Personal Portfolio

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When I sit down and think of my journey that brought me to this point, what strikes me most is how I believed it to be “right place right time”, but now realise it was just “right person, right passion”. As a child I always enjoyed school, I was a good student who was able to coast through most of my schooling. My parents appeared to value teaching even though neither of them had done well at school themselves and had not gone to university. I had three teachers that truly left an impact on me. The first was one of my few male teachers in my entire schooling who challenged a lot of what I said and was the first teacher that made me really aware of the world (age 9). The next teacher that made a real impact was one who told me I “was no good at maths and probably never would be” (at age 10), while the third teacher introduced me to formal science and doing experiments while also encouraging my love of languages (at age 11). Looking at those three teachers I can see their lasting impressions, I held on to the idea that I couldn’t do maths until I was actually a teacher myself.

If I had to characterise my teaching belief at this stage from a learner point of view, to me teachers knew everything and were always right.

I had the privilege of spending a year in Japan when I was 16 which changed my perceptions in so many ways, one of which was how I viewed school. On returning to New Zealand school suddenly became a waste of time, it was filler until real life could start. Interestingly this was also the first time I thought about becoming a teacher; I considered returning to Japan to teach English. Because I was fluent in Japanese yet still wanted a qualification I took bursary Japanese but was kicked out of the class because I knew more than the teacher. This just reinforced that school was a waste of time, as I wondered how...
someone could be teaching when they couldn’t actually speak the language. As a consequence of my lack of enthusiasm, my final year of high school was spent socialising not studying and I skipped a lot of classes. I didn’t study for exams, yet ended up passing all subjects and suddenly school was over yet I had no idea what I wanted to do.

During this time I viewed teachers as nothing more than baby-sitters, the illusion of them knowing everything had been shattered and I felt betrayed in some way.

It wasn’t until I was 19 that my sister who had gone to university told me I needed to do something and dragged me to a careers expo. There I saw a course in vet nursing, having always loved animals this seemed like a good idea and with very little thought I applied and subsequently was accepted to the vet nursing program. However there was not enough challenge in vet nursing for me, so urged by a tutor I went to Massey to study vet. Again there was little thought in it, I was told I should so I did. I quickly realised I had no desire to be a vet, but one of the papers I took was in animal behaviour and suddenly I found something that clicked with me. A friend who was completing his PhD at Waikato then convinced me to study up here so again we moved and I completed my BSc at Waikato. In what had become a theme to my university education I decided to do my MSc based on a conversation with a friend who said she was doing hers. She said I should do mine and I figured “hey why not?”. Again my choice was based on the suggestion of another and very little thought.

My experience with tertiary education was very mixed. At Massey I had encountered a feeling of being nothing but a number and lecturers that didn’t care. I hated feeling insignificant. At Waikato I had some great and some not so great
teachers. I saw a lot of double standards; do as I say not as I do. The best teachers were those that modelled their behaviours and worked with the students, not just talk at them.

At the start of my Masters I began working as a demonstrator for two biology papers, the next semester I was involved in four papers. I had found something I really enjoyed and towards the end of my first year of my MSc I applied to get in to teaching. I decided not to go down that path, preferring to finish my MSc instead and I continued to demonstrate across a wide range of papers and levels. What I enjoyed about demonstrating was I was able to learn things myself, I enjoyed the social aspect of it (and viewed it as a break from study without taking time off), as well as the actual teaching. When Liz Lafranchie who was the biology tutor at the time quit, she suggested I apply for the job, but I was still only partially through my MSc and knew I wouldn’t get the job at that stage.

At this stage I was naïve enough to think that if you knew enough about the topic you would be a good teacher. I can remember thinking that if only I had my PhD I would be qualified enough and know enough to work at the university. What strikes me as strange is that I also remember saying during undergrad that just because someone was a professor it doesn’t mean they could teach. It seems as though I had forgotten my undergraduate experience and had bought in to the idea that a lot of knowledge makes a good teacher.

At the end of my MSc I had decided to work with Alison Campbell on my PhD, with a strong education slant. I was also writing for a science education website funded by Ministry of Research, Science and Technology. I loved being able to combine science and learning, and
when the position for biology tutor came up I was quick to ask Alison if she thought I would be eligible (they were looking for someone with a PhD). It was this culmination of events, fortuitous timing of someone resigning and my not having actually started my PhD that lead me to think it was all about right place right time. But in actuality it was because I had found my niche, my passion in teaching and biology and I was the right person to bring that passion into the classroom.

