

Assoc. Prof. Kurt Seemann

Director, Centre for Design Innovation (CDI)

URL: cdiengage.com.au

Director of Research, School of Design

Faculty of Design, Swinburne University of Technology

Email: kseemann@swin.edu.au



Qualifications:

PhD UNSW

BSc/DipEd (Hons) (UNSW); 5 year FT degree with a triple major (Psychology and Social Organisation; Design and Industrial processes: ethno-technology; Secondary Teacher Qualification)

Grad Cert (Competent Management) Deakin,

Cert IV in Workplace Training and Assessment

ACM Accreditation (Australian Competent Manager) Australian Institute of Management

APPOINTMENTS:

- Director, Centre for Design Innovation (CDI) research, Swinburne University of Technology (2014+) that includes **Program Leader for:**
 - Future Self Aged Care Design Research (including ENoLL: Future Self: Design for Health)
 - Humanitarian Village Emergency Relief Design Research
 - Project Geldom (Condom 2.0)
 - Smart Cap and Gear – concussion reduction Design Research
- Swinburne University Technology Research Forum: Faculty of Design (July 2013+)
 - **Chairing** – Sub-Committee on eResearch Innovation Strategies T4-Drupal
- Member: Senior Ethics Committee - Swinburne University Human Research Ethics Committee (July 2013-2015): Expert in cross-cultural design, health hardware technology, and innovation education research.
- Chair, Graduate and Masters Degrees Review Committee, Faculty of Design, Swinburne University of Technology, Australia. (Jul13-Dec13)
- (6/8/2012 to date) Associate Professor: Design, Culture and Sustainability, Faculty of Design, Design Anthropology Program, Swinburne University of Technology, Melbourne.

Prior to Aug 2012 Commencement at Swinburne

- Registered Director on the Board of Jagun Aboriginal Aged Care and Wellbeing Services (to provide governance and innovation expertise for a complex service sector 201-2012)
- A/School Director for Higher Degrees Research and Training (2011-2012) - School of Tourism and Hospitality Management Southern Cross University
- Acting Head of Campus Nov-Dec 2011, Coffs Harbour, SCU.
- Director of Research (2009-2010) School of Tourism and Hospitality Management Southern Cross University
- Adjunct Associate Professor – Sustainable Settlements Research (2008+) Curtin University Sustainability Policy Institute (CUSP) URL: <http://sustainability.curtin.edu.au/>.
- National Core Program Manager (2006-2009) Desert Knowledge CRC – Core Program 4: Sustainable Desert Settlements, School of Tourism and Hospitality Management Southern Cross University.
- Project Leader (2003-2005) Desert Knowledge CRC - Aboriginal Remote Housing and Technology Education Lifecycle Research School of Education Southern Cross University.

PROFESSIONAL APPOINTMENTS 2010+

- Appointed International Representative on the National Board of the Design and Technology Teacher's Association of Australia (2011+)
- Appointed Thinker Online/Thinker On-Hand, to the Design and Technology Teacher's Association of Victoria. Both in 2010 and again in 2011.
- 2009+ Invited Member of the World Society for Ekistics (WSE). World membership limited to 400.

AREA OF EXPERTISE:

My research investigates the relationship between people, design and technology, and the natural environment as a connected complex adaptive system. The scale of my research has focused at two mutually transformative levels: the human scale of how people value, design, choose and live with the design world of technologies and processes of innovation, and the larger societal scale of socio-technical systems driving and defining human organization and complexity including socio-technical drivers affecting the sustainability of human settlements.

My emerging philosophy to scholarship and education

Technological knowledge, through processes of design, is both contextually validated and yet abides to its inherent epistemological form. It is holistic and yet mutually transforming between the abstract and social world of the individual and the tangible world they shape and experience before them (and increasingly within them). Our actions of transforming our social and ecological environments inherently define our humanisation. Each transformation abounds with opportunities for knowledge discovery as well as affirmation both of ourselves as a reflective species, and of our identity as active participants in the process of learning.

