

Enhancing Student Learning Outcomes with Simulation-based Pedagogies



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Final Report 2016 Appendices (Part B)

The University of Queensland

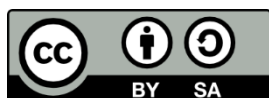
Griffith University
La Trobe University
University of South Australia
William Angliss Institute

Pierre Benckendorff
The University of Queensland

www.bizsims.edu.au



Support for the production of this report has been provided by the Australian Government Office for Learning and Teaching. The views expressed in this report do not necessarily reflect the views of the Australian Government Office for Learning and Teaching.



With the exception of the Commonwealth Coat of Arms, and where otherwise noted, all material presented in this document is provided under Creative Commons Attribution-ShareAlike 4.0 International License <http://creativecommons.org/licenses/by-sa/4.0/>.

The details of the relevant licence conditions are available on the Creative Commons website (accessible using the links provided) as is the full legal code for the Creative Commons Attribution-ShareAlike 4.0 International License <http://creativecommons.org/licenses/by-sa/4.0/legalcode>.

Requests and inquiries concerning these rights should be addressed to:

Office for Learning and Teaching
Department of Education
GPO Box 9880,
Location code N255EL10
Sydney NSW 2001

[<learningandteaching@education.gov.au>](mailto:learningandteaching@education.gov.au)

2016

ISBN 978-1-76028-657-6 PRINT

ISBN 978-1-76028-658-3 PDF

ISBN 978-1-76028-659-0 DOCX

Cite as: Benckendorff, P., Lohmann, G., Pratt, M., Reynolds, P., Strickland, P., and Whitelaw, P. (2016). *Enhancing Student Learning Outcomes with Simulation-based Pedagogies Appendices Part B*. Canberra, ACT: Australian Government Office for Learning and Teaching.

Table of Contents

Appendix A: Student Focus Group Questions.....	28
Appendix B: Simulation Learning Barometer	29
Appendix C: Educator Interview Questions	35
Appendix D: Graduate Capabilities Forum Flyer	36
Appendix E: Graduate Capabilities Forum Slides.....	37
Appendix F: Forum & Workshop Evaluations	47
Appendix G: Webinar Evaluation.....	61
Appendix H: Anticipated Impact using the IMPEL Model.....	63
Appendix I: Evaluation Framework.....	64
Appendix J: Evaluation Panel Report	68
Appendix K: Certification by Deputy Vice-Chancellor Academic.....	71

Appendix A: Student Focus Group Questions

Focus Group session to be half hour in duration. First 10 minutes to discuss Survey – “How did you find the survey questions”. “Were the questions easy to understand?”

Remaining 20 minutes of focus group to focus on team dynamics and impression of simulation

1. What computer simulation did you use?
2. What were the best aspects of using the simulation?
3. What aspects of the simulation did you enjoy the least?
4. Do you think simulations are a good way to learn about business?
5. Did you develop any new skills or knowledge as a result of using the simulation? What did you learn?
6. What resources did the lecturer provide to help you with the simulation? Were these useful?
7. What other resources would have been helpful?
8. What assessment did you complete as part of the simulation? Do you have any comments about the assessment? Assessment weighting? Timelines? Marking criteria? Key tasks? Feedback from teaching staff?
9. Did you work as part of a team during the simulation? How was this experience?

Appendix B: Simulation Learning Barometer

ONLINE BUSINESS SIMULATIONS: PRE-SIMULATION SURVEY

This survey seeks your views about the use of online simulations in business education and should take less than **15 minutes** to complete. The survey is part of an Australian Government funded project titled *Enhancing Student Learning Outcomes with Simulation-based Pedagogies*. This project will evaluate the learning outcomes of simulations in business and related fields.

Your participation is entirely **voluntary** and you can cease completion of the survey at any time without comment or penalty. All answers are **confidential** and can in no way be linked to your personal details. Once a survey is completed it is impossible for any collected data to be withdrawn. Aggregated data and project reports may be used by the Australian Government, or their licensees, as comparative data in future projects, and will be presented in a publicly accessible online site. Individual data will not be published separately. By taking the survey you are giving **consent** to be part of this research.

This study adheres to the Guidelines of the ethical review process of The University of Queensland. Whilst you are free to discuss your participation in this study with Dr Pierre Benckendorff (contactable on (07) 3346 7089 or p.benckendorff@uq.edu.au) if you would like to speak to an officer of the University not involved in the study, you may contact the Ethics Officer on (07) 3365 3924.

1. What is your student identification number?

Note: this information will only be used to link your pre-simulation and post-simulation surveys and will not be retained for further analysis.

➔

SECTION 1: LEARNING FROM SIMULATIONS

Read each question and mark your answers by filling the circles like this: ●

2. The following items are about your **expectations** of how the simulation may benefit your **learning**. Please rate your agreement with the following statements.

I expect that the simulation will develop my...

	STRONGLY DISAGREE				STRONGLY AGREE			
...problem solving skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
...planning skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
...understanding of finance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
...understanding of marketing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
...understanding of staffing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
...understanding of operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
...understanding of strategic management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
...understanding of how the different departments of an organization interact with each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
...understanding of 'real world' problems faced by organisations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
...knowledge of key business terms, concepts and conventions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
...ability to apply my knowledge to a business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
...ability to analyse data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
...ability to evaluate problems and make decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
...ability to create new ideas or plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

3. The following items are about your **expectations** of enjoyment and satisfaction. Please rate your agreement with the following statements.

	STRONGLY DISAGREE				STRONGLY AGREE			
I think the simulation will be challenging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I think I will enjoy learning with the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I expect the simulation will make the course more interesting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I expect that the simulation will allow me to build on knowledge gained from previous courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I expect that the simulation will make me more 'work ready'	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I hope the skills and knowledge learnt during the simulation will be useful for my future career	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

4. The following items are about your **attitudes** toward teamwork. Please rate your **agreement** with the following statements.

	STRONGLY DISAGREE				STRONGLY AGREE			
Teamwork is an effective way to prepare for the workforce	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Teamwork is an effective way to accomplish a task	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I feel comfortable working in a team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I expect that the simulation will reinforce my understanding of the importance of teams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I expect that the simulation will develop my teamwork skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I expect that working as part of a team during the simulation will improve my communication skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Overall, I think I learn more working in a team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

SECTION 2: INDIVIDUAL ENGAGEMENT

5. The following items relate to your general level of **confidence**. Please rate your agreement with the following statements.

	STRONGLY DISAGREE				STRONGLY AGREE			
Even when things are tough, I can perform quite well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
In general, I can obtain outcomes that are important to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I am confident I can learn the concepts taught in this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I am confident that I can perform effectively in different tasks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Compared to other people, I can do most tasks very well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I am confident that I have the computer skills to complete the simulation requirements of this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I am able to achieve most of the goals that I have set for myself in this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I am confident of earning a good grade in this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I can succeed in almost any endeavour I set my mind to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

SECTION 3: ABOUT YOU

6. Please tell us, are you:
 - ☐ Female
 - ☐ Male
7. In what year were you born?
8. If you are an international student, what is your home country?

.....
9. What is the name of your university?

.....
10. What is the name of the degree you are completing?

.....
11. What is the code and/or title of the course using the simulation?

.....
12. What is your current GPA?
13. What year level are most of the courses you are studying this year?
 - ☐ First year
 - ☐ Second year
 - ☐ Third year
 - ☐ Postgraduate
14. Which of the following apply to you? (Select all that apply)
 - ☐ I am studying part-time
 - ☐ I am studying externally (distance education)
 - ☐ English is not my first language
 - ☐ I am an International student
 - ☐ I am working casually / part-time while studying
 - ☐ I am working full-time while studying
 - ☐ I am an exchange student

ONLINE BUSINESS SIMULATIONS: POST-SIMULATION SURVEY

This survey seeks your views about the use of online simulations in business education and should take less than **20 minutes** to complete. The survey is part of an Australian Government funded project titled *Enhancing Student Learning Outcomes with Simulation-based Pedagogies*. This project will evaluate and promote pedagogies that enhance the learning outcomes of online simulations in business and related fields.

Your participation is entirely **voluntary** and you can cease completion of the survey at any time without comment or penalty. All answers are **confidential** and can in no way be linked to your personal details. Once a survey is completed it is impossible for any collected data to be withdrawn. Aggregated data and project reports may be used by the Australian Government, or their licensees, as comparative data in future projects, and will be presented in a publicly accessible online site. Individual data will not be published separately. By taking the survey you are giving **consent** to be part of this research.

This study adheres to the Guidelines of the ethical review process of The University of Queensland. Whilst you are free to discuss your participation in this study with Dr Pierre Benckendorff (contactable on (07) 3346 7089 or p.benckendorff@uq.edu.au) if you would like to speak to an officer of the University not involved in the study, you may contact the Ethics Officer on (07) 3365 3924.

1. What is your student identification number?

Note: this information will only be used to link your pre-simulation and post-simulation surveys and will not be retained for further analysis.

➔

SECTION 1: LEARNING FROM SIMULATIONS

Read each question and mark your answers by filling the circles like this: ●

2. The following items are about how the simulation has benefitted your **learning**. Please rate your agreement with the following statements.

The simulation developed my...	STRONGLY DISAGREE				STRONGLY AGREE			
...problem solving skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...planning skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...understanding of finance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...understanding of marketing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...understanding of staffing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...understanding of operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...understanding of strategic management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...understanding of how the different departments of an organization interact with each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...understanding of 'real world' problems faced by organisations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...knowledge of key business terms, concepts and conventions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...ability to apply my knowledge to a business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...ability to analyse data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...ability to evaluate problems and make decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...ability to create new ideas or plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. The following items are about your **satisfaction** and **enjoyment** of the simulation. Please rate your agreement with the following statements.

	STRONGLY DISAGREE				STRONGLY AGREE			
The simulation was challenging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I enjoyed learning with the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
The simulation made the course more interesting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
The simulation allowed me to build on knowledge gained from previous courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
The simulation allowed me to learn from my mistakes through trial and error	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I feel I am more 'work ready' after using the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
The skills and knowledge learnt during the simulation will be useful for my future career	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I am satisfied with the online software application used for the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Overall, I learned a lot from the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Overall, I am satisfied with the simulation as a learning tool	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Overall, the simulation has met my expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

SECTION 2: LEARNING ACTIVITIES

4. The following items are about the **resources**, **learning activities** and **assessment tasks** related to the simulation. Please rate your agreement with the following statements.

	STRONGLY DISAGREE				STRONGLY AGREE			
I am satisfied with the in-class activities which assisted my understanding of the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I am satisfied with the assessment tasks related to the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I am satisfied with the assessment weighting attached to the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
The assessment attached to the simulation enhanced my understanding of business operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
The simulation interface was easy to use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
The learning resources (e.g. user guides, videos, tutorials) provided with the simulation enhanced my learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I am satisfied with the information I received to perform my tasks with the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
There were sufficient resources (e.g. user guides, videos, tutorials) to help me learn the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
My teachers were knowledgeable about the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
My teachers worked hard to help me learn from the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
There were sufficient opportunities to ask my teachers questions about the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Overall, I am satisfied with this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Overall, this particular course has met my expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I would recommend taking this course to other fellow students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

SECTION 3: TEAMWORK

5. These items are about **team interaction** during the simulation. Please rate your agreement with the following items.

	STRONGLY DISAGREE				STRONGLY AGREE			
It was easy for the team to agree on important decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Key decisions about our company were made by the whole team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was comfortable sharing my ideas with my team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most of the time, members of our team asked each other for feedback on their work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Team members acknowledged the points of view of others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There was a team leader who guided the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The contributions of other team members assisted my understanding of the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My team had regular meetings to evaluate our performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our team performed well in the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My team was dedicated to the task	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My team worked well together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My team actively exchanged ideas using online tools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The unique skills and talents of each team members were fully valued and utilised	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Team interactions helped me understand other points of view	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working as a team allowed me to work smarter, not harder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was able to learn new skills and knowledge from other members in my team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competition between teams motivated me to spend more time on the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall, working as a team on the simulation was better than other team assessment tasks I have experienced.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. The following items are about your **attitudes** toward teamwork. Please rate your **agreement** with the following items.

	STRONGLY DISAGREE				STRONGLY AGREE			
Teamwork is an effective way to prepare for the workforce	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teamwork is an effective way to accomplish a task	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel comfortable working in a team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The simulation helped me understand the importance of teams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The simulation helped develop my teamwork skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working in a team has improved my communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall, I think I learn more working in a team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Did your team use any of the following online collaboration tools to interact? Please add any online tools not listed below if needed.

