of critical decisions about the timing and execution of hiking along successive camps in its ascent to the summit. The teaching points for the exercise focus on how teams make complex decisions when critical information is distributed unevenly among members and when members have partially conflicting goals.”

Source: Harvard Everest Leadership Instructor Resource pack

To view a demo of the simulation visit: <http://hbsp.harvard.edu/list/7000-demo-page-basic>



The simulation is web based and can be used across a range of different platforms. Participants complete the simulation in a series of rounds gaining feedback on their progress as the simulation progresses.

3. Running The Simulation

The project team ran the leadership simulation during the 2013 Induction week for participants joining the Business School’s MBA, MSc in Management Enterprise and Innovation and Management Economics and International Relations programmes. A total of 60 students were invited to participate of which 53 actually took part in the simulation. Students were divided into teams of five and briefed at an introductory workshop held in the library computer rooms. The initial plan was for teams to complete 2/3 rounds of the simulation at the workshop to help the teams orientate themselves within the simulation. However, a campus wide IT problem on the evening of the workshop meant that the teams had to complete the entire simulation remotely. On completing the simulation the intention of the project team had been to run a follow up workshop exploring in more detail some of the lessons learnt. However, the availability of participants proved problematic due to timetable and assessment constraints. Therefore, individual feedback was limited to information provided through the simulation. Interestingly this created an opportunity for the team to see if any of the participants would use evidence from the simulation, without prompting, in support of their leadership course assessment which ran in semester two.

All the teams that took part in the project completed the simulation. Figure 2 shows an example of the differing degree to which the teams achieved the objectives set for them in the simulation.

Figure 2: Example Team Results Everest Simulation

Team	Round	Goals Achieved	Medical Challenge	Weather Challenge	Oxygen Challenge
1	6 (completed)	57%	pass	fail	fail
2	6 (completed)	43%	fail	fail	fail
3	5	0%	fail	fail	fail
4	6 (completed)	56%	fail	pass	fail
5	6 (completed)	96%	pass	pass	pass

The interesting point to note from this table is that it is possible for teams to have a range of different experiences when participating in the simulation, based on the style of group leadership adopted by the team. This provides an excellent platform and opportunity to link to different academic leadership theories and a theme that could be expanded on if the simulation was embedded in our leadership course, rather than offered as an induction activity.

Source: Harvard Everest Simulation (September 2013)

4. Results

The impact of the simulation was reviewed and evaluated using the following three-stage process.

1. Observation and discussion with team members as they participated in the simulation
2. A post project discussion with the course team.
3. A follow up web-based questionnaire with the simulation participants at the end of their formal leadership course.

The feedback from these reviews has been integrated into the discussion below which is structured around the initial objectives set for the project. In addition, examples of learner feedback are provided in Appendix 1.

4.1 The viability of replacing and on-campus leadership challenge with a virtual leadership simulation

The Everest leadership simulation would make a viable replacement for an on-campus leadership challenge. In observing student participation in the simulation it was clear that they found the simulation fun, engaging and stimulating. There were a few minor frustrations with the technology. However, the majority of these were directed at the University IT provision, rather than the simulation software. The course team noted that one added advantage of using a web-based simulation over the traditional on-campus, non-digital approach, was that the simulation collated a range of information about the leadership style of the individual teams which could be used to support class discussion. They also liked the supporting academic

papers provided by Harvard which placed the simulation in context. 70% of the students who responded to the web follow up survey recommended that we should use the simulation again. 10 % of those who said no, actually recommended that we should use the simulation if it was more closely linked to the leadership course. The main issue related to on-going viability of the course will depend on the agreement of the School to fund the licence cost which is \$12.50 per student, per simulation session.

4.2 Comparing and contrasting the student experience of the two approaches

In the end the way we set up the pilot for the simulation did not really allow us to compare and contrast the student experience of the two approaches. This was because to do this we would have needed to run the simulation as an integral part of the leadership programme, rather than as an induction activity. At the start of the project we chose to do the latter, because the leadership challenge is an integral part of the course assessment, and we did not wish to disadvantage students if the simulation proved un-workable as an alternative.

However, having now run the simulation and observed the learning process the course team would be comfortable to use the simulation as a replacement for one of the leadership challenges on the course. In many ways, now that we have seen the information that can be generated through the simulation (see for example Figure 3) we believe that it would strengthen the leadership challenge assessment.

Figure 3 A Comparison of Team Leadership Style

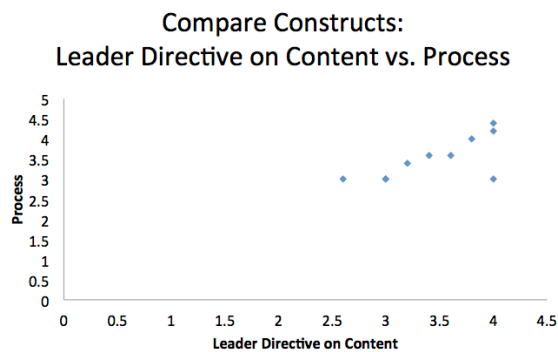


Figure 3 shows how the simulation gathers data on the decisions taken by the team and the approach used by the leaders to reach these decisions, and uses this to analyse the style of leadership adopted by each team. This information would be incredibly helpful for students to use as supporting evidence in their reflective leadership journals.

Source: Harvard Everest Simulation (September 2013)

4.3 Evaluate if the learning outcomes achieved by the virtual simulation are comparable to those delivered through the face-to-face activity.

