For the effective design and implementation of pedagogies that foster learner 'connectedness'
in a pre-service teacher education course.

Summary and context of contribution

The most formative moment in my early lecturing career was a motivating failure. For a brief but powerful moment in Semester II, 2007, about 90 minutes into a philosophy of religion lecture, I became debilitatingly aware of the disconnection between theory and praxis in my lecturing. I felt much like the teacher in Colin Thiele's (1950) poem, 'Bird in the Classroom': '*The students drowsed and drowned in the Teacher's ponderous monotone - limp bodies loping in the wordy heat'*. The moment was formative enough to prompt serious reflection and a systematic attempt to incorporate 'pedagogies for connectedness' into my teaching. The sustained success of these pedagogies is the basis for this application.

What is *connectedness*? As recognised in Education Queensland's 'Productive Pedagogies' (2004), connectedness describes 'the extent to which the lesson has value and meaning beyond the instructional context, making a connection to the larger social context within which students live' (¶, 2). Connectedness recognises that what 'students crave is the opportunity to take education beyond the four walls as it appears in its usual format' (Papadopoulos in Zyngier, 2006, p.2). The need for pedagogies that connect with students' life experiences is increasingly recognised by researchers in education (e.g. Lingard, 2001; Osterman, 2000; and Rogoff, 1991). The rationale for pedagogies of connectedness is simple - effective learning 'needs to engage with student subjectivities and to connect with the world' (Culican, Emmitt, & Oakley 2001, p.88).

For the past three years, I have developed and implemented pedagogies for connectedness in the School of Education at the Cairns regional campus of James Cook University (JCU). Situated in Far North Queensland, the university is characterised by a relatively high percentage of mature-aged students and online students from rural and remote communities. The university has a distinct focus on social sustainability. The six pedagogies that I have developed (Table 1) are grounded in an assumption that pedagogies that 'connect' student learning, are pedagogies that sustain student learning.

Criterion 1: Approaches to learning and teaching that influence, motivate and inspire students to learn

Pedagogies of connectedness 'influence, motivate, and inspire students to learn' by connecting theory to praxis in light of students' life experiences and social contexts. This section provides (a) a description of each pedagogy, (b) an example of its application, and (c) evidence of its sustained effectiveness based on outstanding overall subject and teaching ratings from university-wide assessments (Student Feedback on Subject [SFS] and Student Feedback on Teaching [SFT]).

Table 1. Overview of subject integration of 'pedagogies for connectedness' (PFC) and overall subject ratings.

Pedagogy for Connectedness	Subject Title [Average enrolment]	Use of Pedagogy	SFS*	SFT**
1. Auto-reflective Vodcasts	Foundations of Educational Psychology (Internal) [120]	1, 2, 3, 4, 5, 6	4.7	4.6
2. Auto-reflective Assessment	Foundations of Educational Psychology (Online) [110]	1, 2, 3, 5	4.8	4.6
3. First Year Literacy Initiative (FYLI)	Teaching for Learning II (ECE) [20]	2, 4, 5, 6	5***	4.9
4. Game-Based Lectures (GBLs)	Teaching for Learning II (Primary and Secondary) [20]	2, 4, 5, 6	4.6	4.9
5. Brain-Based Teaching (BBT)	Classroom Management [35]	2, 5, 6	5	4.6
6. Scenario-Based Inquiry (SBI)	Foundations of Education [30]	1, 2, 3, 4, 5, 6	N/A	5

* Based on SFS Item 18: *Overall rating of subject*. Scale (1 Completely Unacceptable to 5 Outstanding) (JCU Average =3.9)
** Based on SFT Item 16: *Overall rating of teaching*. Scale (1 = Completely Unacceptable to 5 = Outstanding).
*** This subject was awarded the number-one university-wide ranking for all subjects in Semester 1, 2009.