- ☐ Facebook
- ☐ Google+
- ☐ Google Docs
- ☐ Skype/Google Hangouts/Facetime
- ☐ Instant Messaging
- ☐ Other

8. Was the use of any of these tools particularly challenging?

- ☐ No
- ☐ Yes

If yes, could you tell us briefly which of the tools were challenging and why?

.....

Which tools were the most useful?

.....

SECTION 4: INDIVIDUAL ENGAGEMENT

9. The following items are about your **engagement** with the course and the simulation. Please rate your **agreement** with the following statements.

	STRONGLY DISAGREE				STRONGLY AGREE		
I spent more time than usual on this course as a result of the simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I attended class regularly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I learned how to organize my time efficiently	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sought advice from teaching staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I kept up-to-date with my studies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The effort I put into the simulation resulted in successful outcomes for my company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will be able to use what I learnt in the simulation in the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. The following items relate to your general level of **confidence**. Please rate your agreement with the following statements.

	STRONGLY DISAGREE				STRONGLY AGREE		
Even when things are tough, I can perform quite well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In general, I can obtain outcomes that are important to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident I can learn the concepts taught in this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident that I can perform effectively in different tasks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compared to other people, I can do most tasks very well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident that I have the computer skills to complete the simulation requirements of this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to achieve most of the goals that I have set for myself in this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident of earning a good grade in this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can succeed in almost any endeavour I set my mind to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SECTION 5: ABOUT YOU

11. How much did you contribute to the success of your team?
- ☐ Far more than other team members
 - ☐ More than other team members
 - ☐ About the same as other team members
 - ☐ Less than other team members
 - ☐ Far less than other team members
12. How many of your classes did you attend this semester?
- ☐ 80% to 100%
 - ☐ 60% to 79%
 - ☐ 40% to 59%
 - ☐ 20% to 39%
 - ☐ Less than 20%
13. On average, how many **hours per week** did you personally spend on the simulation and related assessment?
-
14. On average, how many **hours per week** did you spend working with your group on the simulation and related assessment?
-
15. On average, how many **hours per week** did you spend on paid work this semester?
-

Appendix C: Educator Interview Questions

Section One: Pre-implementation of the simulation.

1. Can you provide some background information about the course and explain how the implementation of the simulation in the course came about (the history of it).
2. Did you have to lobby 'the powers that be' or make a strong case for the simulation?
3. Was financing the simulation's implementation a major concern?
4. Can you describe how the simulation fits into the course?

Section Two: Reasoning behind the choice of simulation.

1. What computer simulation do you use and why do you use it?
2. How did you first find out about the simulation?
3. Have you refined the simulation from its existing form?
4. How does the simulation assist the educator (interviewee) in the dissemination of information?
5. Do you believe the simulation that you use is an appropriate tool for student problem-based learning and is perhaps more effective than traditional learning approaches?
6. Does the simulation assist in motivating students to learn?
 - How?
7. Does the simulation assist with student experimentation through observation and feedback?
 - Explain?
8. How does the simulation assist in achieving the goals and objectives of the subject?
9. Do you believe business simulations assist in students' experiencing and reacting to situations based on knowledge and therefore retaining information?

Section three: Pedagogy attributes of the simulation.

1. How do you orientate students to the simulation?
2. What learning activities and tools do you use to support the simulation?
3. What assessment tasks are linked to the simulation?
 - How are these weighted?
 - What skills and knowledge are you seeking to develop?
4. What do you think students learn?
5. What are some of the best aspects of using a simulation?
6. What are some of the challenges?

Appendix D: Graduate Capabilities Forum Flyer

INNOVATIVE PEDAGOGIES FOR DEVELOPING BUSINESS GRADUATE CAPABILITIES

We would like to invite you to a forum showcasing examples of several recent projects that have examined **innovative pedagogies for developing business graduate capabilities**. Graduate business capabilities have taken on a new importance as a result of the Australian Qualifications Framework (AQF), the development of threshold learning outcomes in several business fields as well as ongoing pressure from peak industry bodies to produce work ready graduates. The forum offers a unique opportunity to network with peers, hear the latest thinking and gain insight into the role of pedagogy in the future of business education.

Showcase Presentations

Innovative Practices in Undergraduate Business Capstones

A/Prof Janis Bailey and Dr Liz van Acker, *Griffith University*

Capstones play an important role in improving graduate capability and increasing employability. Drawing on the findings of an OLT project, we discuss the diversity of capstone offerings in Australian business schools. We canvass innovative learning and teaching strategies that fulfil the 'forward looking' aspect of capstones and thus contribute to capability and employability.

Integrated Business Consulting – Reality Driven Rigour

A/Prof Christine Burton, *University of Technology, Sydney*

A postgraduate unit, *Integrated Business Consulting* was developed as part of the Innovative Practice Trials supported by the ABDC. The aims of the unit were: to provide a proof of concept that live cases based on intensive industry engagement are sustainable in Business Schools in the long term; to investigate ways in which this unit can be expanded and adapted to advance experiential and authentic student learning globally.

Simulation-based Pedagogies in Business

Dr. Pierre Benckendorff, *The University of Queensland*

Technological advancements have improved the sophistication and range of online business simulations available to tertiary educators. Simulations can develop a range of skills and capabilities that are challenging to develop using traditional teaching and learning approaches. This presentation will showcase the resources developed by an OLT project on business simulations.

The showcase will be followed by a **Q&A Panel** and the **Online Business Simulations Workshop**.

Target Audience

The following people would benefit from this forum:

- Business educators and academics
- Learning designers and support staff
- Program Convenors, Associate Deans and Directors of Teaching and Learning

Venues

	Sydney	Melbourne	Brisbane
When	10 November 2014	11 November 2014	3 December 2014
Where	University of Sydney Business School, Room 214, Economics and Business Building (H69), Codrington Street Map	William Angliss Institute, Room A224, Level 2, Building A, 555 La Trobe Street, Melbourne Map	Griffith University South Bank Campus, Room S02_7.16, Board Room, Level 7, Webb Centre Map

Program

09:00 Showcase Presentations

10:30 Morning Tea (provided)

10:45 Online Business Simulations Workshop (concluding at 12pm)

An interactive **simulation demonstration** will be presented in the afternoon (1-3pm) in Melbourne and Brisbane and lunch will be served for those planning to stay for the afternoon session.

Registration

- Seats are limited for this free event – sign up now at: <http://goo.gl/1cDZ1t>
- This is an open invitation. Please forward to anyone who might be interested.

Appendix E: Graduate Capabilities Forum Slides



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

BUSINESS GRADUATE CAPABILITIES FORUM

www.bizsims.edu.au

PROJECT PARTNERS
THE UNIVERSITY OF QUEENSLAND | GRIFFITH UNIVERSITY | LA TROBE UNIVERSITY
UNIVERSITY OF SOUTH AUSTRALIA | WILLIAM ANGLISS INSTITUTE

Funded By
 Australian Government

 Office for Learning & Teaching

Today's Goals

- Contemplate the major challenges in developing business graduate capabilities
- Discuss the role of capstones, WIL and simulations in developing business graduate capabilities
- Explore how simulation-based pedagogies can be used to enhance business graduate capabilities



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Agenda

- 09:05 Welcome
- 09:10 Interactive Activity
- 09:20 Innovative Practices in Undergraduate Business Capstones
- 09:35 Integrated Business Consulting: Reality Driven Rigour
- 09:50 Simulation-based Pedagogies in Business
- 10:05 Q&A Panel
- 10:30 Morning Tea
- 10:45 Simulations Workshop
- 12:00 Lunch
- 13:00 Simulation Demo



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

What challenges do you face in developing
business graduate capabilities?



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING



Innovative Practices in Undergraduate Business Capstones

A/Prof Janis Bailey and Dr Liz van Acker
Griffith University



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING



Integrated Business Consulting – Reality Driven Rigour

A/Prof Christine Burton
University of Technology, Sydney



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING



Simulation-based Pedagogies in Business

Dr. Pierre Benckendorff
The University of Queensland



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Challenges in Business Education

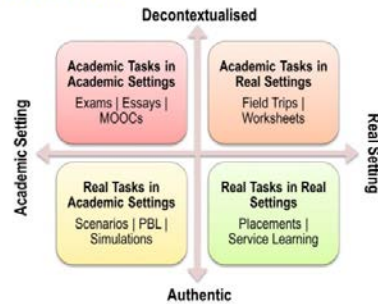
- Large cohorts
- How can students develop and practice **business capabilities**?
 - Reports and essays are limited
 - Business plans and case studies not dynamic / interactive
 - WIL experiences often focused on operational skills
 - Exams and MOOCs largely content-based
- Can we provide large cohorts with a learning experience where students sharpen their managerial skills through regular feedback?



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

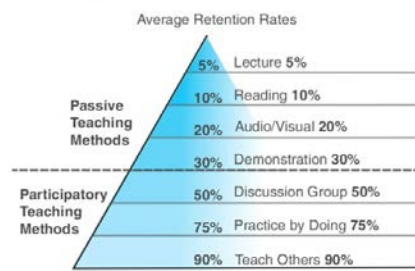
Authenticity Matrix

(Herrington, Reeves and Oliver, 2010)



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

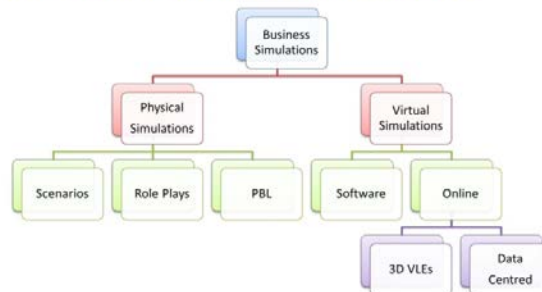
The Learning Pyramid



Adapted from National Training Laboratories, Bethel, Maine

Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

What are Online Business Simulations?



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

What are Online Business Simulations?

Complex simulations designed to teach strategy, competitive analysis, finance, marketing, HRM, cross-functional alignment, and the selection of tactics to build a successful business.



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Project Aims



- Map the **features** of online business simulations.
- Evaluate the contribution of simulation-based **pedagogies** to **student learning outcomes**.
- **Identify** and **promote** innovative **pedagogies** and **resources** for using online business simulations as learning tools.
- Assess the **challenges** associated with the integration of simulations into sustainable teaching practice in business.



Project Resources



- Simulations Audit
- Simulation Learning Barometer
- Case Studies
- Good Practice Guide
- Website www.bizsims.edu.au
- National Workshops



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Home Cases Simulations Learning Barometer Resources About

AIRLINE Online Business Simulation

Educators

Pierre Benckendorff | The University of Queensland | p.benckendorff@uq.edu.au

Gui Lohmann | Griffith University | g.lohmann@griffith.edu.au

Key Features

- **Simulator:** AIRLINE Online Simulation
- **Students:** Postgraduate coursework, internal and external students
- **Class Size:** 20-40
- **Assessment:** Business proposal, annual report, reflective blog, business performance (see percentages for each institution below)
- **Pedagogy:** UQ - Flipped classroom (40 x 10-20 minute video lectures, 13 x 2 hour workshops); GU - Intensive delivery of lectures followed by simulation (7 x 3-hour workshops, 50 hours of)

Why simulation-based learning?

(Biggs, 1999; Feinstein, Mann, & Corsun, 2002; Fripp, 1997)



- Applied to many different disciplines
- A technique (not a technology) to amplify real experiences
- Developing skills in a safe and risk-free environment
- Make errors that do not have real repercussions
- Encourage collaborative learning



Why business simulations?



- Integrate the various elements of running a business
- Experiential/active learning environments that mirror real world problems
- Opportunity for manageable large class capstone learning experience
- Authentic and dynamic team-based learning experiences
- Develop employability skills



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Why online business simulations?

(Adabor & Daneshfar, 2006; Bowness, 2004)



- Apply critical thinking and decision making in a non-linear environment
- Decisions/actions lead to complex and unexpected outcomes
- Develop graduate capabilities and strategic decision making skills
- Continuous feedback to help students understand the outcomes of decisions
- Technology enabled learning available any time, any where



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

DIY Airline Company

Spend 5 minutes designing your own airline company.

Key decisions:

- What will you name your airline?
- Where will you base your airline?
- Domestic or international?
- What cabin classes and services will you offer?
- What types of aircraft will you use?
- What pricing strategy will you adopt?



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

What are the benefits of online business simulations for educators?
For students?



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

What do students say about bizsims?



- The best aspects of using simulation is that it is close to a **real life scenario**, but at the same time it allows us to **make mistakes**
- I think it's definitely better than any other course at the uni, because it's **practical** and **you really make something happen** and it's not only about theory
- Sometimes we had **arguments** but in the end we used the data to prove which decision was better



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

What do students say about bizsims?