Educationally, *made-world* learning engages the whole of the individual almost regardless of whether the individual perceives it to be so. To truly understand the world transformed by our own ideas and actions, we are presented with opportunities to synthesise our cognitive, affective and psychomotor capabilities: ipso facto our gestalt manifests transformations. By teaching to engage the whole individual in the very process of technological actions, we not only come to learn of the world transformed before us but also of the world within us; in this regard I concur with ideas by Susan Greenfield, Paul Romer, Everett Rogers, Peter Ducker, Andrew Feenburg, Martin Heidegger, John Dewey, Don Ihde, and relevant aspects of both Stephen Covey and Albert Laszlo Barabási theories of design innovation and complexity. The humanisation of technological learning, when done coherently and contextually, fosters creative and connected ideas in the individual while also building connected understandings of the subject matter being learned.

I have developed a keen interest in cross-cultural (cross-values) technological and design education for the very reason that the abstractions within fundamentally different world views (eg traditional Aboriginal Desert cultures compared to western coastal urbanised ones), reveal much about both the traits of the humanisation process itself, as well as the ontology of technological knowledge and so the knowledge advantage such insights present for innovation.

I hold a 'connected up' view to the study and teaching of humanisation, from 'first tools' and commodity design, work place socio-technical systems, through to complex human settlement factors shaping design. Across this narrative, I keep an eye on what was lost to achieve what was gained, and whether some things can be undone, or re-valued.

The humanisation of technological and design education - where knowledge, skills and social development are framed as interdependent and coherent - forms the primary frame to my approach to teaching, leadership and research.

Areas of Successful Application

- Sustainable human settlement research, complex adaptive systems research.
- Indigenous and cross-cultural education in technology teaching and learning, and policy research
- Design Innovation Transfer, Material and digital culture
- Philosophy of Design and Technology Education, National Curriculum
- STEM Policy (Science, Technology, Engineering and Maths): knowledge economy foresight, and innovation education

Qualifications and Training – other than noted above

Qualifications

2002 Certificate IV in Workplace Training and Assessment, Southern Cross Human Resources and Development P/L (RTO).

Other Training

1996	Cross-cultural Awareness (in technology learning) - Certificate Institute for Aboriginal Development, NT
1995	Quality Endorsed Training Organization (QETO) Workplace leader training - Attended. NT Government, NT
2002	Sexual Harassment and Discrimination - SCU Also previously NT Government, Anti-Discrimination Commission, NT
1993	Situational Leadership II - Certificate Centralian College, NT
Pre-1986	Pre-1986 Attended various Industrial Arts Teacher Training In-services including Graphics Communication and Design, NSW
1981-82	Naval Officer -Pilot/Observer, RAN (Midshipman under training)

Employment – Position & Delegations

Swinburne University of Technology, Faculty of Design (August 2012+)

Associate Professor, joining Culture Based Innovation Research, and Design Anthropology Team.

Chair of Graduate and Masters Degrees Review Committee, Faculty of Design, Swinburne University of Technology, Australia. (Jul13-Dec13)

Curtin University 2008 – Adjunct Appointment

Adjunct Associate Professor – Sustainable Settlements Research

Attached to: Curtin University Sustainable Policy (CUSP) research institute

URL: <http://sustainability.curtin.edu.au/>

Southern Cross University Service Experience and Appointments

- 2011-2012 Executive Team leading the Coffs Harbour Based, Regional Initiative for Social Innovation and Research (coffsRISIR).
- 2011-2012 School Director of Higher Degrees Research and Training, School of Tourism (SCU)
- Acting Head of Campus, Coffs Harbour, (SCU)
- 2009-2010 School Director of Research, School of Tourism (SCU)
- 2006-2010 Core Program leader and Manager of Desert Knowledge CRC in Sustainable Desert (mostly Aboriginal) Settlements Research
- 2005-2007 Secretary to Journal of Design Educational Council Australia (DECA)
- 2004-2006 Project leader, Aboriginal Sustainable Aboriginal Housing Research, Desert Knowledge CRC
- 2002-2012 Review Board Member of the biennial International Technology Education Research Conference, Griffith University
- 1999-2004 Course Director and designer for the BTechEd(Honours), School of Education (SCU)
- 1986-1997 Executive Manager, Research and Training, Centre for Appropriate Technology Inc/Desert Peoples Centre, Alice Springs NT. URL <http://www.icat.org.au/>

CSIRO

1998/1999 Research Scientist - Post Doc Fellow (internationally competitive appointment)
– Land Use Transport and Environment (LUTE) research – North Ryde Campus – Div of Building, Construction and Engineering sciences. – Socio-technical housing design analyst in modelling human settlements.