(i) Auto-reflective Vodcasts are video overviews of lecture content that motivate learning by (i) connecting 'textbook theory' to a local context, (ii) humanising the lecturer and students, and (iii) fostering community between internal and online student cohorts. I used green-screen technology and video-editing software to prepare 20 vodcasts for online students in *Foundations of Educational Psychology*. Online students in JCU's Early Childhood Education degree often study in rural and remote locations. They commonly feel isolated from a learning community. I used images of the JCU campus, references to the internal students' experiences, references to students' online postings, and anecdotes from my own life experience, to foster a sense of community and learning connectedness. For example, I filmed one vodcast for a lecture on 'identity development' from a creek I used to swim in as a young boy, in order to reflect on the developmental relationship between identity and physical environment. I filmed a different vodcast for a lecture on behaviourism with my two dogs (a Golden Retriever and Border Collie) as an introduction to Pavlov's classical conditioning theory and Skinner's operant conditioning theory. I filmed another vodcast from an Indigenous Djabugay initiation site, in order to reflect on psychosocial development and rites of passage in different cultural contexts. Furthermore, I created two auto-reflective vodcasts with student participants for use in *Foundations of Educational Psychology* and *Foundations of Education*. One vodcast involved a mother of a child affected by Autism Spectrum Disorder (ASD) reflecting on her son's life and the challenges and opportunities it provides for pre-service teachers. In an unsolicited email, the student wrote:

> Thank you for your delivery of my materials in a sensitive, thoughtful and considerate method. I appreciate your time and effort … and how important you felt my contribution was. Thank you! (the edited version was very well done …) I just wanted to say thank you for your sensitivity in this matter, and for involving me.

In light of Criterion 1, the pedagogy involved the student as an individual, respected her experience, and communicated it to the broader group in order to motivate and influence their learning.

Student feedback on the use of auto-reflective vodcasts evidences how it inspires learning through connectedness:

- I'm really enjoying the way you are presenting our subject material and have found the Introductory videos and PPT presentations very motivating…thanks again for making this subject interesting and engaging! (Unsolicited email)
- Raoul was an amazingly motivating, interesting, and inspirational teacher. As an online student I found his particular choice of teaching aides (e.g. you-tube, powerpoints, videos) very motivational. (SFT)
- Raoul Adam is one of the best lecturers I have ever encountered. He made excellent use of blackboard and regularly posted responses to our questions, managing to make us far-flung students feel like we were part of a real class. (SFT)
- Studying externally I liked how Raol made weekly videos so we could understand the start of the topic that week and actually see who our lecturer was. Other videos and materials throughout the subject made it interesting and exciting. (SFT)

Collectively, such comments demonstrate the effectiveness of pedagogies of connectedness for motivating online students.

(ii) Auto-reflective Assessment inspires students to engage and 'connect' with complex theory in light of their own life-experiences. It is designed on the principle that deep subjective reflection can improve objective analysis. For example, I wrote two booklets of 10 'Reflective Tasks' for *Foundations of Educational Psychology* and *Teaching for Learning II*. One task required students to reflect critically on Robert Selman's *Theory of Interpersonal Relations* in light of a formative life experience. Another task required students to reflect autobiographically on Erik Erikson's *Psychosocial Stages* and James Marcia's *Identity Statuses*. Tutorial discussions of these reflections inspired fruitful and powerful analyses of theory. As students connect theory to life experience, they begin to reflect more critically on theory itself. For example, I wrote an auto-reflective assessment for *Foundations of Education*, involving four focus-group sessions and five reflective tasks, to motivate students to connect autobiographically with theory in the philosophy of education. This task inspired students to connect their own life experiences to philosophies of education in order to reflectively construct an individual identity as a teacher.

Student feedback in subjects integrating auto-reflective assessment evidences the effectiveness of embedding connectedness into some assessments to motivate and inspire student learning:

- I don't think there was one occasion that I was confused about any assessment and what was expected of me. His ability to relate each subject task to real life experiences was of great benefit and increased my understanding immensely. (SFT)
- I'd like to thank you for your ability to help us solve our problems by making us think deeply rather than answering simply; for giving us the courage to face challenges … & teaching us to accept them as what they are: learning experiences, not life-threatening hurdles. (Unsolicited online comment)
- It's insightful to look back on one's life and reflect on one's own development as an individual socially and emotionally.
- It was definitely one subject that makes you think seriously about what it takes to develop the skills of good judgment in all aspects of our lives and for teaching it will be important. (Unsolicited online comment)

Such comments also provide evidence that auto-reflective assessment motivates deep learning.

