

The Three Minute Thesis (3MT)

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Chair's Comment

The aim of this session was to introduce the Three Minute Thesis competition which originated at the University of Queensland and is now spreading across Australia and New Zealand, and hopefully further.

The 3MT at the University of Queensland: Zlatko Skrbis

The history of 3MT

The essence of the 3MT competition is for Research Higher Degree (RHD) candidates to present their thesis topic in three minutes in language that is understandable to educated but non-specialist audiences. 3MT was at least partly a brainchild of former UQ Graduate School Dean, Professor Alan Lawson. The first 3MT competition was held in 2008, repeated in 2009 and will go 'national' in 2010.

Why do we do it at UQ?

Firstly, skills training for RHDs

At the University of Queensland (UQ), 3MT is part of an effort to provide students with an opportunity to develop their oral/presentational skills.

Oral and presentational skills are often marginalised in an RHD culture with more emphasis on writing and a production of a thesis. 3MT is the most visible activity that aims to address this issue. At UQ this occurs within a new system of candidature progression (confirmation, mid-candidature review and thesis review) which includes oral presentation as an integral part of each milestone.

We want to ensure our graduates leave the university with the skills to express themselves confidently both in oral and written domains.

We run 3MT because it:

- Allows candidates to learn how to communicate their ideas effectively to a range of non-specialist audiences and to the wider community
- Helps 'crystallise' thoughts about the thesis
- Is mapped onto PhD/MPhil skills development
- Is a lot of fun and has tempting prizes.

Secondly, building research culture in Schools

It provides opportunities for candidates to come together and talk about their research, and opportunities for Schools to provide training in presentation skills.

Thirdly, building external relations for the university

At UQ our 3MT finalist presents at the industry dinner during the research week.

3MT is not a self-referential exercise: we do not see the 3MT competition as something that is self-contained and bears no relation to any other activity. The competition is an integral part of a much bigger set of activities designed to improve our RHD students' presentational skills.

It is not a circus or a hedonistic orgy where people come together to talk nonsense. **It is not about trivialising research.** Recent outcomes demonstrate that 3MT finalists are not just good with their oratory skills but are excellent researchers in their own right. UQ's 2009 winner, Richard Ronay, is now a postdoctoral fellow at UQ and our runner-up, David Macdonald, now holds an academic position at UQ.

Chair's Comment

David McDonald was the UQ runner up in the 2009 3MT competition. He was invited by the organisers to provide some reflections on his experience and to present his '3MT'. If you would like to view his presentation live go to <http://www.uq.edu.au/grad-school/three-minute-thesis>.

Presentation and Reflection: David McDonald

Introduction

I am very happy to have this opportunity to speak to you today about my three minute thesis experience. My goal is to give you an idea of what it is like to attend a three minute thesis competition and I will do that by presenting my talk. The other thing is to let you know how I've benefited, so in short what did I get out of participating?

It is my hope that by doing that, it will encourage as many of you as possible to get involved this year in the three minute thesis competition. So in brief, the three minute thesis competition is an oral competition where you discuss your thesis to an intelligent but non-specialist audience, just like you and you have three minutes or less to do that.

To give you an idea of the steps required to transition between the thesis and the three minute thesis, my official thesis title is *The Morphology and Behaviour of the Lumbar Paraspinals in People with Chronic Recurrent Low Back Pain*. The title of my three minute thesis that I'll present to you now is *Why Do Some People Keep Hurting Their Back?*

'The 3MT'

Imagine ladies and gentlemen, there you are enjoying your day and all seems right with the world when suddenly, because of a quick and unexpected movement, you experience the gut wrenching sensation of low back pain. Now the good news is that the majority of people who hurt their back will recover fully and have no further problems.

The bad news is five million Australians will not be so lucky. You see, these people get caught on the not so very merry-go-round of hurting their back,

appearing to recover, only to suffer subsequent bouts of low back pain and then around and around they go.

The question my research investigated was why do some people keep hurting their back while others do not? Now this question is important because this problem costs Australia \$8 billion every year, not to mention the psychological and emotional costs to the people with recurring pain.