Over the years my teaching philosophies and ideals have changed. I entered teaching almost with an “inherited style”, thinking that because this is the way I was taught this is how I should do it – a view that seems very prevalent (Alters & Nelson, 2002). My experience as a learner and being a demonstrator across multiple papers (and faculties) meant I had been exposed to many different teaching styles and while not realising it at the time I had been mentally judging the way people taught. On stepping into the classroom these inherited styles were prevalent, I used what I had thought was good practice and tried to avoid what I had viewed as poor teaching. I was extremely lucky that one of the people I had observed, and now teach with was Alison Campbell. Not only is she a trained teacher, she has an obvious passion for teaching and cares about her students. I suspect if I had been working closely with someone else, I might have ended down a different path and perhaps not care about teaching in the same way.

At the same time, even though having the support of an excellent mentor, it was and still is difficult to change teaching ideals. While my philosophies have changed there is still a great deal of constraint working within the boundaries of both the department and university. For example our style of assessments tends to be quite rigid and resits are frowned upon. But I believe resits offer students a chance to use a test as formative
assessment and show that they have learned from mistakes. Having rigidity is not necessarily a bad thing because it does create a consistency within the department. But comparing my original style of teaching to now I can see that overtime I’ve changed the way I teach. I put this down to talking with and observing colleagues, reading both professional literature and online forums, PD courses and perhaps most importantly feedback and experience with students.

At the moment in short my belief is that if I treat my students as junior associates starting their careers with me to assist them, as opposed to student/teacher I develop a better relationship with them. The teacher/student relationship seems an unequal one, there is too much power on one side to form genuine relationships and encourage a relaxed atmosphere to stimulate learning (see the teaching beliefs booklet- would you say the apprentice model is closest to your current position?)

In my career portfolio I outline my teaching philosophy and say it is always evolving. At this point in time my teaching beliefs keep coming back to questions as opposed to statements.

1. Are we supposed to be creating good learners or ‘good’ students?

To me a good learner is someone that wants to learn, they’re not just cramming for a test or trying to pass a paper. Good students can get good grades, yet in a year’s time have little recollection of the content they supposedly learner because they are strategic in their approach to get the highest grades (without understanding what they are actually taught). This is not the fault of the student, how we assess plays a crucial role here. Sometimes I feel the university system is too focussed on the end result of the grade, that students miss the learning experience. This is
really strong area of interest for me, it’s a theme I come back to time and again and later in my portfolio address this further.

2. How can I motivate my students in a way that they will not only learn the content required, but have a passion for biology and learning even after they graduate? This question flows on from the first; I don’t want to see students going through their degrees with the end goal of just getting that piece of paper in order to get a job. I’d like to believe we can make lifelong learners and really hope that after graduating students retain an interest in science.

**Implications of My Journey**

In this section I will attempt to unpack and examine the teaching and learning beliefs that my journey illustrates. This section is a mixture of personal opinions and research - informed observations and is mostly focussed on my experience in the biology department at Waikato University.

*Unpacking my beliefs - the influence of beliefs and norms in tertiary science teaching*

Traditionally teaching has not been highly valued by tertiary science educators. On the whole science lecturers view teaching as something they “have” to do, it is of less value than research and in many cases they do not like to think of themselves as teachers, preferring to focus instead on being members of their discipline who sometimes teach (Becher & Towler, 2001). This creates a very teacher centred learning experience, where students are almost passive in the process (Kember & Gow, 1994). In addition, the view within the academic sphere is that those that know a lot, the experts of the field should therefore be the best teachers (Kember & Gow, 1994). Yet research examining this
association does not support that a good researcher makes a good teacher (Brew & Boud, 1995; Hattie & Marsh, 1996). Indeed a meta-analysis of more than 50 research articles examining research and teaching showed there was zero relationship (particularly in science), good researchers do not make good teachers (Hattie & Marsh, 1996). This could be caused by trade-offs, time allocation means teaching is taking time away from research and visa-versa (Fox 1992 cited in Hattie & Marsh, 1996). What this is showing is that it is evident that researchers can be good teachers and they can inter-twine, but in general with the current systems we have in place (e.g. funding, time allocations) this is a difficult process. I experienced this as a student, lecturers who clearly knew a lot but were not necessarily good at communicating their knowledge on the level required by the learner. As a new teacher I felt knowledge equalled superiority, I had picked up on the culture of the university and believed that as a new teacher with only my MSc I could not be a good teacher.