(iii) The **First Year Literacy Initiative (FYLI)** is a unique attempt to 'bring literacy to life' by connecting literacy theory and concepts to local and individual contexts. I began the FYLI in response to the call from the Queensland Government commissioned Masters' Report (2009) for more explicit teacher training in literacy. In 2009, I initiated and led a team of first year lecturers and support staff to develop an action research project involving: (i) a 34-page *Literacy Survival Guide* (Adam, 2009) containing 11 literacy modules infused with local anecdotes and advice from previous students at JCU; (ii) two diagnostic literacy tests integrating questions about students' life experiences with literacy learning; (iii) ten formative online literacy tests; (iv) a school-wide literacy assessment rubric to link 'at-risk' students with literacy support services and resources; (v) a series of focus groups to engage with students' anxieties about literacy learning and to provide individual support, and (vi) a literacy workbook that connects literacy to students' life-experiences and academic identity.

First year students have actively participated in FYLI support sessions and research, and students of all year levels have contacted me to receive the support materials. Many students offered comments on the FYLI's *Literacy Survival Guide*:

- Hi Raoul - much more is covered in the new study guide ... for example: the Glossary is more in depth (liked the way in which it was broken down into 3 sections); more in Grammar; more in References (which also covered Citations, Yah!!); included Critical Reasoning and Word Processing unlike the last Study Guide. Overall, bigger and better!! For me, referencing was my biggest "fear" and though I referred to the Guide, I still felt "lacking". This current guide has heaps more in it! Well done!! (Unsolicited email)
- I found this [literacy guide] quite helpful. Just wanted to say thanks for being such a supportive lecturer. (Unsolicited email)
- The literacy survival guide has been a great tool to help me with the process of writing my assignments. (Unsolicited written feedback)
- Hi Raoul. If only more lecturers were as caring as you. Your comments for this first assessment was (sic) more than I received during the whole of last semester. I would like to arrange a time to have a chat with you regarding my academic writing. (Unsolicited email)

The final comment refers to the unique FYLI assessment rubric which is one small part of an expanding literacy project that is motivating students to connect literacy to life beyond university.

(iv) Game-Based Lectures (GBLs) foster community and learner connectedness through multimedia gaming. I designed and integrated multimedia GBLs into *Foundations of Educational Psychology*, *Teaching for Learning II*, and

Foundations of Education. For example, in a *Rogaine* GBL, students work in small groups to follow cryptic clues to navigate around parts of the university significant to their candidature (e.g. Library Curriculum Collection, Teaching and Learning Centre, Computer Labs etc.). At each location students find a page number of their textbook which is linked to a crossword containing subject-specific concepts. The rogaine creates community while connecting students to the physical space of the university and to learning support resources. In the other GBLs student representatives compete in games including 'Quick Quiz', 'Pictionary', 'Celebrity Concept', 'Poetry Tennis' and 'Detective Dual' in order to review course theory and concepts, and to reduce exam anxiety. Each game is linked to a multimedia PowerPoint presentation. At the end of each round, students select from an interactive electronic board of 'famous faces' – a 'Who's Who' of theorists and celebrities. Each celebrity or theorist is linked to an amusing or inspiring video clip relevant to the subject content. As a 'pedagogy for connectedness' I have used GBLs successfully to reduce exam anxiety, foster learning communities, and inspire students to link subject content to the 'bigger picture' beyond the lecture theatre and textbook.

Student feedback in unsolicited emails after GBLs illustrates the motivational effects that pedagogies of connectedness have, even in larger subject cohorts:

- Hello Dr Adam, I would like to take this opportunity to thank you for the great lecture you gave on Tuesday. As I previously studied externally for the first semester I was pleasently (sic) surprised at the interaction that occured (sic) in your class. (Unsolicited email)
- Raoul you are a true diamond in the rough, if only every lecturer was as helpful and understanding as you are, it would make the whole University experience alot (sic) more enjoyable. You are an awesome lecturer and the effort you put into organising and explaining your subject is truely amazing … we have a lecturer who actually cares about our future and the future of the children that we will be teaching. In turn I hope to be of help to another person who is beginning their studies and finding Uni a bit daunting and overwhelming. You are definitely a lecturer that has made a difference in my life and I'm sure the lives of many others. (Unsolicited email)

Effectively designed GBLs inspire and motivate students by creating and connecting communities of learners.