Centre for Appropriate Technology Inc.

<http://www.icat.org.au/>

1995-1998 Executive Manager – Research and Education

1991-1994 Manager – Education and Research and development, Project leaders on various settlement, health hardware and human rights/community development programs.

1986-1990 Project Officer – National Curriculum Research and development project of the Australian Council of TAFE Directors: The Aboriginal technical worker program (ATWORK).

Royal Australian Navy

1980-1981 Naval Officer – Navy Pilot/Observer - Midshipman under training.

- To succeed into the elite Navy Pilot Training, a rigorous selection and filtering process of several months was undertaken. Batteries of IQ, Ability, Coordination, Spatial, Social etiquette, situational impromptu leadership, essay and strategic, team and leader role playing task, and psychological and politic knowledge tested had to be passed in addition to strict medial tests.
- I was selected to progress my navy Officer Pilot Training as one of the top 3 of 5000 applications filtered. Only 6 per year were selected to become NAVY Officer Pilots (to compare, I recalled about 64 a year were selected in the RAAF services). I qualified for Navy Pilot, Observer and Air-traffic Controller options.
- Once in the program, the non-completion rate was advised as very high and they only expected 50% of the 6 to complete the intensive, ~\$1million per student, 13 months course.
- Near the end of my course I moved to Observer training, and with only 4 students left, we were all advised the HMAS Melbourne, the Ship we were training in dedicated aircraft to Land on, was being decommissioned. I was given the option to stay on or leave with honorary discharge status. I took the option to pursue a University Education.
- However, before I left, I undertook intensive leadership and operational management training in areas of:
 - Leadership and Command
 - Aviation Medicine
 - Communications and Avionics
 - Survival and stress tests in team situations, including underwater and bush scenarios
 - Navy History and Defence Force Law
 - Other related Navy Officer courses.

Peer Recognition, Nominations and Awards

- 2011 to date, Appointed elect, to the position of International Representative on the national Australian Board the Design and Technology Teachers Association (DATTA Oz).
- 2010 and 2011, Appointed by the Victorian Design and Technology Teachers Association, as the inaugural THINKER online/Thinker on-Hand. TO facilitate scholarship for the States profession of teachers of the technological and design studies areas.
- 2010, Selected by the Federal Government of Australia as Australia's lead scholar in Aboriginal Housing Design and Infrastructure Policy development. Contacted to facilitate Policy for COAG.
- 2010, Selected by the Federal Government as one of twenty from across to participate in National School Curriculum (ACARA) in Design and Technology Education. I was noted as the lead Australian scholar in the area of Technology and Design education, Aboriginal technology education and sustainability.
- 2010, One of only 3 world scholars invited to deliver a Keynote Paper on *Innovation and Cross Cultural Education Research*, University of British Columbia, Canada.
- 2009 to date Invited as Member of the World Society for Ekistics (limited world membership is 400)