- We really had to **work closely together** because every decision made by each group member could affect our performance
- Due to the fast pace of the simulation we really develop **problem solving skills** that help us to **make decisions** quickly



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Simulations & PBL

Benefits of simulations	Benefits of problem based learning
▪ grasp the interrelationships among the various functions of business	▪ develop knowledge that can be applied in many situations
▪ problem solving	▪ skills in problem solving
▪ decision making skills	▪ evidence based decision making
▪ self awareness	▪ enhance intrinsic motivation
▪ communication skills	▪ collaboration
▪ sense of accomplishment	▪ self-directed lifelong learning
▪ active and dynamic learning experience	
▪ realism without severe risks of failure	



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Learning outcomes

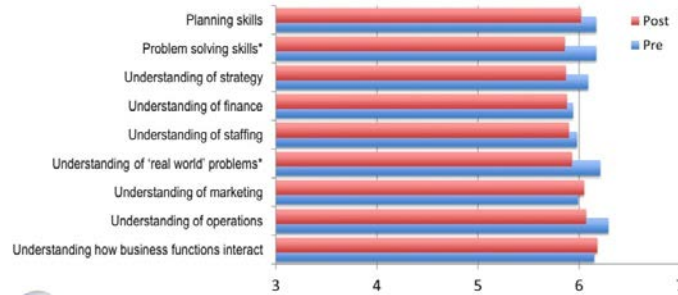
Learning outcomes are considered to be multidimensional:

- **Cognitive learning** can be described as developing an understanding of basic facts
- **Affective learning** is where the simulation participants perceive that they learn, hold positive attitudes and satisfaction
- **Behavioural learning** can be described as simulation participants taking the facts and formulating correct decisions or actions



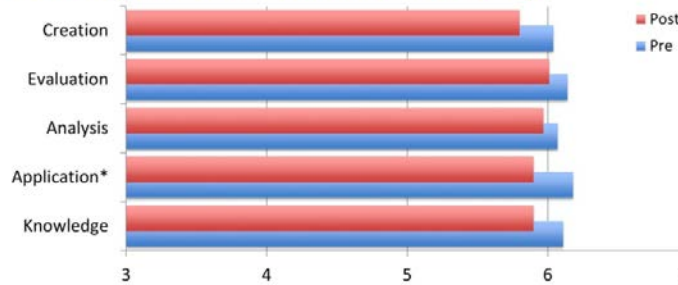
Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Learning Outcomes: Skills & Knowledge



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Learning Outcomes: Blooms Taxonomy



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Perceptions about Teamwork



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Authentic online learning environments

(Herrington, Reeves and Oliver, 2010)

1. Authentic context
2. Authentic tasks and activities
3. Expert performances
4. Multiple roles and perspectives
5. Collaborative construction of knowledge
6. Reflection
7. Articulation and presentation
8. Coaching and scaffolding
9. Authentic assessment

Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Simulation Pedagogies

- Map out **expectations** (time, team roles, instructor as a 'guide on the side')
- Give students **time** to learn from trial and error, trials or practice rounds
- Provide **support** (e.g. videos, demos, manuals, flow charts)
- Encourage **collaboration** (e.g. facebook, skype, wikis)
- Align **learning outcomes**
- Use complementary **pedagogies** (e.g. field trips, industry speakers, mentors, cases)
- **Link curriculum** to events in the simulation, use class time for debriefs
- **Assess learning** (not time or effort spent on the simulation)
- Aim for **authentic learning** and assessment (Herrington et al. 2010)



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Design an authentic assessment task to complement an online business simulation



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Assessment

Assessment aligned with learning outcomes and simulation tasks

- Team interaction (e.g. peer evaluation, video, wikis)
- Reports and presentations
 - Proposals or plans
 - Company performance
 - Competitor analysis
- Reflective assessment
- Performance metrics
- Quizzes



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Student Reflection

The simulation provided a great challenge to push myself to deal with a complex environment, project task management, leadership, problem solving and team relationship management.

Detailed planning, quick reactions, keeping cool and encouraging team members are four major skills I learned from the operation of the simulation.



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

What are some of the challenges
and limitations to using online
simulations as learning tools?

What are the solutions?



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

Some challenges...

For Educators

- Commercial packages require additional funding
- Steep initial learning curve

For Students

- Time is compressed
- Some variables cannot be simulated
- Students become too engaged
- Not a solution for all team work problems



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING



Online Business Simulations
PEDAGOGY | ASSESSMENT | LEARNING

www.bizsims.edu.au

PROJECT PARTNERS

THE UNIVERSITY OF QUEENSLAND | GRIFFITH UNIVERSITY | LA TROBE UNIVERSITY
UNIVERSITY OF SOUTH AUSTRALIA | WILLIAM ANGLISS INSTITUTE

Funded By



Australian Government

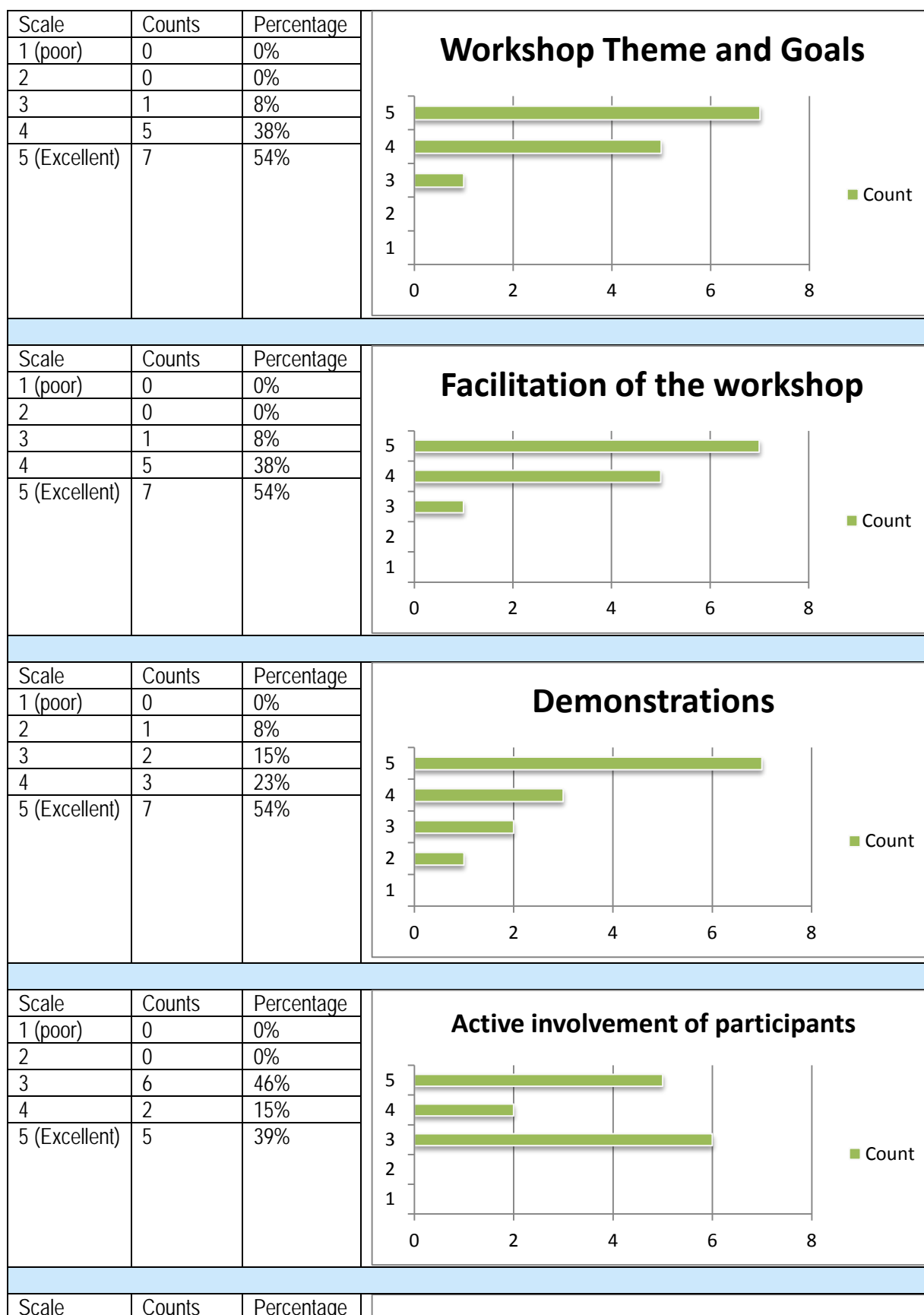


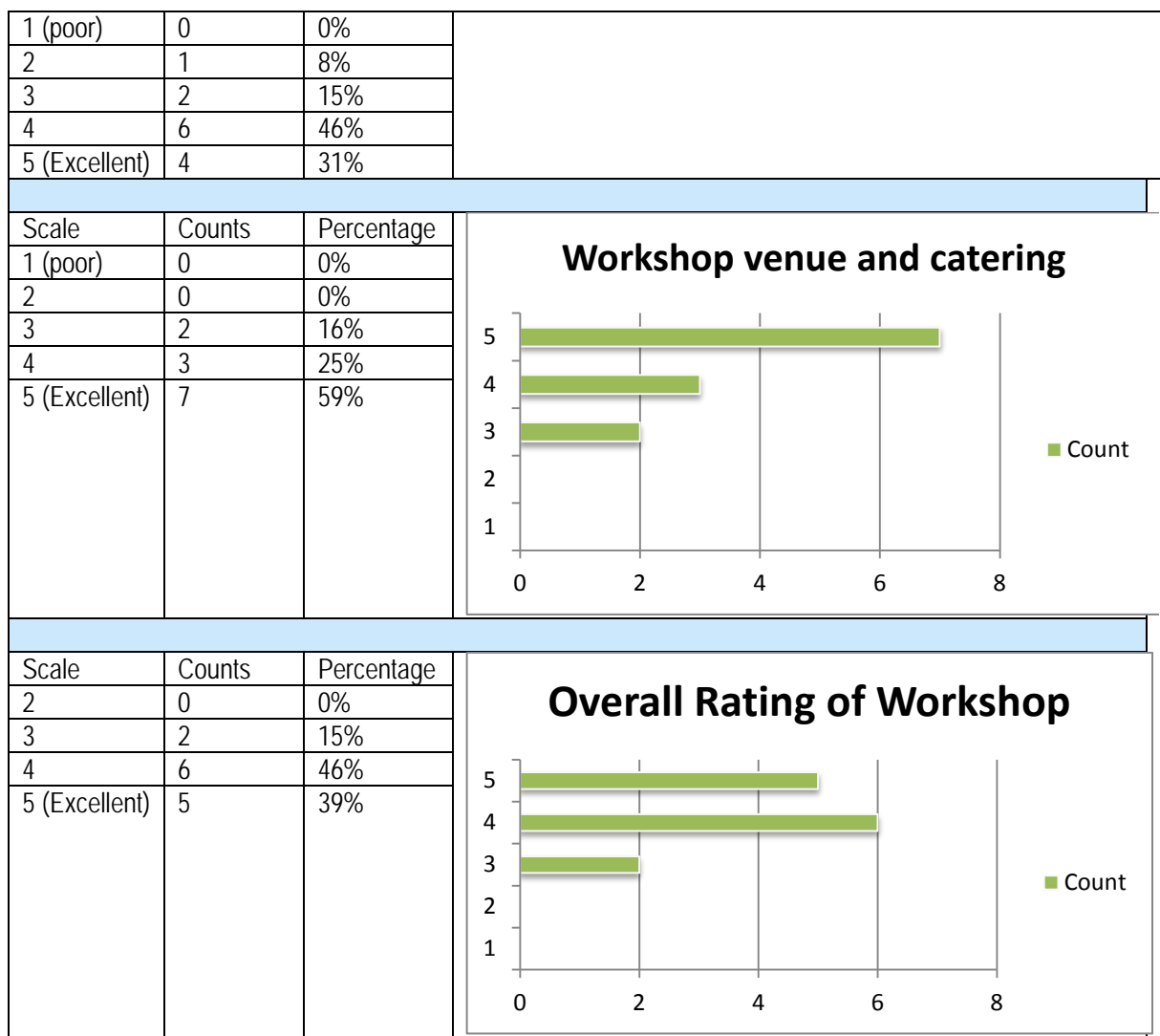
Office for
Learning & Teaching

Appendix F: Forum & Workshop Evaluations

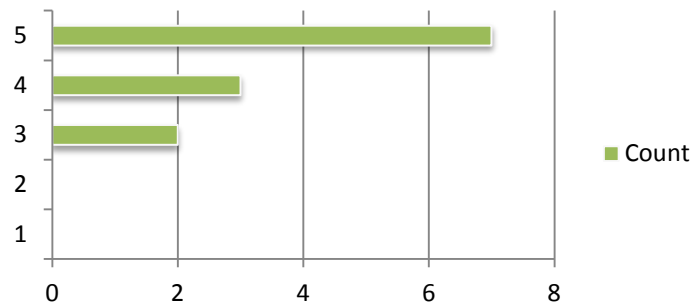
TRANSFORMING LEARNING WITH ONLINE BUSINESS SIMULATIONS