(v) Brain-Based Teaching (BBT) encourages connectedness and motivates learning through the introduction of a new and novel level of analysis – basic neuropsychology. Following the 'Decade of the Brain' the OECD Report *Understanding the Brain: Towards a New Learning Science* (2002) noted the need, 'to discover what insights cognitive neuroscience might offer to education and educational policy' (p.9). In order to improve my own understanding and pedagogy I completed a Graduate Certificate in Cognitive Science (2005) and an eight-week Education Queensland Brain-Based Learning course (2008). I have cautiously but successfully introduced some basic neuropsychology and brain-based teaching into four subjects (*Foundations of Educational Psychology*, *Teaching for Learning II*, *Classroom Management* and *Foundations of Education*). For example, I have designed and implemented a lecture on the neurophysiology of myelinisation. During the subsequent tutorial, students critically reflected on the social and behavioural implications of myelinisation for understanding behaviours (e.g. adolescent risk-taking) that characterise different developmental phases. At the conclusion of the lecture, a parent approached me and remarked:

- I only wish I'd had that lecture before my children hit adolescence – it relates to so many things.

In a different subject, I integrated neuropsychological approaches to classroom management. One student wrote:

- Great block subject. Really enjoyed all the multimedia clips and the in-depth look at brain physiology. (SFS Comment)

BBT is effective because it 'relates to so many things'. It connects ideas to motivate and sustain lifelong learning.

(vi) Scenario-Based Inquiry (SBI) is my original adaptation of scenario-based learning (SBL), and a clear example of 'pedagogies for connectedness' that motivate learning by connecting theory to practice. It uses an inquiry method to help students connect theory to authentic contexts beyond the classroom. In 2008, I designed and developed a comprehensive SBI model and multimedia template. The model is the basis of a forthcoming chapter (Adam in Errington, Ed., 2010) in *Preparing Graduates for the Professions Using Scenario-based Learning*. I introduced the chapter as follows: 'This chapter describes the use of Scenario-Based Learning (SBL) to close the transitional gap between "top-down" university-based theories of behaviour management and the "bottom-up" realities of school practice' (p.1). The development and application of my SBI model was informed by Education Queensland's criteria for connectedness: 'We want to ensure that students engage with real, practical or hypothetical problems which connect to the world beyond the classroom' (2004, ¶1). I implemented the model in three subjects through a series of lectures and tutorials. For example, one phase of the model involved pre-service teachers in *Teaching for Learning II* generating scenarios from their school practicum experience and then role playing the use of Education Queensland's 28 behaviour support strategies.

Student feedback on subjects integrating scenario-based inquiry demonstrates its influence on authentic connected learning:

- ED4951 is an extremely practical subject in terms of its content being applicable to real life scenarios. (Email)
- … the lecturer did an outstanding job of structuring the course, encouraging and supporting learning, engaging and affirming students' input and providing practical skills and examples linked to theory that will be invaluable in my teaching career. Fantastic subject and lecturer. (SFT)
- [ED4951] needs to be compulsory!!! it is such a great subject and Raoul did a great job teaching the content! What a full on week it was but I have not stopped using the techniques he taught me at work or in my prac!!! (SFT)
- Time taken to explain, clarify, and relate the subject content into authentic contexts enabled much higher understanding of material and increased motivation to engage in subject – Fantastic teacher. (SFT)

Collectively, these comments support the effectiveness of the SBI model I developed to foster learner connectedness.

Recognition and sustained impact on student learning

I have successfully communicated my pedagogies for connectedness through (a) peer-reviewed publications[1] (Adam, 2009a; 2009b; 2010 forthcoming); (b) school, faculty, and interfaculty presentations and workshops (2009; 2010); (c) national conference presentations for the Australian Association of Researchers in Education (2008), and the Psychology and Spirituality Society (2008); (d) community professional workshops for the Cairns Professional Educators and Teachers Association (2009); and (e) JCU lecturer panels for the School of Education and the School of Psychology. For example, my presentation of the SBI project to local pre-service teacher supervisors generated much interest and was well received. My staff workshop on the design and creation of vodcasts inspired other lecturers with online courses to connect with their students in this way. The value and influence of the pedagogies for connectedness have also been recognised through the award of three competitive grants (Internal Research Award, Faculty Grant, and Research in Block Grant). Their value is also recognised in performance review statements by the Head of School, 'I have been very impressed by the enthusiasm, commitment, and professionalism being displayed by Raoul. His teaching is clearly exemplary'.