- Keynote to the 2010 for the Victorian Design and Technology Teachers Association National Conference. Received high score accolades as best paper. Title: *"Innovation Education"*
- Keynote to the 2009 Vocational and Applied Learning Conference "Designing our Future", Launceston Tasmania.
- 2007 (March) Gained Best Project Review recognition by the CEO Jan Ferguson, of Desert Knowledge CRC, for my Annual Performance Review of the Core Research program, Sustainable Desert Settlements Research.
- 2006-2009 Won Competitive Position: Core Program Leader – Desert Knowledge CRC – Sustainable Desert Settlements
<<http://www.desertknowledgecrc.com.au/research/settlements.html>>
- 2006. Re-Nomination by DKCRC CEO for Northern Territory Innovation Awards for research in technology education.
- 2005. Nomination by Technology Educators for Northern Territory Innovation Awards for research in technology education.
- 2004. Voted National Secretary for the new international Journal of Design, Innovation and Critical Technology Studies. To be launched later this year.
- 2003. International Peers. Nominated by the Technical Foundation of America (TFA) and Australian affiliate committee (through Griffith University: Centre for Technology Education Research) as Australia's Peek Academic in Technology Education and Diversity. One of fifteen Australians elected to present at the TFA's "Initiatives in Technology Education – Comparative Perspectives" bilateral refereed symposium 4-8 Jan 2003, Surfers Paradise, QLD.
- Desert Knowledge CRC: 2003-2010. Principle Research Scientist and Program Manager: Housing and Infrastructure Lifecycle Research. First ever CRC grant for SCU Coffs Campus, School of Education and Division of Arts.
- Alliance 2000 Project 2001-2003+: \$16K First ever Innovation Development Grant awarded to the SCU School of Education to seed and develop a high school research and teaching delivery alliance with the new BTEchEd/Hons: a local region knowledge incubation program.
- Nominated (accepted) by DEST Quality Schools Branch Director to co author the DEST national discussion paper on the Knowledge Economy and Technology Education. Document distributed to all States and over 80 schools nation wide in 2002.
- Nominated by Whitehouse Design to the Hon. Brendan Nelson sit on the national committee to oversee the proposed national DEST Technology Education Action Plan (2002-2006)
- Team Leader 2002. Nominated (accepted) by 80 nationally identified technology education peers to lead the development and writing of the new national 10 year vision Statement for DEST in Technology Education: to 2012.
- Nominated (accepted) by teacher peers to be NSW State Academic Rep. In Technology Education to sit on the NSW Board of Studies – Year 7-10 new Technology (Mandatory) syllabus review Board Curriculum Committee (current)
- Nominated (accepted) by teacher peers to be NSW State Academic Rep. In Technology Education to sit on the NSW Board of Studies – Year 7-10 new Design & Technology syllabus review Board Curriculum Committee (current)
- Nominated (accepted) by teacher peers to be NSW State Academic Rep. 2002 and 2003 to be a member of the NSW State Engineering Studies Exam Committee. (Current).
- Convenor and keynote: Creating World Class Technology Teachers K-12: Qualities for 2010. A significant planning and reflective forum for creating outstanding technology education by 2010. Sponsored by NSW DET and SCU. Venue CHEC.
- Whitehouse School of Design alliance in research and innovation education. A key driver for the developing alliance was the credibility and future orientation of the new BTEchEd(Hons) course.
- Invited Key Note Speaker for the 2002 ACET (Australian Council for Education through Technology).
- Principle author and course coordinator of the new Bachelor of Technology Education (Honours) at Coffs Harbour Campus of SCU: First Technology Teacher Degree to specifically respond to the Innovation Summit and Foresight Report Recommendations.

- 1997 Australian Science, Technology and Engineering Council Foresight Report to DETYA “Matching Australia’s S&T needs to 2010”. Principle Author (acknowledged) referenced for Priority Action 8 in Education needs via technacy education.
- Education Innovation Award for research and design of the Aboriginal Technical Worker [ATWORK] certificates and curriculum resources in Applied Design and Technology: Australian Adult And Community Education Council (AAACE) 1992. First ever national VET Curriculum and first in Indigenous education.
- Convenor and keynote: 1992. Design and Technology Education for Community Development: Linking People, technology and the Environment. Alice Springs, Design Education Council of Australia (DECA). Sponsored by Centre for Appropriate Technology, Community College of Central Australia, DECA and ANSETT Australia.