Adelaide Workshop, 26 March 2015

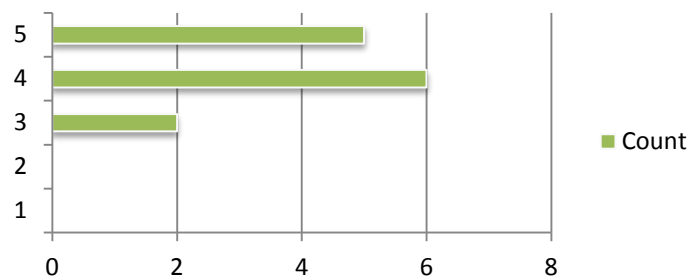




Workshop venue and catering



Overall Rating of Workshop



The most useful aspect of the workshop

- Demonstrations and views
- Hearing about current use of simulations
- Learning more about simulations from a business context.
- Discussion of educational purpose of simulations
- Learning about the use of simulations
- Just being able to see what is available and hear about how others are using these tools. Networking and sharing ideas
- How simulations is pedagogically structured and delivered
- There is a lot of scope for the business schools to integrate business simulations in the pedagogy
- As a manager to actually better understand the pedagogy around using sims, assessments
- Learning how data-based simulations can be used for experiential learning
- Examples
- How simulations can be used around a course or course around a simulation
- Practical demonstration of simulation

To improve this workshop, you could have

- The presenters limited to 10 min-15 min summary
- Show how simulations can be run without using "off the shelf" software packages. How to design simulations mapped to the key learning outcomes of the course using common tools available in a uni context.
- A little longer space (not so squeezey) and full day to allow more time for playing with simulations. More student perspective input

- Can't think of any but it is not what I can use in my teaching. Maybe, it's useful to articulate what kind of course this workshop can be useful
- A variety e.g simulation demonstrations in other areas: research, language learning.....
- There can be hands on experience in using one of the simulations in a comprehensive manner. This might encourage others to start using the simulation
- Bit longer.
- It was great, if time permits may be some real time experience of working on simulation.
- Longer time to explore simulations and case studies

Did you learn anything new today?

- Yes, range of possibilities, issues, pros and cons
- More detail of particular sims
- How to use simulations in teaching and a range of tools for teaching.
- Yes, I've got a better understanding of the use of sims. It also helps to confirm in my mind that a sim I currently use is worthwhile
- Pedagogy focus on sim
- It was informative
- Absolutely. Better understanding of the use of sims on a broad base
- Got ideas how innovative pedagogies can be used for online simulation scenarios. Points to consider if we use simulations in our course.
- Attitudes towards sim assessment, Bringing back grads
- Yes. Haven't used simulations for authentic activities.
- Deeper understanding of range of simulations and functions

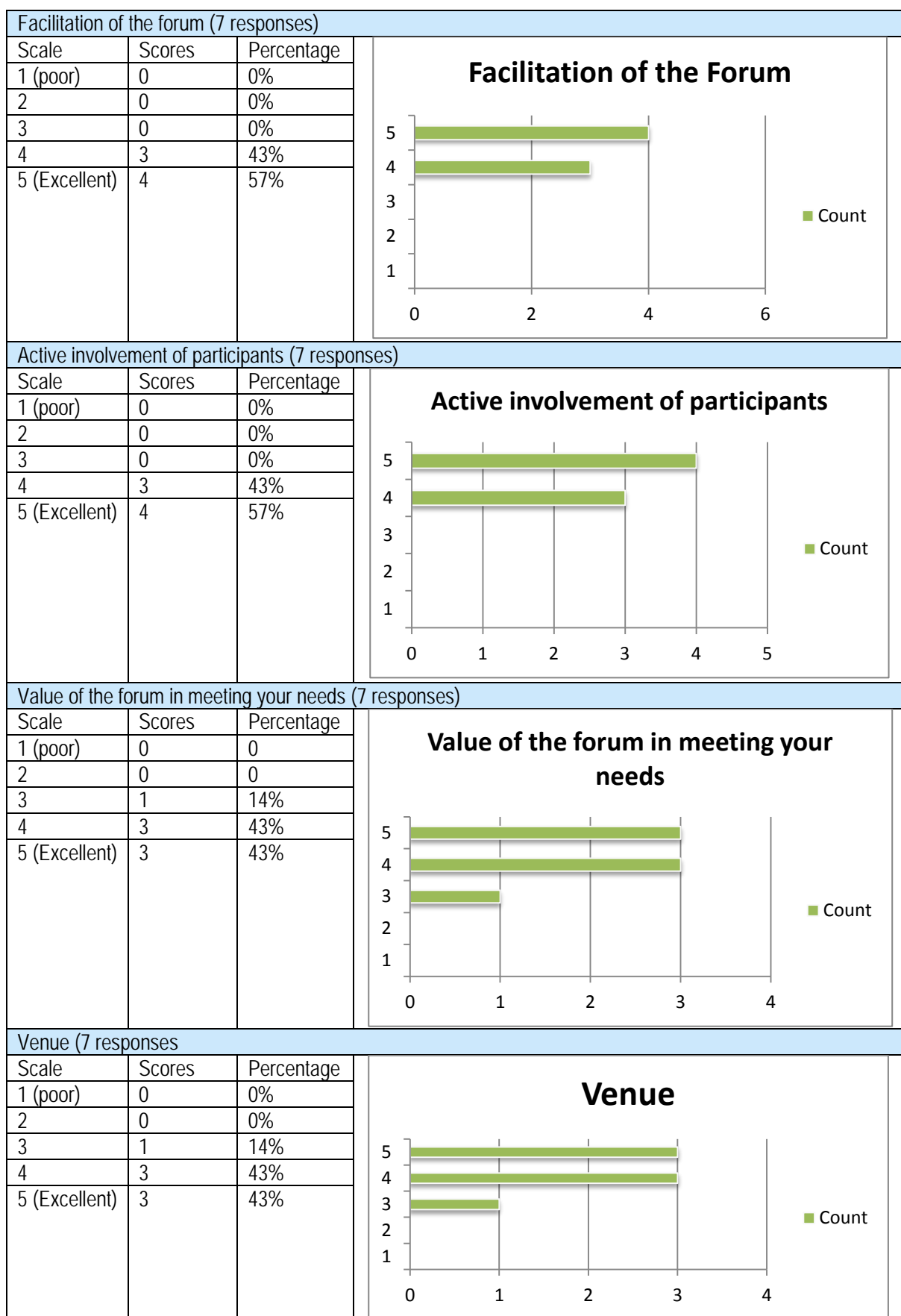
What (if anything) do you plan to change at your institution as a result of this workshop?

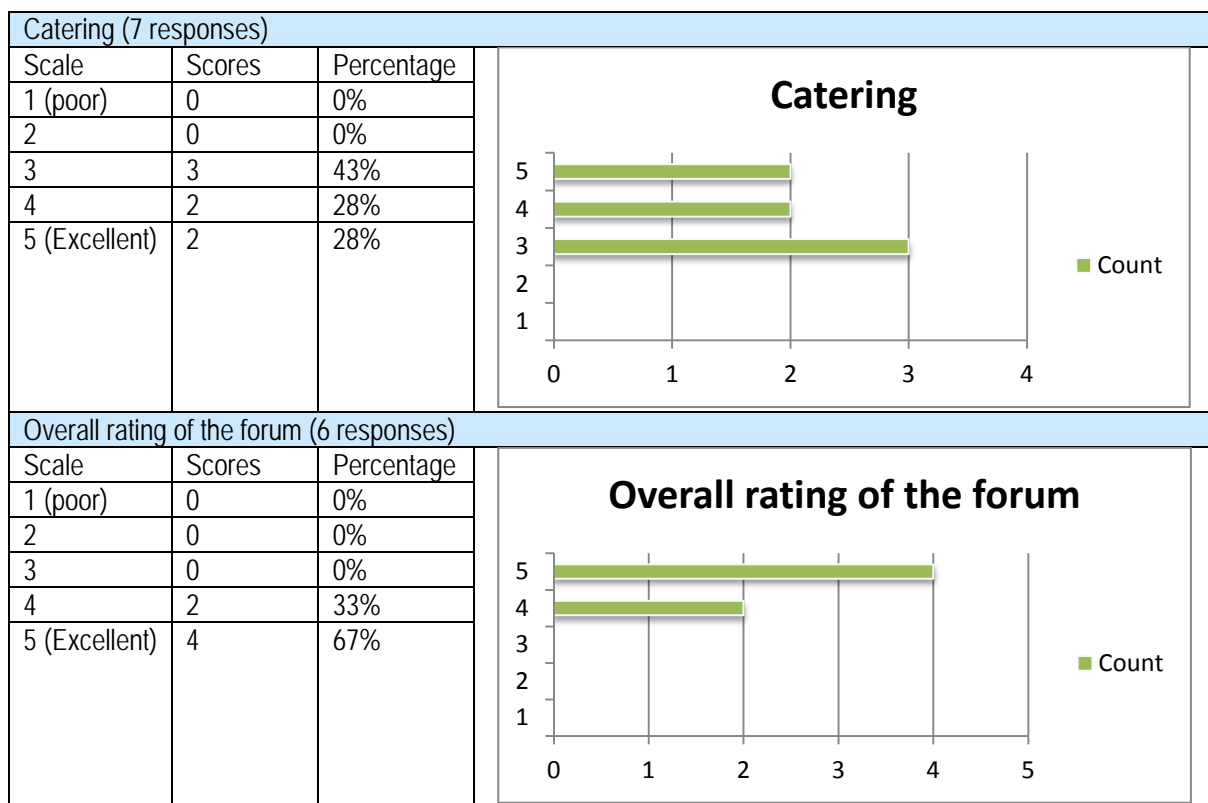
- Further investigation into available sims
- Share info and encourage more consideration of sims
- Run some games
- I'll take ideas back to my school on how these sims could be incorporated into courses and especially a capstone course which we are currently developing.
- Intend to apply/run sim on Interpreting Training.
- To discuss with lecturers and students and deeper analysis of how we actually use HOTS looking holistically from all stakeholders perspectives (organisation, lecturer and student)
- I would like to collaborate with colleagues and academics, try use simulation in a couple of courses we identify. We may apply for grant to develop our own simulation platform.
- See # 4. Thank You!
- Feedback info to team I work with.
- Unsure at this point.

INNOVATIVE PEDAGOGIES FOR DEVELOPING BUSINESS GRADUATE CAPABILITIES

WORKSHOP - Brisbane, 3 December 2014

Forum theme and goals (5 responses)			
Scale	Scores	Percentage	<p>Forum theme and goals</p> <p>Count</p>
1 (poor)	0	0	
2	0	0	
3	0	0	
4	3	60%	
5 (Excellent)	2	40%	
Session 1: Showcase and Panel Q&A (6 responses)			
Scale	Scores	Percentage	<p>Session 1: Showcase and Panel Q&A</p> <p>Count</p>
1 (poor)	0	0	
2	0	0	
3	0	0	
4	3	50%	
5 (Excellent)	3	50%	
Session 2: Simulations Workshop (6 responses)			
Scale	Scores	Percentage	<p>Session 2: Simulations Workshop</p> <p>Count</p>
1 (poor)	0	0	
2	0	0	
3	0	0	
4	3	50%	
5 (Excellent)	3	50%	
Session 3: Simulations Demo (3 responses)			
Scale	Scores	Percentage	<p>Session 3: Simulations Demo</p> <p>Count</p>
1 (poor)	0	0%	
2	0	0%	
3	0	0%	
4	1	34%	
5 (Excellent)	2	66%	





The most useful aspect of the forum

- Presentations on capstones/consulting etc
- How to position the 'technique' of simulation in a curriculum.
- Examples of online simulations
- Listening to outcomes of project and other universities experiences and thoughts
- Exchange of ideas and issues to consider
- Hearing what other institutions are doing
- Wasn't as relevant to me as I thought it would be - was looking forward to hearing from Janis.

To improve this forum, you could have

- Included all participants/presenters
- Extend the discussion of graduate capabilities and how to teach/learn them.

Did you learn anything new today?