The learning outcomes set for both the face-to-face and virtual leadership challenge were the same:

- to assist learners evaluate their own strengths and weakness as a leader;
- to provide the learner with the skills to critically and constructively appraise the leadership of their peers;
- to help learners understand the impact their leadership has on others;
- to guide learners in how to make the link between leadership theory and practice; and
- to help learners reflect on the challenges associated with leading teams.

To assess the extent to which the simulation helped us deliver against these learning outcomes we used a follow-up web survey to ask students the degree to which participating in the simulation had helped them develop an appreciation of the different dimensions of leadership outlined above. A likert scale was used to measure the response with 1 representing the simulation being of very little value and 5 representing the simulation being of considerable value. Figure 4 presents both the range of responses (light blue) and the most popular response (dark blue). It is clear from the survey that most students enjoyed participating in the simulation, but feel that the simulation only really addressed the last of the learning outcomes set for the leadership challenge. In part these results were to be expected, as the virtual leadership challenge was not integrated into the actual leadership course, where we normally spend time putting the challenge in context. Now we have piloted the simulation we can clearly see how it could be used to strengthen delivery against the majority of the learning outcomes listed above.



Figure 4: Web-Survey Learning Outcome Feedback

Web Survey Questions	1	2	3	4	5
I enjoyed participating in the simulation	■	■	■	■	■
The simulation helped me identify my strengths and weaknesses as a leader	■	■	■	■	■
The simulation helped me identify the strengths and weaknesses of my team members	■	■	■	■	■
The simulation helped me understand the impact my leadership has on others	■	■	■	■	■
The simulation helped me make links between theory and practice	■	■	■	■	■
The simulation helped me understand the challenges associated with leading teams	■	■	■	■	■

4.3 Identify if there are any additional benefits to be gained through the use of the virtual simulation.

In discussion with staff and students we identified three main additional benefits associated with using the simulation including:

- the tracking and analysis of the decision-making behaviour of the teams; a resource, which as already stated, could be used by students to help them provide evidence for their reflective journals.
- the possibility for students to contribute to the challenge from any location. This will be particularly valuable as we seek to move towards more flexible participation in the course, and
- the mirroring of real world business practice, where more companies are requiring individuals to work and lead distributed teams.

4.4 Develop a strategy for the sustainable integration of the simulation into the MBA programme.

Based on our experience through this pilot our plan is to use the simulation as one of the three leadership challenges that students complete as part of the Leadership module on our MBA programme. We believe that by integrating the challenge with two of the existing on-campus challenges we will be able to create a richer learning experience for our students and ensure that the course learning outcomes are met. As the evidence from this pilot has shown, completely replacing our face-to-face challenges with the virtual simulation may limit our ability to deliver against all our learning outcomes. However, the positive feedback from students regarding their enjoyment of the simulation combined with the additional feedback the simulation can provide, make adopting the simulation a sound strategy.

In order to do this we need to pursue one of the following options:

- Build the cost of the simulation into the course fee
- Ask students to pay for their own participation
- Seek sponsorship for use of the simulation

4. Conclusion and Next Steps

The support from the ‘Developing and Supporting the Curriculum Steering Group’ has been invaluable in providing us with the funding to evaluate the Harvard Everest Leadership Simulation. The positive experience of both the students and staff involved in this project has encouraged us to use the simulation as an integral part of the MBA leadership course. If we are able to secure the funding to allow this to happen we plan to undertake a more comprehensive piece of research into the value of using the simulation in support of leadership development.



Appendix 1: Examples of Learner Feedback Gathered Through the Follow Up Web Survey

"I liked simulation because it helped us to understand the different challenges faced by a team when they try to achieve a common goal. It also helped in identifying how we can collaborate with each other irrespective of the different thoughts and ideologies to work for goal attainment."

"I liked the general idea of the simulation and the way of presenting the challenges. However it would have been far better if, first, it would not have taken three attempts on three afternoons to start the simulation. Moreover, it was less fun in my group to do the simulation as one member never participated and two others (one of them, both MBAs, being the team leader) did not even listen to the instructions given before and played with their smartphones."

"I liked the simulation because it highlighted the way people interact, holds different interest and perceptions of reality which the leader has to manage and care for. The only thing is for this exercise not to be split up like ours over a week's time. I think it would have been more challenging having to face people in obtaining team solutions. It would also be nice for a follow up session where teams could discuss their challenges and the exercise itself with all (could be a tutorial linking to theory). I know our session was challenged because of technical problems at the library, however I really appreciated this exercise."

"I liked the simulation cause it recreated the challenges associated in leading a team with various self interests."

"I did not enjoy it as I felt it was totally disorganized and the leader did not do the job properly. I found myself 'dead' after 2 days and no meetings with team members. The idea is good, but you might want to consider doing it after the Leadership course. At this point people know each other and are excited about working with one another."

"I liked simulation because it helped us to understand the different challenges faced by a team when they try to achieve a common goal. It also helped in identifying how we can collaborate with each other irrespective of the different thoughts and ideologies to work for goal attainment."

"I would only recommend it if it was better prepared. Doing the simulation outside the library group setting was super difficult, team members didn't show up online or still didn't know after several days what they were actually supposed to do. So yes, do it again if the library internet works and everyone can do it while being in person together. Also, some more explanations at the beginning would be helpful so that everyone knows what is actually happening."