GRANTS WON AND LED

GRANTS WON AND LED

TOTAL value of Grants won since 1999 to Nov 2014. **\$4,668,262.15**

Summary Table of Competitive Research Income I led and won (cash and audited resource of Inkind) and nationally managed

TITLE	Grants Value won & led by Dr Kurt Seemann
Variation to Leadership Project CP4	\$737,437.57
Main Project - Core Project 4 Sustainable Desert Settlements	\$2,979,435.08
CP4 Sustainable Desert Settlement	\$105,957.50
Inception Proposal & Research Framework CP4	\$131,860.00
Developing Lifecycle models for sustainable investment in desert communities	\$197,456.00
Internal Transfers from GRC	\$5,691.00
Supporting Indigenous Children's Capacity for Innovation in Built Environment.	\$20,000.00
Linking Desert Knowledge with Pedagogy Research for Middle School Curriculum	\$79,294.00
Commissioned Research TAFE consultancies	\$2,000.00
Minor research projects	\$750.00
Postgraduate Scholarship 'A'	\$33,000.00
School of Education Top Up	\$2,500.00
Postgraduate Scholarship "A" Top up	\$30,000.00
Postgraduate Scholarship "B"	\$33,000.00
Postgraduate Scholarship "B" Top up	\$30,000.00
Dusted Communities (auDa Foundation Grant)	\$53,500.00
Norwegian Schools Innovation Grant	\$6,000.00
ARC Linkage – LP120200712 (Swinburne with Curtin University) 2013-2016 Project: “Indigenous participation in a low-carbon economy”	\$226,365.00
* Internal Innovation Grants First Ever Vice Chancellor’s Innovation Development Grant to School of Education	\$16,000.00
* Internal Research Grant Regional Air Travel viability research in QLD (CI of 3 team members)	\$10,000.00
GRAND TOTALS	\$4,668,262.15

Chief Investigator or co-CI Research Consultancy Projects (Pre 2012).

- 2006-2010 Core Program leader (CI1)– Sustainable Desert Settlements, DKCRC
- 2003-2006 National Project Leader (CI1) (\$203,147), Developing Lifecycle models for sustainable investment in desert communities.
- 2007-2008 Project leader (CI1): Australian School Innovation in Science, Technology and Mathematics (ASISTM) Project. (\$79,294 (18months)) Curriculum Corporation DEST. <<http://www.asistm.edu.au/asistm/>>
- 2007-2008 Project Leader (CI1): Supporting Indigenous Children's Capacity for Innovation in Built Environment Learning in Outback NSW (\$20,000 (18months)) DKCRC.
- 2000 to date, (Leader) Creator, principal author and manager for 5 years of The cross-discipline Bachelor of Technology Education with Honours degree. Southern Cross University.
- 2005 (CI1) North Coast Institute of TAFE Course Consultant Project: Certificate and Diploma in Community Development (\$2000)
- 2003-2010 (CI1) Desert Knowledge CRC. Program Manager. Housing and Infrastructure Lifecycle Projects
- 2001-2003 (CI1) Alliance 2000. Principle Researcher. Innovation Development Grant – SCU (\$16K, seeding grant). This proposal demonstrates capacity to create and successfully produce external partner projects that have thus far been renewed for a total of ten years since commissioning.
- 1995 (CI1) Research Officer, Australian National Training Authority, Remote Area best practice standards project in Cross-cultural Technology education.
- 1996 Research Officer (acknowledged) selected as expert in remote waste management research by Professor Peter Newman. State of the Environment Report - Chapter On Human Settlements. URL: <http://www.environment.gov.au/soe/1996/publications/report/pubs/chap03.pdf>
- 1994 Research Officer (acknowledged) National Water and Sanitation Report for the Federal Race Discrimination Commissioner, ACT. (Principle Author Dr Bruce Walker).
- 1990 Research Officer, ANU/CAT Denitrification Project, Alice Springs.
- 1989 Principle Researcher, Remote Area Waste Impact and Management Needs project, NT Dept of Health and Community Services. \$3.5K Grant. Alice Springs.
- 1987-1989 Principle Researcher, The Aboriginal Technical Worker (ATWORK) national VET Curriculum Feasibility Study Report (\$36K) of the Curriculum Project Steering Group for the Australian Directors of TAFE. (Published)

Other complex context Projects (Pre 1999)

- Highest scorer (Education specialist) in an NT Government AUSAID consultancy to develop planning and education processes for the Solomon Islands in Power Supply systems
- Selected by GRM International for consultancies as training specialist to set up and plan the delivery of large scale (municipality) training systems in VET courses in Manila.
- Selected by AUSTRAINING International to be the 3 year expert for establishing and delivering primary education and teacher training in rural development studies in PNG.
- Old-Mapoon Planning for a healthy Community project - training, survey design and data analysis expert
- Kintore housing and Technical services Project - education and training expert
- Kintore waste management (design of technology systems and training expert)
- Warriabri Housing maintenance - team leader consultancies.
- Department of Family and Community Services ; Econometric modelling of housing lifecycle cost in remote communities. Principal research scientist.