- Yes. Discussion of other approaches was interesting. How to use simulations in capstone.
- The opportunity build other learning activities around simulations
- Examples of online simulations
- Yes - different assessment techniques. Latest research
- Yes a good exchange of ideas
- Different approaches to using/assessing simulations
- Yes an awareness of simulations and their current use

A theme I would like to see addressed at a future forum is

- Evidence of benefits of online simulations for students

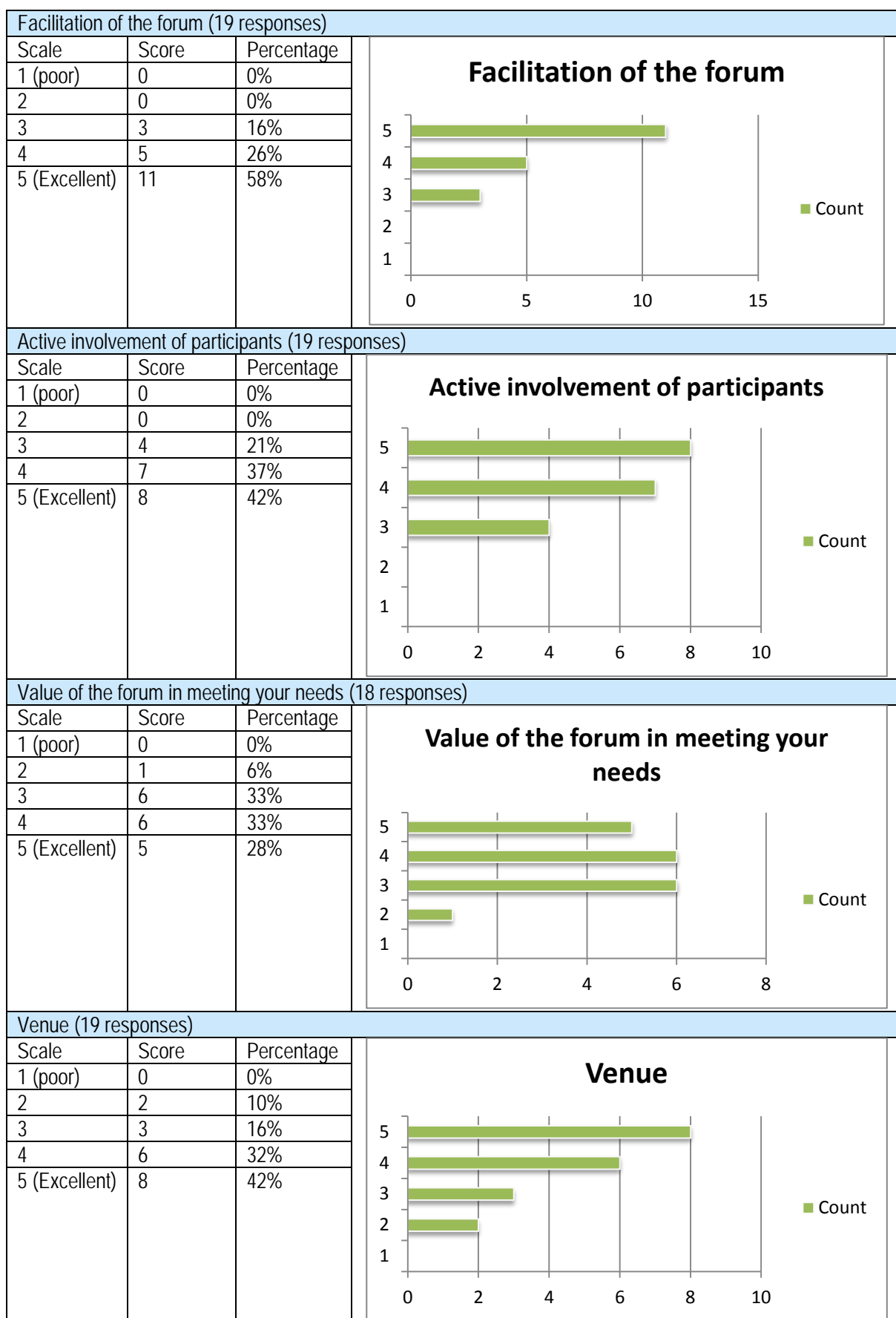
Final comment/s:

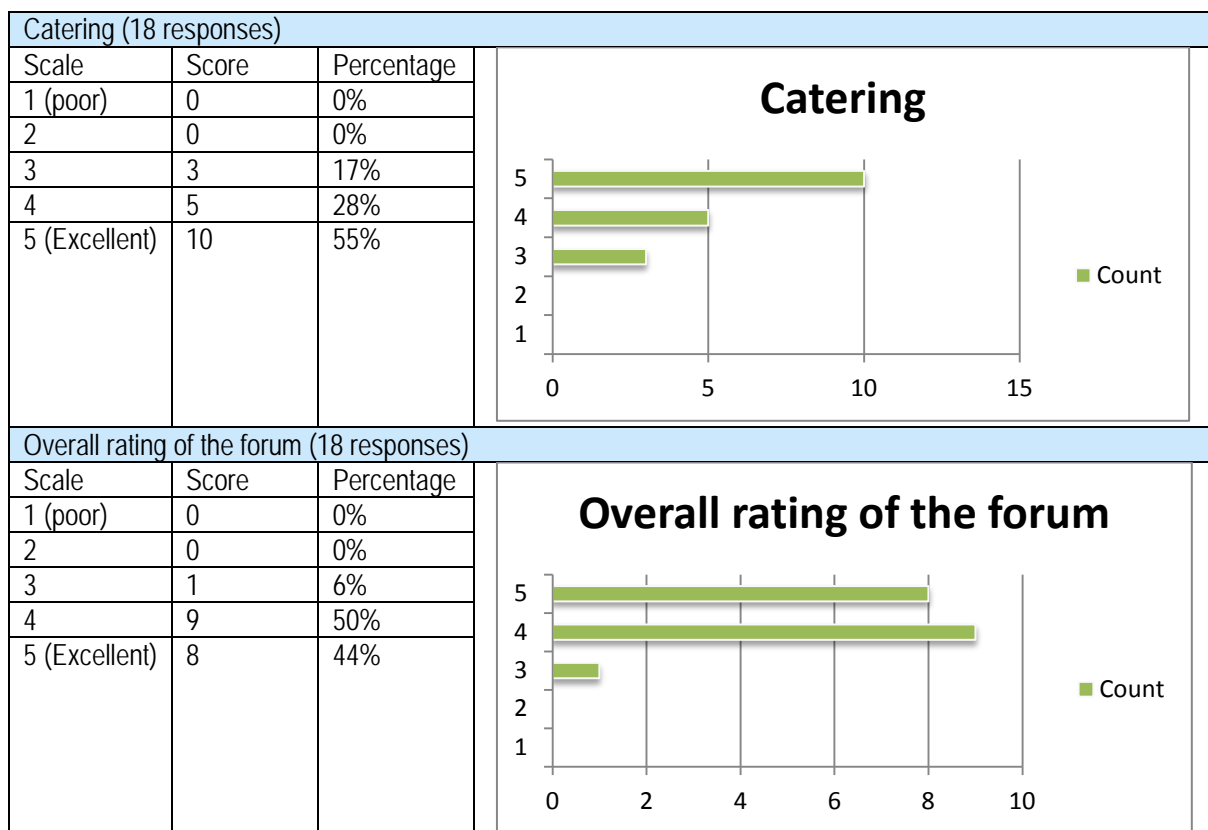
- Thanks. Very useful and the online resources look great!
- Great practical application focussed workshop
- Very useful
- Great project. Good outcomes
- Thank You.
- Well set out

INNOVATIVE PEDAGOGIES FOR DEVELOPING BUSINESS GRADUATE CAPABILITIES

WORKSHOP - Melbourne, 11 November 2014

Forum theme and goals (18 responses)			
Scale	Score	Percentage	
1 (poor)	0	0%	
2	0	0%	
3	3	17%	
4	8	44%	
5 (Excellent)	7	39%	
Session 1: Showcase and Panel Q&A (19 responses)			
Scale	Score	Percentage	
1 (poor)	0	0%	
2	0	0%	
3	2	10%	
4	11	58%	
5 (Excellent)	6	32%	
Session 2: Simulations Workshop (17 responses)			
Scale	Score	Percentage	
1 (poor)	0	0%	
2	2	12%	
3	1	6%	
4	7	41%	
5 (Excellent)	7	41%	
Session 3: Simulations Demo (13 responses)			
Scale	Score	Percentage	
1 (poor)	0	0%	
2	0	0%	
3	2	15%	
4	8	62%	
5 (Excellent)	3	23%	





The most useful aspect of the forum was

- Eye opening. New ideas
- Insight to simulation and application to education
- Demonstration
- Three presentations nice progression - education theory - actual application
- Playing
- Insight of others, including audience members
- Presentation regarding the IBC course at UTS. Discussion re benefits/challenges of simulations for authentic learning
- Capstone and simulation
- Overview of simulation practice and pedagogies
- The experience of presenters using simulations
- Consideration of advantages and challenges
- Share experiences in capstones, simulations
- Hearing experiences of others
- Simulations Workshop
- The capstone sessions were most valuable for me.
- Simulations
- Introduction to simulations, capstone discussion had some useful points

To improve this forum, you could have:

- Talked about/related the demo to a real life situation more.
- better WiFi
- I'd like more discussion on types of features of different simulations
- Provided access to the slides
- Adhere to the timings. After a certain point, you lose the attention of the audience when they have been listening for a long time
- The specific underpinning of simulation for graduate capability development
- Made the game more accessible using a pre-existing configuration

- More examples of problems and difficulties not just success.
- Used a more generic situation example e.g.capsim capstone
- Discussion of delivery methods (2+1, 1+2 etc)
- Maybe just do a demo of simulation
- Just fine
- The sims demo needs to show how the experience is transferable
- Slow down for us to try
- Simulations were discussed in the abstract. Examples would have helped. Advice like "speak to the sales rep for the specific simulation" is not very helpful when you don't know which simulations are available or even how to find out which simulations are available.

Did you learn anything new today?

- Yes. How an online simulation works
- Education context for simulation as a tool
- Yes
- A little mainly rewinding/repackage my current understanding
- Yes, participating in the online simulation was a completely new experience which was very informative
- Yes, the different simulations programs in business
- Lots about using simulations in class
- Breadth of simulations available
- Yes. Sims demo was more sophisticated than I expected
- That simulations are possibly not very useful because they seem to be designed to be used over an extended period. Not completely obvious how you can have good breadth of topics if you have to invest so much time in the process.

A theme I would like to see addressed at a future forum is

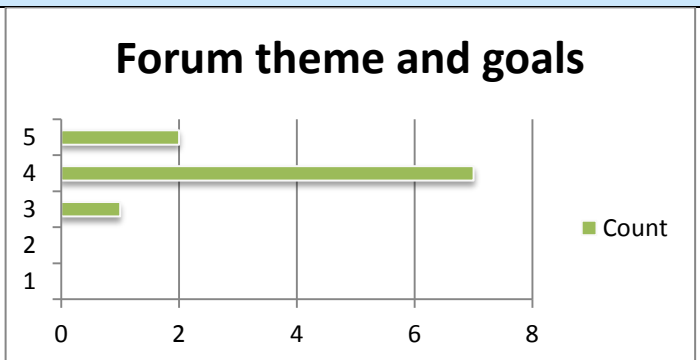
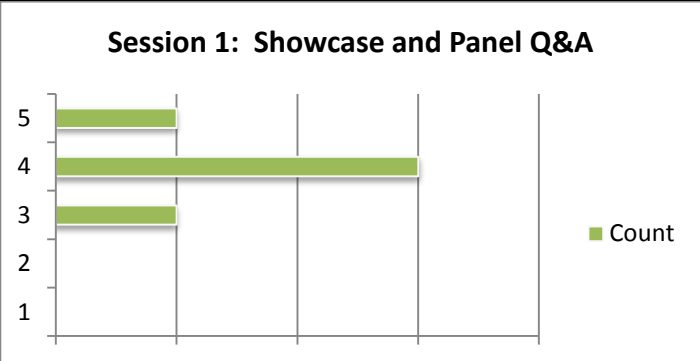
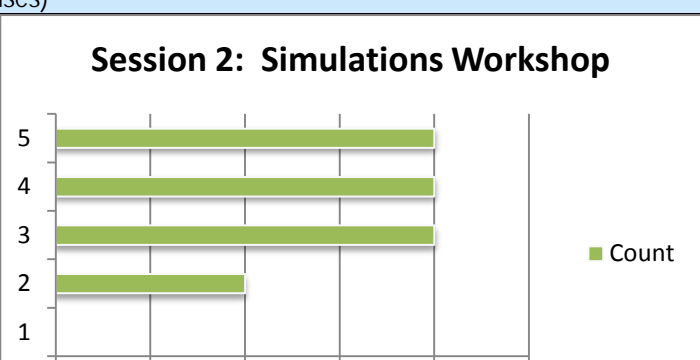
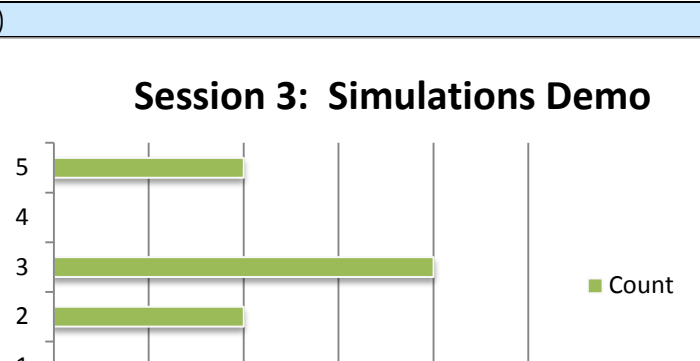
- More on assessment/dashboard
- More dynamic simulations
- Problems/barriers for using simulations. Innovative assessments
- Practice issues such as access to technology, training of academic staff, demonstrating value
- Assessment specific to 'surround' the simulation
- Dealing with large classes (500 + students) and multiple 5-20 streams
- Simulation of Enterprise Architecture and Strategic Business goals of Enterprises
- More of the same - simulations across different disciplines
- Yield Management for Services