The first thing to consider is that the back muscles are critical for spinal health. Without the support of your back muscles, your spine would collapse under as low as nine kilos of weight. So without getting into the specifics, I'm fairly certain that everyone here today weighs just a bit more than nine kilos. So that means our spine couldn't support our own bodyweight, let alone protect itself from the forces applied to it when we move.

By recording back muscle activity, I investigated the function of the back muscles in a group of people who keep hurting their back but during the period of time when it appeared that they had recovered. My research showed for the first time that the activity of the back muscles does not return to normal despite recovery from pain.

My key findings can be summarised by two words, the two Ds: decreased and delayed. See the activity of the back muscles in this group of people is decreased just when they need it most, during quick and unexpected movements.

Furthermore, the activity of the back muscles is delayed compared to normal. So folks, what we've got here is a classic case of too little too late that leaves the spine with less back muscle support than is needed to prevent re-injury. These findings offer us a mechanism to finally explain why these people keep hurting their back. These findings are also important because they force us to redefine what it means to be recovered from low back pain.

It is not just a simple matter of being symptom free and able to get on with day to day tasks. These findings will also help shape the development of specific therapeutic exercise programs to restore back muscle function and ultimately break the cycle and help get as many people as possible off of the \$8 billion low back pain merry-go-round. Thank you.

Reflections

Thank you again for that, that was very nice. So that hopefully gives you an idea of what it is like to attend one of these competitions. What I'd like to answer now is so what's in it for you? I want to answer that question by highlighting some of the things and some of the benefits that I've received as a result of participation.

I've divided these into two groups in my mind and the first group is things you can put in your hand. So the things you can put in your hand include free food. I think we'd all agree that if you want to motivate a group of research higher degree students to participate in something, the offer of free food is a good idea. The other thing is the prize money. It is extremely nice to get funding for conference travel and that is going to enable me to attend the World Congress of Low Back and Pelvic Pain this year to talk about my research again and that's a fantastic opportunity.

Secondly, what I'd like to draw your attention to are the things that you can't put in your hand. Changes in confidence, offers to speak, future employment, which has already been alluded to, and networking. Now the first thing about confidence is you may think well it is good that it helps you to become more confident in your ability to speak publicly and that's true but that's the small c

confidence. The big C confidence for me was realising that people are actually interested in my work that aren't part of my profession, my discipline, and this was particularly timely for me because I was well and truly in the midst of my PhD psychosis. The intellectual despair had well and truly set in and I was really wondering: 'Why am I doing this, why do I sit here and do this?'

So on the day of the three minute thesis competition, after we had presented, the judges were off tabulating the results and four separate people came up and asked me very genuine questions about back pain and how we were going to make things better and how this research was going to help them.

One guy in particular marched right up to me and he said, that's exactly what happens to me. That's exactly what my back pain is like, I do this thing and it's back. So he was asking all kinds of questions. I hadn't been asked a question like that in my whole research career. It is always statistics or something. It was fantastic and that really helped me to get more enthusiasm for my work and to get back into it. So that to me is the big C confidence; that was fantastic.

The offers to speak came in which was wonderful. I got to speak at division level presentations, at the Division of Physiotherapy, for the School of Health and Rehabilitation Sciences and a research showcase at the Faculty of Health Sciences. The benefits of that were much bigger than to practice speaking and getting my name out there.

I got to meet a bunch of different levels of administration, get a sense of how the University worked and to connect with these people in a way that made them feel happy to see me in a hallway which was great because when I went for my interview for my lectureship position, I had positive experiences with everyone but two of the panel members. It was great.

The other good thing about the interview was you have to do a 10 minute presentation at the start so it worked out really well and the networking opportunities fabulous. To be here today is just a great example of that. I've got a chance to meet at least 20 different people and have really good conversations with them and that is extraordinary. For someone like me I think it is fantastic. So why isn't everyone doing it? Because it's scary. That's why not everyone is doing it. The fear of public speaking can be profound and it is related to this issue of sociophobia. A brief example of sociophobia that may be a bit backwards is that you can see there is no-one in the front row. The people there are just as scared.