It is interesting to note that authors such as Boyer (1990, cited in Trigwell, Martin, Benjamin & Prosser, 2000) argue for setting aside the tension of research versus teaching. In my experience this is rarely something that occurs, the focus appears to be one or the other. Academics that research on their own teaching often encounter an attitude that this education research is not as valuable as their actual discipline (e.g. biology) research (Brew & Boud, 1995).

I don’t agree with the view that teaching is just the transmission of knowledge yet even now I find it hard to break away from the traditional thinking of certain modes of teaching/learning in certain situations. Until recently I held on to the idea that labs, lectures and tutorials all having different teaching styles. Again this comes from an inherited norm,
it was something that was emphasised to me as a student (e.g. being told “lectures aren’t for questions, that is in tutorials”). These conceptions of learning modes are that lectures are for the “traditional” talking at the student-audience while they listen and take notes. Labs are for hands on learning, and tutorials for a more interactive informal teaching approach. Even when observing first hand that this no longer has to hold true (such as flip teaching) the notion of different modes of teaching is such an ingrained norm I find it hard to shift away from this thinking. When I hear of teachers using twitter (see Junco, Heiberger & Loken, 2011; Skiba, 2008) I fall in to the same trapped thinking of my colleagues of thinking “well that just won’t work for science”.

My experience as both a learner and educator is that classes that are interactive are more effective. When students are able to interact with their peers, work on problems and have the ability to test their own understanding (instant feedback) they will engage more. As a student I would love to have had the opportunity to use clickers and the like to participate in classes. With retraining I know I can make my brain start thinking “this will work for science”, the evidence is there in Deslauriers, Schelew and Wieman’s (2011) study on improving student learning in physics. To take a large class and make it interactive using what was really quite a simple model is refreshing (particularly as the major argument against interaction appears to be class size). Not only was there an increase in test scores compared to the control group, there was a higher level of attendance and students stated they felt they would have learned more if the whole course had been taught that way showing they enjoyed it and saw the value in this teaching style (Deslauriers, Schelew & Wieman, 2011).
How should we prepare new educators for tertiary level teaching?

My path to teaching was a very experiential journey, it was never a goal to enter into an academic career. I was lucky that I had a supportive mentor, others are not so lucky. There is a lack of support for new teachers as well as a stigma attached to seeking help.

Based on my own experience I believe that in an ideal world, every new teacher (and existing teacher for those that wanted the help, or were identified as needing help) would be paired up with a teaching mentor, someone that they could meet with on a regular basis to discuss their teaching (Ingersoll & Strong, 2011). In this way new educators can go through an induction period, learning from someone with greater experience (assuming they were well versed with educational pedagogies which should be the case for a teaching mentor) on topics such as classroom management, assessment design, student engagement etc. All of these things are skills that primary or secondary teachers are taught through formal academic qualifications, yet at the tertiary level our teachers are essentially thrown in the deep end. Coming back to the idea that if you know a lot about your topic you can teach it, at the tertiary level new educators might not have to worry about content, but they still need to learn teaching skills and what it means to be a teacher. This relates to knowing who you are as a teacher (authenticity which I discuss later) and requires regular reflection and it should involve research on your teaching. For this you need to know what questions to ask of yourself and your students, and the desire to improve. On the job learning is how most tertiary educators gain their skills and lack pedagogical understandings and so little of this questioning occurs.

As I spent a few years as a demonstrator prior to starting in my role as a tutor, I was exposed to good and bad teaching. I was able to ease in to a teaching role, starting with
just a few hours a week and little responsibility and building up slowly. I recognise that this is not normally an option, but a reduced working load should be the starting point for new teachers and is not uncommon in some induction programs (Ingersoll & Strong, 2011).

Why do we expect our primary and secondary school teachers to have a teaching qualification but not tertiary? Beyond a mentor program all new teachers should be exposed to the scholarship of teaching (Trigwell, et al., 2000) if not be expected to undertake a formal qualification. A familiarity with education literature can lead educators to make informed changes to the way they teach, they can research on their teaching and truly be able to gauge if changes they make have an effect (Trigwell, et al., 2000). Without this research our teaching norms remain the same, we will continue to hold on to our assumptions and inherited styles.