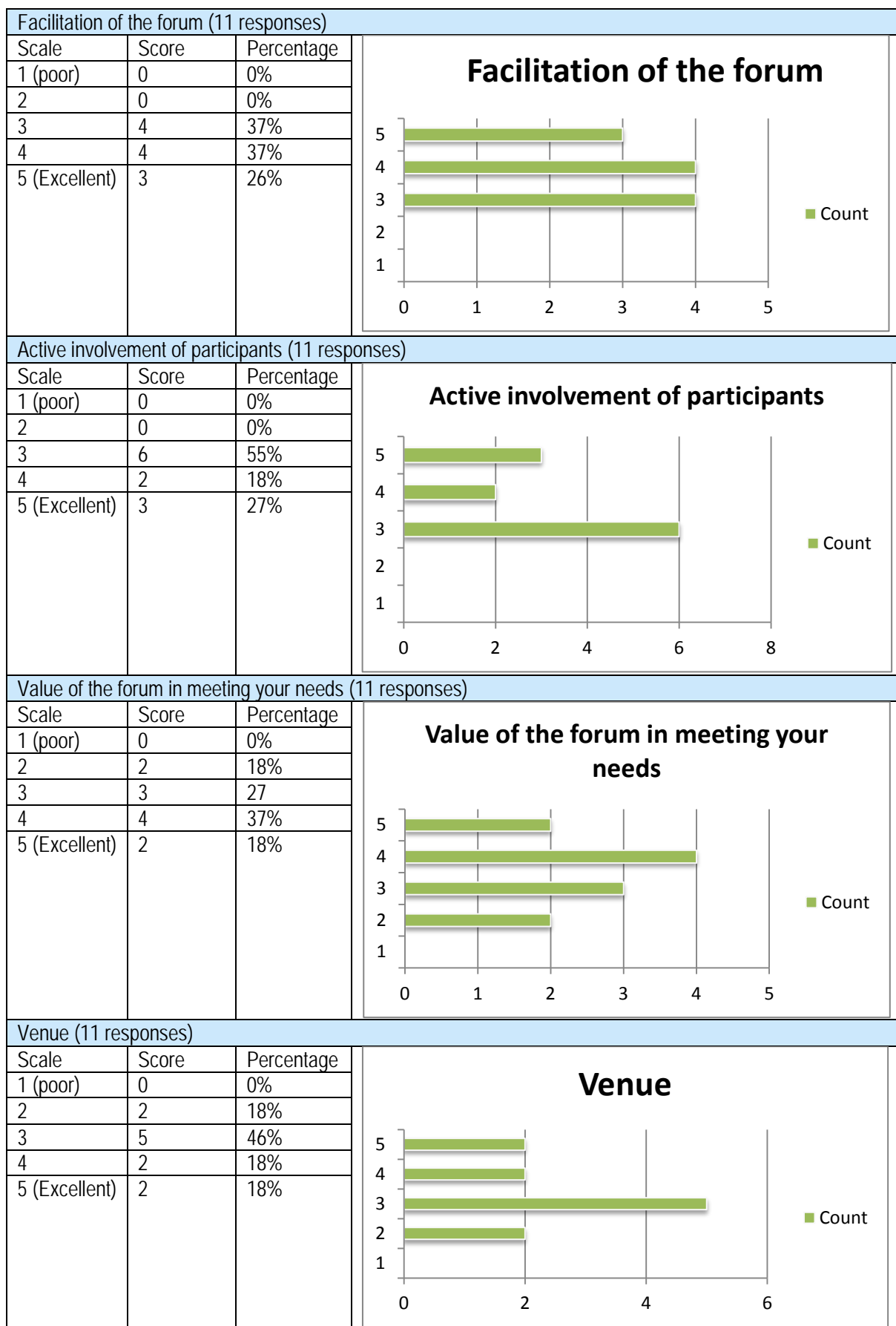
Final comment/s:

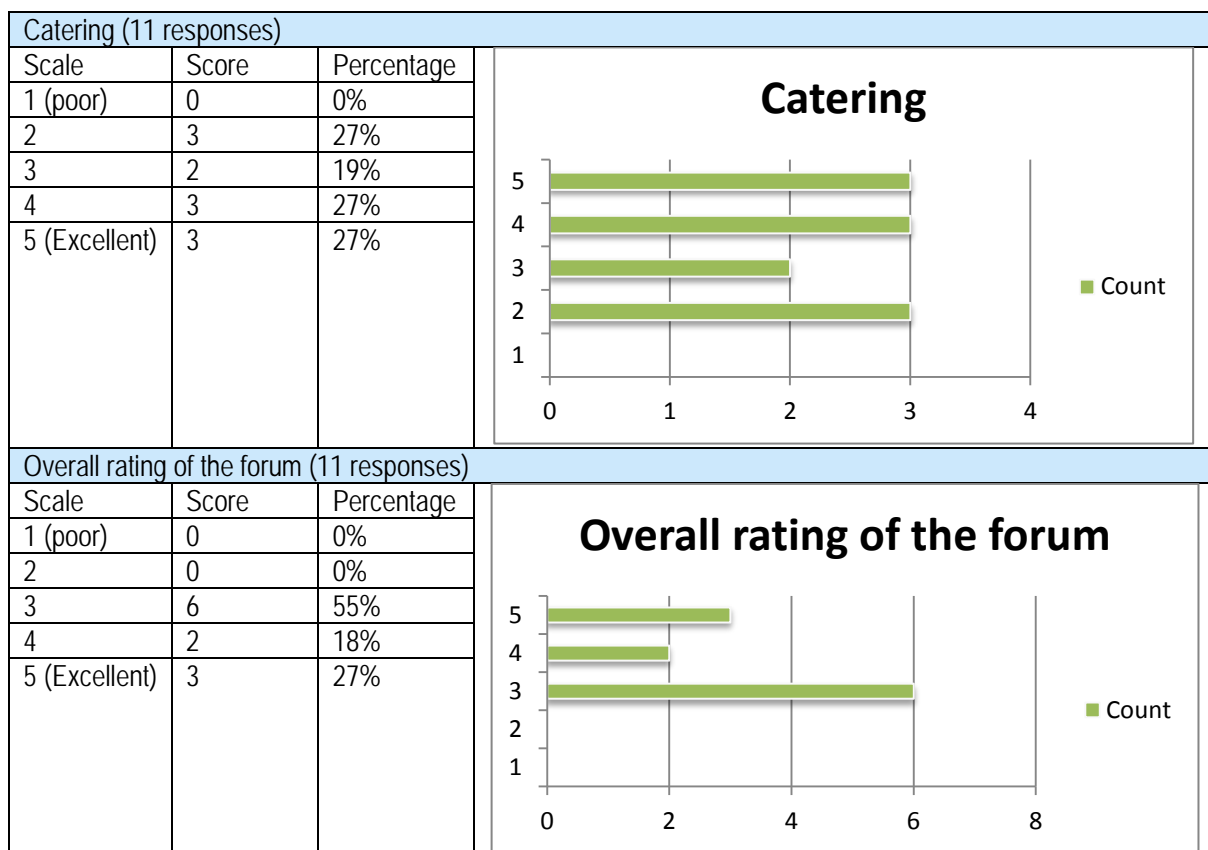
- Food for thought. Thank you!
- It would have been good to have had a longer lunch break as the morning sessions involved a lot of listening so an hour for lunch would have meant more time to revitalise.
- Thanks, was good!
- Great to have the exposure and connections.
- Overall, good forum.
- Excellent and keep it up.
- Very good
- Excellent. Thanks. Check out project enrolle
- Great show

INNOVATIVE PEDAGOGIES FOR DEVELOPING BUSINESS GRADUATE CAPABILITIES

WORKSHOP - Sydney, 10 November 2014

Forum theme and goals (10 responses)			 <p>Forum theme and goals</p> <p>Count</p>
Scale	Score	Percentage	
1 (poor)	0	0%	
2	0	0%	
3	1	10%	
4	7	70%	
5 (Excellent)	2	20%	
Session 1: Showcase and Panel Q&A (10 responses)			 <p>Session 1: Showcase and Panel Q&A</p> <p>Count</p>
Scale	Score	Percentage	
1 (poor)	0	0%	
2	0	0%	
3	2	20%	
4	6	60%	
5 (Excellent)	2	20%	
Session 2: Simulations Workshop (7 responses)			 <p>Session 2: Simulations Workshop</p> <p>Count</p>
Scale	Score	Percentage	
1 (poor)	0	0%	
2	1	14.5%	
3	2	28.5%	
4	2	28.5%	
5 (Excellent)	2	28.5%	
Session 3: Simulations Demo (4 responses)			 <p>Session 3: Simulations Demo</p> <p>Count</p>
Scale	Score	Percentage	
1 (poor)	0	0%	
2	1	25%	
3	2	50%	
4	0	0%	
5 (Excellent)	1	25%	





The most useful aspect of the forum was

- Introduction into simulations and discussion of capstone courses
- Learning about different ways to engage students in a changing education environment. Particularly hearing about the case studies - simulations and capstone courses like at UTS.
- learning how Simulations have been applied within the course as presented by guest speakers and also seeing how the Simulation works
- For me it was just to keep in touch with what is happening to date
- Ideas from Integrated Business Consulting “Reality Driven Rigour
- Links to other information and networking. Ideas and suggestions.
- The practical advice, information, simulations and website links - as well as Liz’s book: thank you Liz!
- Literature used

To improve this forum, you could have.....

- You could expand the material, e.g., have participants interact on-line with a simulation, and extend the workshop over the course of a day.
- Allowed for a little more time
- spent less time waiting between instructions when learning to use the simulator.
- It would be great if there are simulations for the IT part of business as well, for eg, technology management.
- Tie the three presentations together more.
- No suggestions.
- Better venue - the room was hot, crowded and not well equipped and the catering was very average.
- Demonstrated the simulation quickly

Did you learn anything new today?

- Benefits of simulations
- Yes, I learnt about thinking of the student perspective when designing courses.
- Yes, I learnt about airline simulations
- Yes. The discussion is very good, and getting to see the demos is very interesting.
- Ideas about how to get deep involvement from industry in assignment work.
- Yes
- Yes - I learned a lot about the fact that education is now no longer about a "course of study" but needs to consider the practical and experiential aspects of learning and some approaches to helping achieve this.

A theme I would like to see addressed at a future forum is.....

- How to be a better facilitator of a capstone which is interdisciplinary
- It would be great if there are simulations for the IT part of business as well, for eg, technology management.
- How to get "non-engaging" academics to engage with business more.
- No suggestions
- Curriculum design and embedding graduate attributes and the use of technology to develop graduate attributes.

Final comment/s:

- Worthwhile workshop
- Thank you, the research and application of the research is very interesting and will be useful for my future career.
- Great work, very well organised. Thank you!
- Thank you to ALL the academics involved for sharing!