The First Year Literacy Initiative (FYLI) has received particular recognition and support within, and beyond, the university. Staff feedback acknowledged the importance and timeliness of the initiative. The Pro Vice Chancellor of JCU sent an unsolicited email in response to the initiative, "Hi Raoul, This is brilliant. You are brilliant. Thank you so much for taking the initiative. What you are doing is strategic and political and important and well targeted". Staff in core first year subjects actively supported the initiative by implementing 10 minute literacy slots in lectures to link literacy concepts to their own subject matter. Staff with subjects in other year levels and departments (Nursing) requested generic copies of the guide and rubric to use with their own students. Beyond the university, the FYLI has been used to initiate and establish literacy action-research links with a local high school in Smithfield. Furthermore, data from the FYLI will inform four peer-reviewed papers for a symposium at the Australian Teacher Educators Association (ATEA) conference in July, and the continuing dissemination of the program across, and beyond, schools and faculties at JCU.

Perhaps the best evidence for the sustained impact of my pedagogies for connectedness on student learning over a three year period is from my SFS (Student Feedback on Subject) and SFT (Student Feedback on Teaching) results (Table 2). *Teaching for Learning II* (Early Childhood) was awarded the university-wide number-one-ranking for all subjects in Semester I, 2009. *Teaching for Learning II* (Primary) was ranked within the top 25 subjects university-wide in the same semester, and *Foundations of Educational Psychology* continued to be ranked in the top 25 subjects university-wide in Semester II, 2009. I had been given two of these subjects to rewrite and lecture in light of their poor previous ratings. My results are exceptionally high across all subjects, small cohorts (n = 15), large cohorts (n = 140), internal cohorts and external cohorts. The results for large and online cohorts are outstanding given the traditionally lower scores for these forms of delivery.

Table 2. SFT and SFS Scores for criteria related to pedagogies for connectedness

Subject	Student Feedback on Subject (SFS)*				Student Feedback on Teaching (SFT)	
	1. Motivation	2. Interest	4. Engagement	14. Confidence	8. Motivation	9. Engagement
Teaching for Learning II (Early Childhood)	4.9	5	4.7	4.9	4.5	4.6
Teaching for Learning II (Primary)	4.5	4.7	4.4	4.3	4.5	4.6
Foundations of Educational Psychology (In)	4.6	4.8	4.5	4.4	4.2	4.3
Foundations of Educational Psychology (Ex)	4.7	4.9	4.7	4.5	4.4	4.4
Classroom Management	4.7	5	4.6	4.3	4.4	4.5
Foundations of Education	N/A	N/A	N/A	N/A	4.5	4.8

*SFT and SFS scale (1 = Completely Unacceptable to 5 = Outstanding).

Finally, I recognise that exemplary teachers must be co-learners and collaborators. Exemplary teachers understand that learning and leading by example are effective and honest ways to motivate and sustain students' learning:

- I've probably said it before, but I'll say it again: You are an excellent example of a motivating, successful teacher to all education students! Not only do you deliver the subject content in an interesting, comprehensive way, you also set a fantastic example of what we, as future teachers, should be looking to achieve. (Unsolicited email)
- The quality of Raoul's teaching was outstanding. I looked forward to lectures which were always related to real-life situations and engaging. He made it very easy to make connections between theory and practice and has motivated me in finishing as I am now very excited to teach. He has shown me the kind of teacher I wish to be. (SFT)

Pedagogies for connectedness are successful because they re-centre lived experience in the process of learning. This re-centring of lived experience need not de-centre the structures and institutions of learning. Rather, pedagogies for connectedness 'open a window' to learning *beyond* the classroom by inviting Thiele's bird *into* the classroom.

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[1] Adam, R.J. (2010, forthcoming). Schooling for hard knocks: Using Scenario-Based Learning (SBL) for behaviour management skills in pre-service teacher education. In E. Errington, (Ed.), *Preparing Graduates for the Professions Using Scenario-based Learning* (Ch. 7). Brisbane, Qld: Post Pressed Publishers.

Adam, R.J. (2008). Sociocognitive conflict and cultural diversification: Problems and strategies for teachers. *Australian Association for Researchers in Education.* Retrieved from http://www.aare.edu.au/08pap/ada08077.pdf