For me I enjoyed teaching but quickly realised that to be a good teacher I needed more than just knowledge and enthusiasm. Even with a mentor I still needed that exposure to education literature but it is not something that you can just jump in to. Attending professional development courses allows for “dipping in the toes”. At the bare minimum all educators should be attending professional development courses. Regularly professional development courses is essential, be exposed to new teaching ideas and research should be a fundamental aspect of any educator. Staying abreast of teaching literature is beyond the scope of most non-education academics, so it makes sense that for the rest of us that attending professional development courses sessions facilitating by experts is the most effective mode of updating our teaching practices.
New educators should also remember and hold on to their own experiences as a student. Every student is different, but their experiences are often similar. We all seem to have had that teacher that inspired, or put us off a topic. We all struggled somewhere along the way and experienced a light bulb moment. Being able to use your own learning experiences when helping students, showing that you struggled as well, builds a relationship with your students.

Who are the students?
Looking at the student body, it the degree of variation in our students is apparent. Yet at times it feels that the university has not moved on from the view of a typical student and does not allow for the flexibility needed. The old ideal that students came to university thirsty for knowledge and able to dedicate a number of years of their lives to study does not hold true.

According to the United States National Centre for Education Statistics (n.d.), a “non-traditional” student is someone who:

1. Delays enrolment (not entering university straight from high school)
2. Studies part time
3. Works full time (35 hours or more)
4. Does not live on campus
5. Has dependents
6. Did not complete high school (or does not have the highest qualification)

Others go further and list sex, ethnicity and marital status as defining features on non-traditional students (Allen, 1993).
We are seeing an increasing number of students that fall in to this category (I myself was one of them), yet statistically they are over represented in attrition rates for completing their degrees (Allen, 1993; Bean & Metzer, 1985).

As educators we sometimes hold the preconception of what a student is - the role they should fulfil. In that ideal world every student in my classroom would arrive having read the background texts and be ready to engage with the topic. The reality though is that many of our students (particularly at first year) don’t slide in to this niche. Non-traditional students have greater pressures on them (such as children and work) that can take time away from their studies even if the students are focused (Allen, 1993). For many students they are unsure of what they want to study (these students also more likely to drop out [Bean & Metzer, 1985]) or they are taking courses because they are compulsory for their degree. Again I fell in to both of those categories, I “bounced” around in my learning journey before ending up where I am now, and many times thought about dropping out because while I enjoyed learning some papers did not hold my attention because they were the gap fillers.

As educators we need to find ways to grab the attention of students when they enter the classroom. Not every student is there because they are enthusiastic about the topic, or there may be other issues in their lives that seem more pressing than learning. Student engagement is a complex issue, what motivates one student will have little effect on another. In addition the pressures of life can mean what motivates a student one day can have little effect on another day. Motivation can come through the desire to learn, the desire for good grades, the outcome of a degree (remuneration) (Levy & Campbell, 2008), competitive natures (I have one student who admits he is only here to prove to his sister he is smart). When the motivation is extrinsic, probing to find where the motivation lies can help, but what I would like to see is an intrinsic desire to learn. I’d like to see in my students
not just the desire to learn, but to be working on being a lifelong learner. Levy and Campbell (2008) list a number of attributes that designate someone as a lifelong learner, the ones I want to see in my first years is the beginning of the ability to assess their own learning and being able to make connections between topics when taught in different contexts so that they can see the bigger picture. Often science is taught in a compartmentalised fashion; students will have a paper in biology, chemistry and physics, but fail to see how the three subjects are completely entwined.

Of everything I’ve learned in researching for my portfolios, what intrigues me most is student engagement. I always felt that intrinsic motivation) was a better driver, so I find it validating to learn that indeed students with an intrinsic driver achieve better grades, retain the learnt information for longer and are more likely to stick with a task (Levy & Campbell, 2008). But of course it is never this simple. For most students the drive is a mixture of both. The challenge is to identify where on the spectrum a student is coming from and finding ways to reach them. If they are focussed on the end goal of a job, then finding that ambition and showing them how what they are learning now is directly relevant to employment is a way to increase their engagement.