Appendix G: Webinar Evaluation

Transforming Assessment Webinar Feedback to Speaker

Session Details:

Enhancing student learning outcomes with simulation-based pedagogies

Wednesday, 4 Mar 2015 07:00 AM GMT

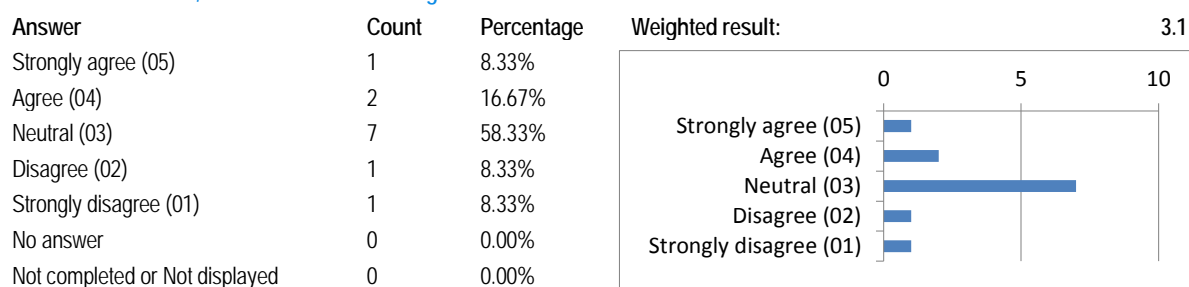
Speaker:

A/Prof. Pierre Benckendorff (University of Queensland, Australia)

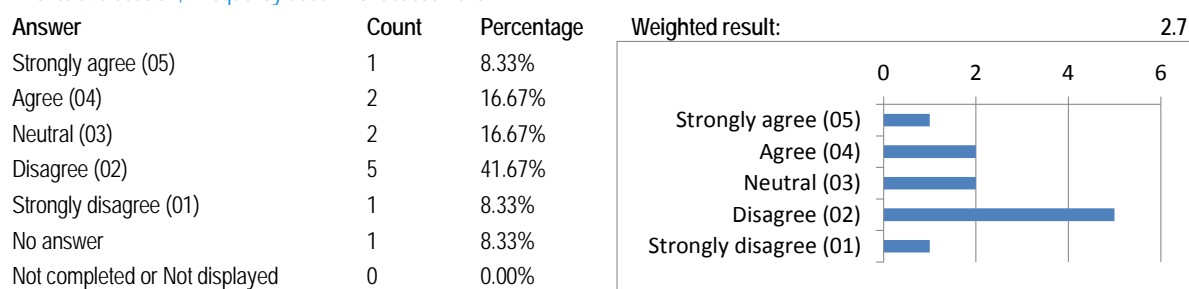
Notes:

The following data was collected via the anonymous end of session online survey.

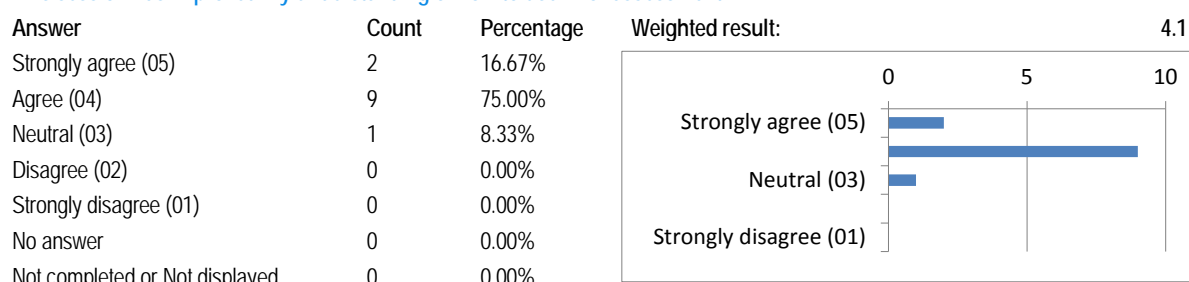
Prior to this session, I had a detailed knowledge of how to use X for assessment.



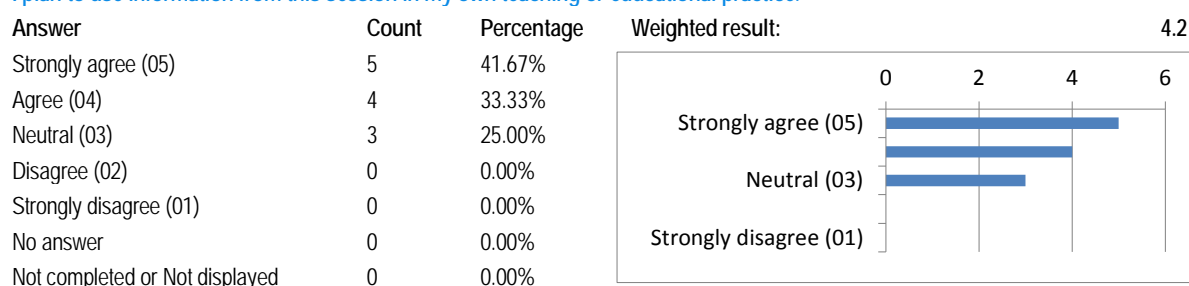
Prior to this session, I frequently used X for assessment.



This session has improved my understanding of how to use X for assessment.

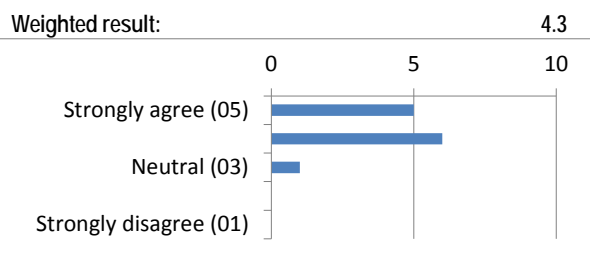


I plan to use information from this session in my own teaching or educational practice.



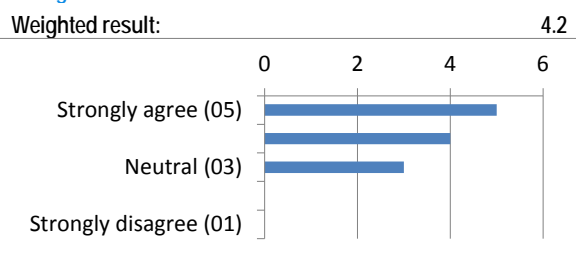
I would like to learn more about how to use X for assessment.

Answer	Count	Percentage
Strongly agree (05)	5	41.67%
Agree (04)	6	50.00%
Neutral (03)	1	8.33%
Disagree (02)	0	0.00%
Strongly disagree (01)	0	0.00%
No answer	0	0.00%
Not completed or Not displayed	0	0.00%



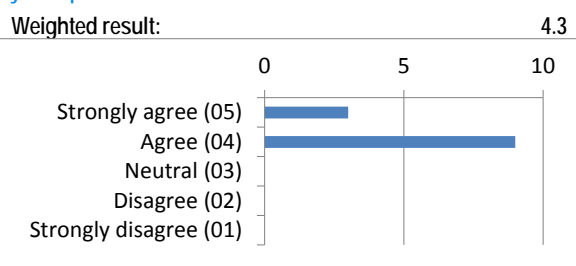
I think my institution should allocate more resources to assisting teaching staff to use X for assessment.

Answer	Count	Percentage
Strongly agree (05)	5	41.67%
Agree (04)	4	33.33%
Neutral (03)	3	25.00%
Disagree (02)	0	0.00%
Strongly disagree (01)	0	0.00%
No answer	0	0.00%
Not completed or Not displayed	0	0.00%



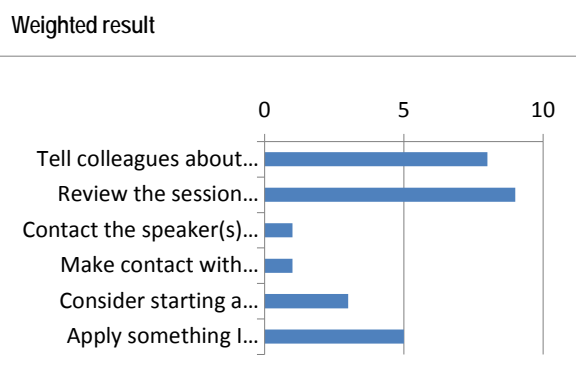
After this session I can see how better to use X for assessment in my discipline.

Answer	Count	Percentage
Strongly agree (05)	3	25.00%
Agree (04)	9	75.00%
Neutral (03)	0	0.00%
Disagree (02)	0	0.00%
Strongly disagree (01)	0	0.00%
No answer	0	0.00%
Not completed or Not displayed	0	0.00%



Following on from this session I intend to:

Answer	Count	Percentage
Tell colleagues about this session/topic (F1)	8	66.67%
Review the session recording (F2)	9	75.00%
Contact the speaker(s) of this session to follow up further (F3)	1	8.33%
Make contact with one or more participants I met in this session (F4)	1	8.33%
Consider starting a trial or project related to this topic (F5)	3	25.00%
Apply something I have learnt from this session in my own work/teaching (F6)	5	41.67%



Open response items

The best aspects of this session were:

reading the chat panels where people were sharing their own experiences

It was so timely for my needs! About to start looking at business simulations for online subjects, and currently know *nothing* about them, so session was perfect for me, and the project website looks just what I need to follow up on. thanks!

Very clear, interesting and comprehensive. Many thanks.

Tips and challenges

Good overview of the available tools. Clear explanation of core issues and benefits

This session could be improved by:

Perhaps to inform participants in advance that they need to install the "Blackboard Collaborate Launcher" - I went to this site (<http://ta.vu/BCtest>) in advance of the session but I was not able to join a Configuration Room to test out my equipment - it shows "Page not displayed". I wasn't aware I need to download and install the launcher until I tried to join the session.

It was fine!

Appendix H: Anticipated Impact using the IMPEL Model

	Project completion (2015)	2016	2018	2010
Team members	Project findings and expertise applied to improve teaching and learning in partner institutions. New implementations of simulations at partner institutions.		Recognition contributions to learning and teaching through promotion and awards.	Ongoing research and scholarship around simulation pedagogies
Immediate students	Enhanced learning outcomes as a result of changes at partner institutions impacting on ~700 students across five institutions.		First cohorts of students graduating from improved programs	-
Spreading the word in academia	Project website (case studies, tools) and seminars at partner universities and other universities and vocational educational institutions.	Presentations at national and international conferences. Webinars to a wider audience of interest.	Publication of book chapters and journal articles to engage the international academic community. Updated project website including links to published conference papers and journal articles.	Citation analysis of publications, teaching awards, downloads and views tracks.
Narrow opportunistic adoption	-	Other educators at partner institutions use resources and cases to embed one or more simulations into individual units		
Narrow systemic adoption	-	-	Systemic mapping and embedding of simulations as part of a broader curriculum framework at partner institution programs	Ongoing evaluation and review of the efficacy of embedding simulations into curricula
Broad opportunistic adoption	Educators already using simulations use cases and resources to improve teaching and learning		Educators at other institutions use resources and cases to embed one or more simulations into individual units.	
Broad systemic adoption	-	-	Systemic embedding of simulations into other institutions as part of internal curriculum review cycles. Ongoing evaluation and review of the efficacy of embedding simulations into curricula	

Appendix I: Evaluation Framework

Evaluation Framework for Technology Enabled Learning Cluster Enhancing student learning outcomes with simulation-based pedagogies University of Queensland SP13-3261

Evaluation Overview

The main purpose of the evaluation approach is to provide both formative and summative evaluation and is directly informed by the ALTC Project Evaluation Resources designed to assist projects in achieving success and to provide a judgement on the overall merit of the projects. Even though each of the individual eight projects has an individual evaluation plan, there are some common challenges and indicators across each of the three clusters. In addition, the clusters will attempt to leverage their reference groups in order to not have duplication. There is agreement within clusters to leverage their professional networks and to jointly use conferences and key events to maintain cohesive communication on the 2013 Strategic projects.

The guiding focus of the evaluation is to determine:

- the project's aims been achieved, and
- were the outcomes delivered on time and within budget.

All projects were asked to respond to the same series of questions to assist with the development of individualised evaluation plans:

- 1) What is the scope of the project?
- 2) What are the intended outcomes?
- 3) What are the key operational processes to achieve the outcomes?
- 4) What are the key drivers?
- 5) Who are the key stakeholders?
 - a) Who are the key audiences for the results of this project?
- 6) What evaluation approach do you think is suitable for your project?
- 7) What are the key evaluation questions?
 - a) What are the data sources?
 - b) What types of data/information will be collected?
 - c) How will the data/information be analysed?
 - d) What are the criteria for making judgements about the evaluation findings?
- 8) What are the critical points for consultation with the evaluation team?
- 9) When are key project milestones and events?
- 10) How will the outcomes from the project be disseminated?

Project Overview

The aim of this project is limited specifically to online business simulations that encourage learners to analyse the interrelationships between the various functional areas of an organisation. The project does not seek to develop a new simulation but is concerned with innovative pedagogies that enhance the effectiveness of online simulations in universities. The role of simulation-based pedagogies in linking theory with practice and developing graduate capabilities in a business context is of particular relevance.

