



School of Graduate Studies

A submission for the CAGS/ETS Award for
Excellence and Innovation in Enhancing the Graduate
Student Experience.

April 30th, 2013

Introduction

The oral defence is the pinnacle of a doctoral program at many universities. Years of hard work culminate in a presentation to defend scholarly work before a panel of academic examiners. The audience varies across institutions (some are open to the public), but most require the presence of an external examiner - an academic from another university with considerable knowledge in the candidate's field of research.

Traditionally, the external examiner has travelled to attend an oral defence in person, often from other countries. At Memorial this has presented many challenges:

- Over \$70,000 a year in examiner travel costs
- A larger time commitment from external examiners
- Travel delays leading to longer wait times for students
- Geographical location as a major factor in external examiner selection, not just their qualifications
- Administrative support time required for travel logistics

We sought an administrative innovation, utilizing technology, to overcome these challenges and ultimately improve the student's experience as they completed their doctoral studies at Memorial University. The goal was for all PhD defences to have an external examiner attend remotely through electronic means (with limited exceptions).

Introducing Technology

The introduction of technology into any process can bring challenges such as computer compatibility issues or resistance to change. For many people things appear more complicated, even though the technology is intended to make things simpler. The benefits would be lost if the intended users could not easily use it, or did not wish to use it.

The School of Graduate Studies at Memorial University understood it would be unacceptable to expect an external examiner to learn a specific technology (hardware or software) prior to participating remotely in an oral defence. These individuals would come from a variety of backgrounds and technological aptitudes, have a variety of software limitations, and yet we would normally be working with each of them only once.

A technical solution had to be very straightforward and accessible. Technology is after all, supposed to make things simpler!

eDefence at Memorial University

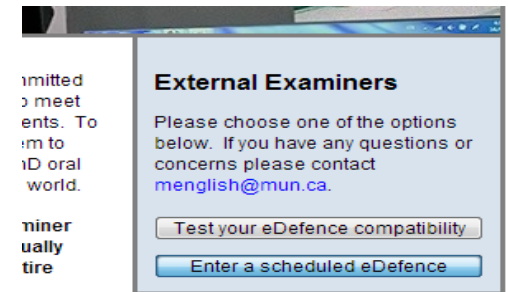
At a stressful time in a student's academic career, the process of finalizing details for their oral defence should be seamless. They should also have access to the most appropriate external examiners, regardless of geographical location.

Memorial's eDefence model offers a completely ubiquitous approach to oral defences, relying only on internet-connected devices and 'cloud' technology *. **The external examiner requires only an up-to-date Internet browser and telephone to participate.**

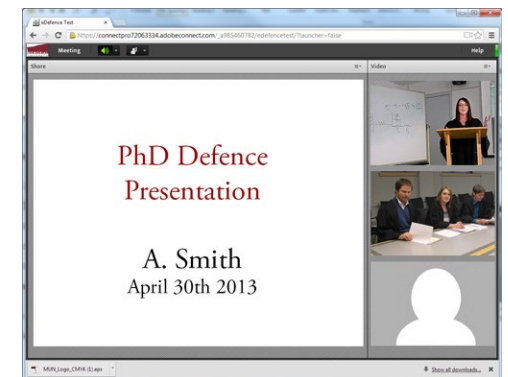
Our technology setup is simple and portable, and we operate without the assistance of a technical support department. The physical location of the defence can be anywhere that is best suited for the candidate's presentation. Examiners can connect using any Internet-connected device (laptop, tablet, smartphone) from anywhere that is best suited to them. They simply click a link on MUN's School of Graduate Studies website to enter a defence. **Neither party requires expensive or complicated equipment.**

The result is a technically flawless oral defence where students interact with the external examiners as if they were face-to-face, without changing the process of a traditional defence.

* The School of Graduate Studies at Memorial University is using Adobe Connect™ (<http://www.adobe.com/products/adobeconnect.html>) cloud-based software to run eDefence.



External examiners enter straight from our website. The compatibility test helps ensure their camera is working properly.
<http://www.mun.ca/sas/current/edefence/>



External examiner view includes the student's live presentation and video feeds, all inside of a web browser.

The Outcome

- **Exposing PhD candidates to the highest quality external examiners.**

eDefence has connected over 60 PhD candidates with examiners in almost every continent since its implementation in early 2012. The external examiner's geographical location is no longer a constraint in their appointment, but rather his/her expertise is the key factor.

- **Offering more efficient timelines to students.**

A shorter window of commitment from the examiner (hours instead of days) means anxious doctoral candidates don't have to wait as long to book an oral defence date. Also, travel delays/disruptions will no longer cause postponements.

- **Enriching the Academic experience.**

The resulting savings of over \$70,000 annually has allowed the School of Graduate Studies to allocate funds to other areas such as graduate student orientation, professional development (career and entrepreneurial), and most notably student conference travel.

Other benefits include eliminating the carbon footprint for external examiners (a component of the School's green initiative, <http://www.mun.ca/sgs/green/>). Departmental administrative work is also significantly reduced since they will no longer have to co-ordinate travel arrangements and costs.

"eDefense is the reason I have my defence over now! I am afraid otherwise the stars would not have aligned to get everyone in the room when they needed to be and the whole process would be dragged on into the fall. So infinite thanks for that!"

Grant Strong, PhD candidate (Computer Science)
Memorial University of Newfoundland

"Considering the vast time difference between UBC and MUN and the three day time requirements for an in person visit, I would not have been able to participate in the defense personally during the term any other way."

Dr. Parisa Mehrkhodavandi
University of British Columbia - Vancouver, Canada

"The whole procedure was very accurate and very fast, which means MUN people respected my precious time. Good job!!!"

Dr. Dimitrios Soudris
National Technical University - Athens, Greece

Summary

- **INNOVATION**

Memorial University's eDefence model is innovative because of its ubiquity. Its simplicity and portability are instrumental in increasing the pool of potential examiners for doctoral candidates. This allows examiner selection to be based on other more important considerations.

- **SIGNIFICANCE**

The model shortens the wait time for the candidates and simplifies administration. The resulting cost-savings have led to increased opportunities for graduate student travel and professional development.

- **EXCELLENCE**

eDefence is continuously improved as we implement feedback from our candidates and examiners. We are thrilled with its success and expect our model will be adopted by other academic institutions.

eDefence is, without question, an innovation that has added to the quality of the graduate student's experience at Memorial University.