Complementing the idea of intrinsic and extrinsic motivation for learning, is the fact that the learning process itself being made up of internal and external factors (Illeris, 2009). Figure 1 (from Illeris, 2009) shows how learning is multi-dimensional and therefore as teachers we need to be aware of all of these factors. Any one of these dimensions can have the greatest effect on a student at any one time, yet these influences can change.
Figure 1. The fundamental processes of learning (Illeris, 2009).
Admitting when you don’t know

While still completing my MSc, Alison asked me to teach a tutorial for her. This was a new experience for me; I had demonstrated in labs but never been at the front of the class. I revised what the class had been learning and I felt nervous but confident walking in to the tutorial. Unfortunately for me a student asked me a question unrelated to the current lectures and something I had not revised. Not wanting to lose face I said what I vaguely thought was true, and was relieved when another student confirmed what I said.

Confidence boosted I then went on to answer another question that I did not know the answer to but thought I might be correct. In explaining I ended up confusing myself and the students, and I could see on their faces that they knew I was lost. I thought admitting I did not know something would make the students have less respect for me, when in fact the honestly is far more important. Yet again I fell in to the trap that the teacher is the expert, the student is the novice, and knowing more makes me a better teacher.

Teaching is not a simple thing, it can’t be reduced down to technique or even the amount of knowledge a teacher has. For me there was fear in admitting I didn’t know something, similar to the fear my students experience. Students are afraid of answering questions in case they get it wrong, fearful of not understanding something taught to them or ultimately of failure in a course (Palmer, 1998). For students it is important for them to admit when they don’t know something, we tell them this time and again so that we can then help them. For the teacher though, admitting when you don’t know can be incredibly hard yet it is just as important. It also has the potential to be helpful and a positive experience as it can help in your own learning process.
Knowing who you are as a teacher (including your limitations) is vital to be an authentic teacher (Cranton & Carusetta, 2004; Palmer, 1998). You must be willing to admit when you make a mistake, this honestly maintains your credibility (Cranton & Carusetta, 2004; Palmer, 1998) even though as a teacher admission may feel like students will respect you less.

Learning over grades, or a marriage of both?

As someone that spent seven years in tertiary education I had the mind-set that good grades constituted a good learner and that someone that scored high on a test was better than someone that scored lower. When I first started teaching I would always write one particularly hard question in the tests - I remembered sitting tests and having questions such as “what was the scientific species name of the rat you dissected”, and I adopted this idea (asking for species names, names of equipment used or specific chemicals). I asked questions that were little to do with learning and was not important to the students experience in the lab or future studies. My reasoning had been that I had been through that system, and it was always just one mark. It showed me who the good students were, those that really studied.

I was also worried that if someone got 100% it would mean my test was too easy because so many academics had said there is no such thing as a perfect score. When marking assignments if a student was looking like they would get that perfect score I found myself looking harder to find spelling mistakes etc., just to ensure I never gave full marks. I’ve heard other lecturers make this same comment, I’m not sure where this idea comes from though. It speaks to the notion of power though, that the person doing the assessing holds power over the student (Johnson-Bailey & Cervero, 1998).
The comparison between then and now clearly shows my changing view of the power dynamics of the classroom. Educators easily fall into the trap of a hierarchical power role, with teachers being superior to students (Johnson-Bailey & Cervero, 1998). Students also have this view (Case, 2008). Ideally what we want though as educators to fulfil a facilitative role, particularly when we say university is about taking responsibility for your own learning and we are meant to be encouraging students to be more than passive learners. Even within the students’ group there exists power dynamics, where the actions of one (or more) students can impact the learning of others (Johnson-Bailey & Cervero, 1998).

It was a TDU session on assessment that made me realise that I wasn’t testing learning, just luck and recall. Assessments did not have to be a quagmire of trick questions and a rite of passage of being able to interpret the question as half the battle. The seminar opened me to different testing styles and learning objective.

I started using alignment in my teaching, I asked myself what did I really want my students to learn, what questions would I ask to reflect this learning (Biggs, 1999). I was starting to see that it wasn’t just about learning OR grades, but that with the right assessment and right teaching we can have students learning for life and getting high grades. It was this shift in my thinking that allowed me to change not just the style of questions I asked, to move beyond a surface level question to deeper understanding (Biggs, 1999) but also to change how I assessed. I started using learning outcomes for every class, explaining to students the purpose of the learning outcome. In addition I followed up this explanation after the assessment, showing students how the outcomes had matched up to the questions. By close alignment of intended learning outcomes with assessment students are
able to start a class with a clear goal, and have the ability to self-assess and identify if they have truly learned what I had intended (Biggs, n.d.).