But sociophobia is the fear of being negatively evaluated by your peer group in a public setting and public speaking is a great example of that. But just to put this into context of how profound this fear can be, this is number two on the list of most common phobias. Number 10 is necrophobia, which is fear of death and dying. So what that means is that most people would be more afraid of delivering the eulogy than being in the casket.

This is one of the particular strengths of the three minute thesis contest is that it is a warm and friendly audience. The people there are cheering you on. They want to see you do well and they want to be entertained. They are not there to dissect your argument. It is a very positive experience and that for me was wonderful. The other great thing about the three minute thesis competition from this perspective is there are no questions at the end.

Literally, you get a really genuine warm round of applause and you get to really enjoy that without having to dread the questions that are coming. So I think the

three minute thesis competition can address one of the most profound limitations in public speaking which is sociophobia just by continuing to do what it does. It is fantastic.

So ladies and gentlemen, I hope I've done a reasonable job of illustrating and conveying to you just how positive an experience this has been for me and I hope that this encourages you to take part in this year's Australasian three minute thesis competition at the University of Queensland. Thank you very much for your time.

Chair's Comment

Following the very well-received presentation by David McDonald, Charles Tustin and Chris Stoddart of Otago University in New Zealand explained how they have introduced 3MT at that university.

The University of Otago Three Minute Thesis Experience: Charles Tustin and Chris Stoddart

In November 2009, the University of Otago held the final event in its inaugural Three Minute Thesis competition. The contest as a whole was well received and saw 73 students (approximately 7% of all PhD candidates at Otago) take part in heats, with nine participants progressing to the final. The following is a summary of how Otago organised its competition, and some of the key lessons learned along the way.

Pre-planning

- It is recommended that a minimum two to three months be allowed prior to the final for planning (assuming a medium to large university that would need to organise heats before a final event).
- Sponsorship of prizes is something to consider early in the process. While external sponsorship is not necessary, as an educational, media-friendly and fun event, the Three Minute Thesis has sponsorship appeal.
- If running the event for the first time, a call for initial expressions of interest, prior to a formal application process, can help give an indication of how many students might take part, which can help with planning.
- After the expression of interest stage, Otago used application forms for formal entry into the competition. These included options for participants to show which of the proposed heat dates they would be available for, a commitment from participants to be available for the final should they be selected, and a media/publicity waiver. Rules for the competition also need to be made clear at the point of application, and it is recommended that scheduling for the heats and the final is organised prior to the call for applications, in order to allow participants to commit to the relevant dates.
- Selecting judges is a very important part of the process. At Otago different judges were used for all the different heats and the finals, with 24 judges used in all; obviously this requires a lot of availability checking, so judge selection needs to start early in the process. The best judges are not overly critical (the Three Minute Thesis is *not* an oral examination), but equally not too fawning in their praise; they present some constructive criticism, but in a non-threatening and supportive manner. The feedback from the judges provides an excellent learning opportunity for the participants, but stinging criticism can wreck the whole experience and leave a sour taste: choosing judges carefully is therefore essential.
- A suitable venue for the final needs to be selected. A lecture theatre can work for this, but ideally it should have something of a dramatic/musical theatre feel, to help give the final a sense of occasion.

The Heats

- Otago used closed, non-public heats, with three judges per event. Two administrative staff were also on hand to time keep, manage the participant's previously collected slides, introduce participants to the judges (and vice versa), and provide feedback to the judges on the feedback they were providing.
- Participants came to the room in groups of four or five, with each presenting in turn. Once everyone in a group had presented, the judging panel gave feedback to each of the participants in the same order in which they had presented. Each heat had approximately 16 participants, and took between two and two-and-a-half hours.
- Other heat formats are also possible, and may work better in other situations. For example, Otago has satellite campuses in Wellington and Christchurch, which in 2010 will hold their heats as public 'mini-finals', so that non-participating students on these campuses have the opportunity to come along and watch.
- The advantage of the Otago format from 2009 is that it presents a relatively non-threatening environment to the participants: they are not performing in front of a large crowd, and by facing the judges as part of a group, there is a shared camaraderie under stress. Additionally, the chance to see how others approach the presentation, and how the judges react to this, is a further learning opportunity.
- In 2009 Otago did not use Divisional or departmental quotas for finalists – instead the best nine participants across all the heats were selected. This helped ensure a high-quality final, but is administratively more complex than having Divisional heats whereby different areas of the University can put forward their best candidate(s). Otago will use this latter system in 2010.