- National Quality Measures technical training research project - leader

IMPACT highlights

POLICY IMPACT - FEDERAL

1996: Contributor/chapter researcher for the 1996 Australian State of the Environment Report, Chapter on Human Settlements (acknowledged as team member for the chapter). Commissioned by the Federal Government of the day. Human settlements team formed and lead by Prof. Peter Newman and included Prof. Bob Birrell and Dr. Peter Newton CSIRO Chief Scientist. REF: <http://www.environment.gov.au/soe/1996/publications/report/pubs/chap03.pdf>

1997: My Research in Science, Technology and Innovation, was a cornerstone recommendation (endorsed) by the Federal Government's long reaching Foresight Review to 2010. Published by Australian Science, Technology and Engineering Council's (ASTEC) 1996 Report "Developing Long-Term Strategies for Science and Technology in Australia: Matching Science and Technology to Future Needs 2010". In particular, of the only 8 Priority Actions endorsed by the Federal Parliament to 2010, Number 8, priority Action was solely based on my research on Technacy theory and practice.

Priority Action for the Commonwealth Government 8

ASTEC recommends that as a priority the Minister for Science and Technology and the Minister for Employment, Education, Training and Youth Affairs, work with State and Territory governments to:

incorporate 'technacy' in primary and secondary school curricula and teaching practice across Australia.

To initiate this process, ASTEC has proposed a study on primary S&T education, which would review the work done in preparing the statements and profiles for S&T and suggest any changes needed to achieve this objective.

REF (<http://www.dest.gov.au/archive/science/astec/future/final/futureb.html>)

POLICY RECOMMENDATION – STATE/TERRITORY

December 2003: More recently, additional research developments from my work in the STEM area and technacy was raised 37 times in a commissioned report to the Northern Territory Government "Future Directions for Secondary Education in the Northern Territory". Recommendation number 9:

9. the NT Government, through the Minister, take up with the appropriate Ministerial Council the feasibility of a national testing regime for technacy to parallel testing for literacy and numeracy so that standards can be established for these skills; and that NT DEET undertake preliminary work in this area which may be presented at appropriate forums to bring the issue onto the national education agenda. p-xxi and p-56 etc.

Ref:

<http://www.betterschools.nt.gov.au/history/docs/report/report.pdf>

2007 The NSW Department of Education, research division for curriculum studies has selected a paper I co-wrote on Technology and Innovation Education and uploaded it as a critical paper for all NSW Technology teachers to read. Only 4 papers were selected, and mine was the first recommended reading. I was commissioned to produce the paper by the Federal Government's Department of Education Science and Training (DEST), Quality Schools Branch: "The Knowledge Economy". REF: <http://www.curriculumsupport.education.nsw.gov.au/secondary/technology/prolearn/reading/index.htm>

My DKCRC initial research into the Lifecycle of Aboriginal Housing has impacted directly on Policy discussions in the Northern Territory Government Indigenous Housing Sector. The research has been published into a Book in 2008 and will be submitted to as one of 4 to a Federal Ministerial Briefing in September 2008 by CEO of DKCRC in Canberra.

Seemann, K., and Parnell, M., et al. (2008) *Housing for Livelihoods: Scoping the Lifecycle of Housing and Infrastructure through a Whole-of-System Approach in Remote Aboriginal Communities*: ISBN: 1 74158 083 8 (Print copy). Desert Knowledge CRC, Alice Springs. (127pages)

Research Impact on Teaching Practice

My research in technacy and Innovation education methods in the classroom has significantly impacted on Aboriginal and Non-Aboriginal Teachers. Funded by DEST/DEWR My research with the Curriculum Corporation on Innovation in Maths, Science and Technology Program has resulted in the teachers forming the Alice Springs Declaration. Feedback sheet pasted below validates this impact.