Outcomes

The intended outcomes are:

- Series of reports and academic papers
- Simulation learning barometer
- Project website
- Series of national workshops

Formative Evaluation

This project's formative evaluation processes will include:

- Regular team meetings and ongoing monitoring of project management activities among the leadership team (project leaders and managers).
- Inclusion of evaluator in shared team space for access to notes, minutes, timelines, etc.
- Inclusion of evaluator in key advisory group meetings
- Inclusion of evaluator in key project team meetings
- Inclusion of evaluator in all advisory group communications
- Inclusion of evaluator in all project cluster communications
- Analysis of data and evidence collection from surveys/workshops/interviews
- Regular reporting back to project leaders, project team members, advisory group
- Planned and ongoing engagement with evaluator around expectations, monitoring of achievements against milestones, risk assessment and strategies for intervention.

Summative Evaluation

The project's summative evaluation processes will involve the key evaluation questions in the table below related to the intended project's aim and outcomes:

Objective/Phase	Key Evaluation Questions	Evidence
Reports and academic papers	How many academic papers have been accepted and where?	Number of case studies Survey responses Interview responses Simulations audit
Simulation learning barometer	Was the simulation barometer developed? How is the barometer perceived by users? Does the barometer identify learning outcomes from the online simulations?	Analysis student responses to barometer.
Project Website	How many unique visitors/downloads/video views? Does the website provide a platform?	Web analytics Quality of Resources Size of community
National workshops	How many different institutions and individuals participate? How do participants evaluate the effectiveness of the workshop(s)?	Participant evaluation Feedback from Advisory Group Size of project community

The revised project timeline is in the table below on the next page.

Timelines, Project Stages and Key Tasks (Revised March 2014)

Timeline	Tasks	Responsibilities	Outcomes & Deliverables
Stage 1 Project Initialisation <i>January-April 2014</i>	1.1 Appoint a Project Manager (PM) to assist the Project Leader (PL)	PL	<ul style="list-style-type: none"> ▪ Workshop involving all project partners ▪ Project management schedule, communications protocol & dissemination plan ▪ Collaboration framework ▪ Ethics application ▪ Briefing of reference group members and project evaluator ▪ Project website ▪ Literature review ▪ Report 1 ▪ Newsletter 1
	1.2 Appoint external evaluator (EE) and refine evaluation framework	PL	
	1.3 Conduct a full-day planning meeting of all Project Partners (PP) to establish vision, goals, financial management, contact details, timeline and meeting schedule for duration of project	PL, PM, PP	
	1.4 Complete a project management schedule, communications protocol and dissemination plan	PL, PM	
	1.5 Establish and brief a Project Reference Group (RG)	PL, PM, RG	
	1.6 Prepare an ethics application for approval	PL, PM, PP, RG	
	1.7 Establish a project website	PL, PM	
	1.8 Report progress to OLT and external evaluator	PL, PM, EE	
	1.9 Appoint a Research Assistant and conduct a literature review to identify key issues, measurement approaches and variables	PM, RA	
	1.10 Conduct a desktop audit of existing business simulations	PM, RA, RG	
	1.11 Write and Disseminate <i>Report 1: Online simulations in business education</i>	PL, PP, RA, RG	
	1.12 Liaison, engagement and dissemination to business educators	PL, PM	
	1.13 Disseminate project newsletter 1	PL, PM	
	1.14 Report progress to external evaluator	PL, PM, EE	
Stage 2 Data Collection & Analysis <i>March-June 2014</i>	2.1 Conduct a full-day meeting to workshop the design of measurement tools based on the literature and the expertise of the project partners and reference group	PL, PM, PP	<ul style="list-style-type: none"> ▪ Workshop involving all project partners ▪ Simulation Learning Barometer ▪ Interviews with educators ▪ Student surveys ▪ Reports 2 & 3 ▪ Academic articles ▪ Newsletter 2
	2.2 Undertake a pilot study of the measurements tools to serve as an internal evaluation mechanism	PL, PM, PP	
	2.3 Review the measurement instrument with members of the Project Reference Group as an external evaluation mechanism	PL, PM, PP, RG	
	2.4 Conduct student surveys at the start and end of each semester using measurement instrument	PL, PP, PM	
	2.5 Prepare case studies based on student feedback and interviews and workshops with educators	PL, PP, PM	
	2.6 Write and Disseminate <i>Report 2: Learning outcomes of online simulations</i> and <i>Report 3: The use of simulations as pedagogic tools</i>	PL, PP	
	2.7 Disseminate project newsletter 2	PL, PM	
	2.8 Liaison, engagement and dissemination to business educators, including submission of academic papers and conference presentations at national discipline conferences and	PL, PM	

Timeline	Tasks	Responsibilities	Outcomes & Deliverables
	teaching and learning conferences		
	2.9 Report progress to OLT and external evaluator	PL, PM, EE	
Stage 3 Design of Online Toolkit <i>May-August 2014</i>	3.1 Conduct a full-day meeting to develop a framework for the online toolkit	PL, PM, PP	<ul style="list-style-type: none"> Workshop involving all project partners Online Toolkit Newsletter 3
	3.2 Use information from previous stages to develop multimedia resources for the online toolkit, including exemplars, sample assessments, information sheets, evaluation frameworks, video profiles and tips.	PL, PM, PP	
	3.3 Consult with the reference group and other stakeholders to refine the online toolkit	PL, PM, PP, RG	
	3.4 Disseminate project newsletter 3	PL, PM	
Stage 4 National Workshops & Dissemination <i>September 2014</i>	1.1 Liaison, engagement and dissemination to business educators	PL, PM	<ul style="list-style-type: none"> National workshops with business educators Academic articles
	1.2 Conduct a series of national workshops with business educators and other stakeholders to: <ul style="list-style-type: none"> present evidence of the efficacy of online simulations present the online toolkit and promote its features and benefits embed insights from the case studies to improve teaching and learning practice form a community of practice around the use of digital simulations 	PL, PP, PM, EE	
	1.3 Evaluate national workshops	PL, PM	
	1.4 Submit academic outputs including journal articles and conference papers	PL, PP	
	1.5 Report progress to external evaluator	PL, PM, EE	
Stage 5 Project Finalisation <i>October-November 2014</i>	1.1 Disseminate project newsletter 4	PL, PM	<ul style="list-style-type: none"> Evaluation Report Final Project Report Project Website Newsletter 4
	1.2 Evaluate the Project	PL, PM, PP, RG, EE	
	1.3 Final Project Report to OLT	PL, PM	
	1.4 Financial Acquittal Statement	PL, PM	
	1.5 Disseminate Final Project Report to the Project Reference Group, business educators and other stakeholders	PL, PM	
	1.6 Ongoing dissemination of the project outcomes through the project website, academic articles and conference presentations	PL, PM	

Appendix J: Evaluation Panel Report

Evaluation Reflections University of Queensland – SP13-3261 Enhancing student learning outcomes with simulation-based pedagogies

Background

The aim of this project was limited specifically to online business simulations that encourage learners to analyse the interrelationships between the various functional areas of an organisation. The project did not seek to develop a new simulation but rather was concerned with innovative pedagogies that enhance the effectiveness of online simulations in universities. The role of simulation-based pedagogies in linking theory with practice and developing graduate capabilities in a business context was of particular relevance.

The guiding focus of the evaluation was to determine if the project's aims were achieved, and outcomes delivered, within budget and on time.

The purpose was to gather and disseminate good practice in the design of simulation-based units, including the design of pedagogy and assessment.

The intended aims were to:

- Map the features and characteristics of online business simulations;
- Assess the challenges associated with the integration of online simulations into sustainable teaching practice in business education;
- Evaluate the contribution of online simulations and related pedagogies to student learning outcomes; and
- Identify and promote innovative pedagogies and strategies associated with the use of online business simulations in universities.

These outcomes were intended to be accomplished via the following demonstrable outputs:

- Simulation learning barometer
- Online toolkit
- Series of national workshops
- Published papers and reports

Evidence

The first interactions between the Project and Evaluation Teams were at the OLT workshop for the 2013 Strategic Commissioned Projects, conducted in April 2014. Within the Technology Enabled Learning Cluster, there were three projects, with this project being led by Associate Professor Pierre Benckendorff from University of Queensland, with partner institutions – Griffith University, La Trobe University, University of South Australia and William Angliss Institute – including team members Gui Lohmann, Marlene Pratt, Paul Reynolds, Paul Strickland and Paul Whitelaw. There was also a dedicated project manager Lainie Groundwater who provided support and guidance to the project team and reference group.

In order to identify that the project's aims were achieved and outcomes delivered both formative and summative evaluation strategies were utilised. The Evaluation team was provided with access to the key documentation via Dropbox from the project team and were included in significant project team communications. In addition, a member of the evaluation team was a participant in virtual and face to face project team and reference group meetings which facilitated input and advice throughout the project lifecycle.

The Evaluator found several key factors that contributed to the successful achievement of the project aim and goals. These factors include:

- Regular meetings of the project team with the Evaluator and Reference Group from the beginning of the project, which were well supported by project plan updates and reports on activities. This ensured that the team were provided formative feedback to further enhance the proposed project outcomes.
- Active and sustained communications between project team members from the partner institutions.
- Strong project management, as demonstrated by extensive and appropriate documentation and insightful input to the project from the project manager.
- Appropriate knowledge of institutional structures and priorities, ensuring that the activities undertaken related to institutional strategies and requirements in this emerging field.
- Establishment and maintenance of a genuine team approach to the project. This was exemplified in the breadth of contribution made by project team members not only at the national workshops but throughout the project.
- Diversity of skill set in the project team, which ensured a range of perspectives, breadth of analytical skills, and variation of insight into the project communication requirements.

Project Management

It has been documented that effective project management has the following elements:

- Identifying requirements,
- Establishing clear and achievable outcomes,
- Balancing the competing demands for quality, scope, time and cost,
- Managing the expectations of various stakeholders, and
- Adapting plans to overcome challenges.

From a Project Management perspective, the project was well managed and all stakeholder groups were involved. There was effective and significant communication with all members of the project team and involvement of the reference group assisted with project execution and promulgation of project outputs. From the evaluator's perspective the coordination with the Reference Group was the most effective involvement of any OLT project evaluated to date and was comprised of national and international experts in their fields who contributed enthusiastically to the success of this project.

This project had clear goals and strategies and adapted along the way to increase data gathering and engagement with students and business academics.

The leadership from Associate Professor Pierre Benckendorff along with the capable and conscientious oversight of Lainie Groundwater as Project Manager, were key factors in the success of this project. This facilitated a collaborative team environment with a clear and ongoing focus on the project deliverables. Inclusion of a member of the Evaluation Team in key project discussion provided formative evaluation and input throughout the project and was facilitated by the project leader in a positive and generative manner.

Achievement of Outcomes

The key summative evaluation questions centred on the development of simulation learning barometer, engagement with national workshops, project website and online resources and published academic papers.

Over 530 participants from 48 organisations attended project forums, webinars and presentations at conferences. The project website received over 2,100 visits from more than 1,400 users and the project's YouTube videos received over 600 views. Forum participants included educators and learning designers from public and private institutions as well as representatives of associations/companies. It is anticipated that within the next two years over 700 students per year will benefit from curriculum changes as an impact from this project. The Online Toolkit will continue to have an impact beyond the life of the project.

This project has generated a community of almost 200 interested stakeholders and there is scope to build on this by forming a network to act as a custodian for the project website and to continue the legacy of the project.

The simulation learning barometer was developed and trialled to measure the impact of simulation based pedagogies in business education. A range of cohorts using simulations across 7 universities were sampled – a total of 711 pre-simulation and 450 post-simulation surveys were completed. The project team addressed the challenge of a lower than expected response rate and extended the time to gather data from students.

A framework for implementing a simulation based pedagogy was developed that clearly highlights learning outcomes should be the first consideration with adopting a simulation. To assist users in implementing and evaluating simulations a good practice guide was developed.

A number of presentations on the outcomes from the project have been made and several journal articles are in the development stages.

Summary

The project activities, and in particular the website and national workshops ensured that a large number of stakeholders were integrally involved with the project and the project adapted with input received. Overall the evaluators appreciated the opportunity to work with such a capable and enthusiastic project team. The extent of interest in the online resources, the active nature of the workshops, and the ongoing positive inter-institutional dialogue is reflective of the value of this project.

Appendix K: Certification by Deputy Vice-Chancellor Academic

I certify that all parts of the final report for this OLT grant provides an accurate representation of the implementation, impact and findings of the project, and that the report is of publishable quality.

Name: ...Deanne Gannaway..... Date:3 July 2015.....