Instead of large tests that required cramming and had a large grade component the assessment was changed to a small short test every week that directly reinforced what the students had been learning, each worth just a small amount. In addition I made it the top 10 out of 12 tests would count because I recognised there were times when external influences played an impact (things that students would not seek med certs for), and everyone had strengths and weaknesses. By excluding some tests, students that excelled in most things but perhaps struggled with dissections ended up with a fairer grade. I asked for feedback from the students in course appraisals and students were overwhelmingly in favour of this method. They recognised that it was for direct reinforcement (they did not have to revise something they had done in the lab weeks before), they liked that it was less pressure because each test was only 2%, and knowing that two tests would be ignored boosted their confidence.

I came to value learning as the success, not the end grade. A perfect example of this is student I taught in B semester 2012. He was new to biology and a mature student. He struggled with his essay and did not seek help and his end grade was a C. I spoke to him about it, I sat down and went through it with him asking him if he understood why he had not done as well as he had expected and in the end he agreed completely with his grade. In A semester 2013 he saw me before the essay was due, he told me he had his previous essay out while he was writing and kept referring to my notes and the end result for him was a B. He was over the moon and so was I and not just because of his improved grade. I
was happy because he had learned to ask for help, he had learned from his previous experience and my feedback, and I was happy because he was happy.

The importance of human connection

Teaching at first year is different to teaching at higher levels and poses distinctive challenges. First year students by and large are new to the university, many are away from home and family. I never fully appreciated this until last year when compiling my portfolio for the teaching excellence award. A student wrote a letter in which she says:

First year was very hard for me, moving away from home to a big university where I did not know anyone and I did not know how university worked. Many of my other tutors were quite intimidating and made me feel very overwhelmed by everything I had to do in my classes. Most of the time I did not understand what to do in laboratories and was too shy to ask tutors or other students... Brydget came into the lab happy and bubbly, encouraging us to come up to her if we have any questions at all, even if they were not biology related. None of my other tutors had said this to the students, and although it seems like a small gesture, it meant so much to me and I felt that I had someone I could talk to if I ever needed to. I felt like I belonged somewhere.

I has always maintained that it was important to get to know the students, learning their names, their programs of study and if possible a little about their non-university life. For me it was because I did not like the feeling of “just a number” that I had experienced as a
learner but I had not recognised the emotional impact that my belief had. Reading the letter gave me a sudden insight into just how important it was and it also brought tears to my eyes.

Students regularly report the importance of pastoral care (Wilcox, Winn & Fyvie-Gauld, 2005). Being able to allay students’ fears and explain that what they are worrying about other students are feeling is important for putting them at ease. For first year students transitioning from school, it is not just the adjusting to academic environment but also being away from home. Wilcox, Winn and Fyvie-Gauld (2005) show that these students need help dealing with “emotional shock” of the transition. Furthermore pastoral care has been linked to higher retention rates and greater levels of engagement (Crosling, Heagney & Thomas, 2009).

When students report that their favoured mode of seeking support comes through dealing with tutors and their peers (Walsh, Larsen & Parry, 2009), it clearly illustrates the need to good student guidance and relationship building. It is unsurprising then that a lack of guidance can result in alienation. When students have this disconnect with their studies they are more likely to drop out (Case, 2008). Therefore it is essential that students are helped both socially and academically to develop a sense of belonging (Case, 2008).

Student Mentor Programs

While attending a TDU seminar on teaching for diversity I was paired up with someone who spoke very little English making communication difficult. It reminded me of my experience in Japan of sitting in class and understanding very little of what was said and the feeling of
isolation that accompanied it. After that session I thought about how many of my students were international.

International students can face more challenges than domestic students, not only can language be a barrier but making friends and missing home all have an emotional impact. It is hard to identify what makes a good teacher for international students because they have diverse needs (Arenas, 2009). They too can suffer from alienation, feeling like they don’t belong (Case, 2008). It is not always easy for these students to assimilate themselves into their new culture.

I decided to trial a student mentor program, where domestic and international students were paired together. Such mentoring programs are not new, but evidence suggests there are benefits to all involved (Leask, 2009). Domestic students volunteered their time, they were assigned an international student and after an initial mentoring session with me the domestic students then made contact with their mentee. I had thought that not only would this help international student with their studies and making connections but that it would give our domestic students responsibility and a social volunteering role. Importantly it also gave students the experience of interacting inter-culturally, something that will be important in their future (Leask, 2009).