The Final

- After finalists are selected, it is time to step up advertising efforts to encourage staff, students, the public, and the media to attend the showpiece final event.
- The final also requires some additional personnel apart from the judges and time-keeper. A Master of Ceremonies is essential to keep the event running smoothly, and to break the event up, half-time entertainment (a musical performance) was also organised at Otago. Finally, dignitaries, including sponsors and high-level university staff, can be invited to award prizes and for any speeches around the event.
- If an audience favourite is to be selected (recommended!) a mechanism for voting needs to be organised. At Otago electronic 'clickers' were used, but a paper ballot or even a count of hands can also work.
- It is recommended that finalists be given an opportunity to practice in the venue prior to the actual event. Performing in front of a crowd is a step up from the heats, and this helps to ensure that participants are at their best on the day.
- The Otago final, with nine finalists, a musical interlude and presentations and short speeches at the end, took approximately an hour and twenty minutes from start to finish.
- An edited version of the Otago final may be viewed on the University of Otago's iTunesU site (under "Life at Otago") or at <http://podcast.otago.ac.nz/weblog/lifeatotago/>

Chair's Comment

To conclude the session, Tony Miscamble of the University of Queensland, one of the originators of the 3MT, presented an invitation to all present to take part in the international final to be held at UQ later in 2010.

The 3MT going international: Tony Miscamble

The design of the competition derives from the intentions Zlatko described earlier. After two iterations we've arrived at a model that is simple, robust and hopefully achieves its purpose.

There are three **judging criteria** of equal weight telling competitors what they need to do:

- Communication style: tell me what you're doing and why without jargon and without juggling.
- Comprehension: at the end of three minutes, will I understand what you're doing and why you're doing it? Will I walk away a little more educated?
- Engagement: notice the emphasis on oration. 3MT is a TALK, not a picture show.

The rules tell competitors what they can't do and keep minds focused on the competition's intentions:

- One PowerPoint slide is permitted. No transitions, no moving parts, it has to be STATIC.
- The slide cannot have any embedded media or music or films.
- No props are allowed.
- Time limit: Three minutes maximum. It can be less than that but it can't be more. We will have a timekeeper with a laptop displaying the countdown. To commence the competitor makes eye contact and gives the timekeeper a nod to start the clock. The timekeeper will give a 20 second warning before time is up, and ring a bell at 3 minutes.

The prizes are generous and useful to the winners. At UQ we provide these as research travel grants to emphasize the academic purpose of the competition: \$5000 first prize, \$2000 second and \$1000 for the People's Choice prize. Every person in the audience is given a ballot paper to vote for their favourite presentation—the People's Choice. This popular feature of the competition engages the audience, gives them a stake in the outcome and signals that their opinion is valued.

Structure. At UQ we hold heats at each level of our university's hierarchy to progress successful competitors towards the university final. Adapt the competition to suit your own institutional arrangements. Keeping the 3MT format simple allows local organization of the competition, which spreads the logistical workload and encourages participation.

Who is competing? We are delighted that to date, 27 Australian and four New Zealand universities have indicated their participation in this inaugural competition. These 31 universities have a combined cohort of over 50,000 research students. We anticipate strong media interest in the event and hope it raises the profile and understanding of early career research in Australia and New Zealand.

The competition final is at UQ's St Lucia campus in Brisbane on Tuesday 21 September. Our Vice-Chancellor will host a dinner to celebrate our competitors and the research talent of our universities. You will find details, resources and updates at <http://www.uq.edu.au/grad-school/three-minute-thesis> or contact us anytime at the 3MT@gradschool.uq.edu.au. **There is still time for your institution to participate.**

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