Based on an initial success I decided to expand the scheme, where students that had mentored international students in their first year were asked if they would like to be senior student mentors for first year students. I had two mentors for each lab stream, hoping that first year students would talk to the senior students for advice about university, papers, as well as information. This aspect of the mentoring program failed to fly, feedback
from the mentors was even though they regularly come in to the lab to talk to the students, there was little to no engagement and students weren’t seeking them out/asking questions. In addition the international mentor program has proven unsuccessful this year due to the length of time it takes for international students to be identified. By the time I am able to create the mentor/mentee relationship we are in our fourth week meaning by then most international students have found their feet.

I haven’t completely given up on the idea of a mentor program, I see it as something that could have a very positive effect (particularly senior to first year students) but it is something that I need to relook at and decide how to better structure it. The idea of having the “near-peers” (experienced and successful undergraduates) interacting with new students, sharing their experiences has been shown repeatedly to have a positive effect in student learning (Minor, 2007; Whitman, 1998).
Feedback and evaluation

Formal feedback on my teaching

Like most academics I use course appraisals as an indicator as to how I am going as a teacher. I’ve been fairly successful at scoring a “1” for teaching effectiveness, but in all honesty I don’t care that much about the numbers. I’m aware that so many things come in to play when students are filling out course appraisals, in particular personalities. Students that I am friendly with would likely score me a “1” even if I was doing a poor job. What the teaching appraisal gives me is a snap shot of the overall trend.

Therefore for me the most important part of the course appraisal process (aside from letting the students feel like they are able to give us feedback) is the comments that students write. In my most recent round of course appraisals (BIOL102A 2013) the only comments on “things this teacher should change” were all things out of my control (such as the timing of Easter resulting in reduced lab streams running). In general my “things to maintain” comments are usually the same from year to year, they act as my yardstick in this way. The comments that come through the most are that I’m enthusiastic, friendly, and able to communicate difficult concepts simply. If I ever see a drop off in those comments, I will know that my game is slipping.

With course appraisals occurring at the end of the semester students often don’t see how their feedback impacts on a course. I attempt to redress this in two ways. I speak to the feedback given by writing up a response document that I post on the moodle page for that course (and send out a participant message to notify students of my response). I also post the same document on the moodle page for the next iteration of the course, allowing the new students to see how I have responded to feedback from previous years.
Informal feedback

At the end of every lab there is a sheet of paper that students must hand in (as part of an attendance record). On this piece of paper is a “feedback box”, a space for students to write comments to me on what they might have liked, be confused on, or thought was boring in the lab. I use this to help develop my teaching and work on the lab book for students (often the comments are about how I could make an instruction clearer on a new experiment). The students appreciate being able to give this feedback particularly when I can explain to them how I have acted upon it. While it does not usually help that student, I make a point of addressing all feedback the following week and explaining what has been changed as needed. Because I thought some students would not use this because the form had their name on it they are also told (three times a semester) that they can post feedback on moodle anonymously. So far no one has taken up this option. I think it is because they feel comfortable enough to tell me either verbally or on the feedback box when things are working well, and what they do not like.

The most important feedback comes through conversations and interactions with students. For example when third year students that I no longer teach still drop by my office, they may not be telling me I was a good teacher, but I know that I must have reached my goal of developing a personal relationship with them.

One of the best pieces of feedback I have had this year came after a tutorial session with my mature students. I had covered a particularly difficult concept (the same topic identified year after year by students as the hardest thing to understand). After the tutorial a student said “you just covered four hours of lectures in 40min, yet I understand so much more now. You have a way of making it not scary and now I don’t feel dumb... you should become a
lecturer”. What excites me about these kinds of comments is not only have students understood something, but they clearly appreciate what I have done (the same student dropped by again to thank me for the tutorial and to say they were feeling so much better about biology now).

Feedback to students

There are three main ways I give feedback to students, written on graded pieces of assessment, in person and in emails. On weekly tests as well as the student’s mark, I correct important mistakes (such as showing them how to lay out and work through a mathematical problem) or write comments to make them think. When students do better than normal I write comments of encouragement, if they have a less than normal grade I remind them of my marking policy (10 out of 12 tests counting) and encourage them to come and see me if they need help. Every three weeks they are given a running total of their lab marks and a comment on how they’re doing. Other marked work is dealt with in the same way with comments on ways to improve when it comes to scientific writing etc. I try to make it clear to students that just because I write on their essay, it does not mean they have been marked down, I’m just trying to show them how to improve – supporting them through formative assessment. I know students appreciate this as shown by my earlier discussion on the mature student and his increased essay grade between semesters.

Because I try to develop a relationship with all my students I feel confident in giving verbal feedback. I know how they are all doing and can identify when they are struggling. In this way I can give feedback that they can respond to, through conversation we are able to get to the heart a lot quicker than written feedback allows.
Evaluating my teaching

The easiest way to evaluate my teaching is of course to look at pass rates and grades. Because I have weekly tests I also had the ability to look at the grades from year to year for any particular lab, meaning any change in teaching I make I can use this quantitative data to assess if it was a success. This was particularly helpful when evaluating if the Who Dunnit exercise had a positive test result. It is important to reflect on how a test goes, its allowed me at times to realise that I have tested students on something I had not fairly taught them and means I can keep checking to see if my learning objectives and testing are in line.

Before I made the changes with the Who Dunnit I had never thought much about evaluating my teaching in specific measurable ways. Now though I realise how critical it is to be recording and testing teaching changes. We can only truly improve our teaching if we approach it in a methodical manner (Richards, 1990). Much of our teaching is based on intuition; we read the class and make assumptions. But this leaves us open to incorrect impressions and so teaching reflectively is critical (Richards, 1990).
Reflection and development

When I first thought about making changes to BIOL101 with the *Whodunnit* I started keeping a journal with ideas on how I could make changes. As I implemented these changes I started making notes on how these changes worked (or didn’t work), and students’ comments and eventually it became a teaching journal. It was a place to document and reflect my teaching, how it made me feel and ideas I’d like to try.

On starting my PGCert I decided to try my hand at blogging. My reflective journal has been incorporated into a blog, a mixture of reflection, comments of papers I’ve read and general day to day teaching comments. At this stage I’m not blogging to an audience, it is more about exploring a different medium. Blogging can be time consuming if you become part of a community, but it can be an efficient means of communicating to a wider audience and allows for debate. I am using my blog as a learning space, this has been identified as an effective tool both for self learning and collaboration (Williams & Jacobs, 2004).

In addition to recording reflections I find talking about teaching practices and things I’ve tried a great way to reflect. Conversations with other academics both within and external to my faculty give me new ideas, help me digest some of my own teaching and encourage me to trial new things.
**Future goals and aspirations**

I’m not really sure what my future goals are at this stage, other than to complete my PGCert. Professionally I have starting thinking that it might be time to do my PhD (with my children reaching school age I will have a bit more free time and can undertake it part time). This possibility leads to me wonder how far down the academic path I want to go? I have always said I didn’t want to lecture because lecturers don’t get the same level of interaction I do with my students, and I really enjoy the practical side of lab teaching – I get to see so many of those “eureka” moments for students that lecturing you miss. But now I can see that I can move past that and with development I could teach in interactive ways. I had always envisioned my future at Waikato, certainly I cannot see myself leaving the tertiary environment.

One of my problems in thinking about a PhD is I’m not even sure in what area I want to pursue further study. I need to decide if I will follow a science education path or a more pure biology focussed study.

In contemplating my next paper for my PGCert I have been thinking about what I would like to trial in terms of learning and assessment initiatives. I would love to trial interview style assessment. So often a student says they don’t know the answer, but with careful probing it turns out they know than they realise and it often while they are speaking that I see them make connections. I recognise that I would need a lot of help in developing interviewing skills myself in order to make this a successful and valid form of assessment, but I think for some students this would be a fairer test of their knowledge.
Conclusion and acknowledgements

This portfolio has been a changing experience. I’ve learned so much about myself as a teacher, from challenging beliefs that I’ve held to engagement with the education literature. I believe that I will continue to evolve as a teacher, it amazes me that even just in the space of a semester my teaching has been transformed.

I am grateful that I have had the guidance of Dorothy Spiller in this process and would like to acknowledge her astounding work. Thank you Dorothy, for your supervision, suggestions and infectious enthusiasm. I am also grateful to Alison Campbell for believing in me as a teaching and encouraging me over the years. I am lucky to count her as a mentor and friend.
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