The Alice Springs Declaration

We educators and learners hereby declare that:

"We will foster and advocate technacy and innovation capability across curriculum and in teaching practice, in the interest of our common sustainable future."

"We also acknowledge inspiration from desert people's ingenuity and the relationship between people, technologies and our environments that as a system offers both ideas as well as challenges for assuring intergenerational fairness."

As a direct result of this project, the Chair of teaching Australia, Dr Gregor Ramsey emailed me applauding my string leadership style.

----- Forwarded Message

> From: Gregor Ramsey <gregor.ramsey@internode.on.net>
> Date: Sun, 15 Jun 2008 08:54:43 +0930
> To: 'Kurt Seemann' <kurt.seemann@scu.edu.au>
> Subject: RE: Thank you: Technacy and Innovation project
>
> Thanks Kurt
> I enjoyed it [ASISTM PROJECT OUTCOMES WORKSHOP] very much as well.
> You are a great leader ..The Charters arrived the morning you left.
> We chased you to the plane, but missed connecting by 5 minutes.
> I have sent them Express port to you at Southern Cross Coffs Harbour.
> They should be there early this week.
> I would be grateful if you could send them on to participants.
> All the Best
> Gregor
> Dr Gregor Ramsey
> Chair, Teaching Australia.

FEEDBACK SHEET:

ASISTM SURVEY Project 2047

For each statement below please indicate your rating by ticking a box

N=20

Teachers+Associates: N=16 (TL teachers/Associates in project 17)

Non-teachers (New-to-project HS-students/Parents/Aids): N=4

5 = Strongly Agree

1 = Strongly Disagree

1. The project has added value to the way I think <u>about technology and innovation</u> .	Average	4.8
	Median	5.0
2. The process of developing the Technacy & Innovation 'chart' for describing phases of technacy experience and qualities has helped me rethink aspect of teaching technology in the classroom.	Average	4.5
	Median	5.0
3. Learning about Aboriginal and other desert ideas has inspired me as a teacher and in some ways changed or helped validate my ideas for teaching technacy & Innovation.	Average	4.9
	Median	5.0
4. The ideas around Sustainability introduced during this project have added value to my teaching.	Average	4.3
	Median	4.5
5. A national technacy and innovation chart of developmentally appropriate experiences would offer teachers a very useful tool for planning and improving practice.	Average	4.6
	Median	5.0
6. This project has changed (or validated in the positive) the way I think about technology and innovation.	Average	4.7
	Median	5.0
7. I enjoyed the challenge of this project	Average	4.8
	Median	5.0
8. I learned new ideas that have helped add value to aspects of my <u>teaching generally</u> .	Average	4.8
	Median	5.0
9. I would like to be part of any future project on <u>technacy and innovation</u> should the opportunity arise.	Average	4.9
	Median	5.0

Please complete this sentence:

As a result of this project, some of the new ideas I will now explore in my teaching include.....

- T4-Integration + application of prototype [technacy and innovation] chart in classroom
- T5-program delivery, teaching strategies, incorporation of [non-teacher] 'professionals'
- T6-integration of subjects & units, professional development on ICTs, new way of thinking & delivering design and technology, and technology education in our school
- T7-developing further a K-12 strategy in S&Tech, but as a multi-disciplinary tool.
- T8-developing the idea of technacy across the primary grades, utilising outcomes to drive teaching and learning; and encouraging students to think innovatively.
- T9-Teaching kids how to think – 'Why' instead of just...'it has to be like this...'
- T10-[Abl Liaison Staff) – Taking this knowledge back home with me and sharing it with my community.
- T11- a renewed approach to delivering education re. technologies in the classroom on multiple levels; an increased emphasis on promoting and developing innovative thinking skills.
- T12-Looking at a student's ability in relation to technology in a different way. Use technology with a different aspect to resource and design.
- T13-presenting innovative learning opportunities for my student's that combine many KLAs and have a meaningful, usually physical, outcome for students. Guide my students in using technacy to support their own learning desires.
- T14-keep moving, with support on technology & having innovations ideas and having more teachers and schools onboard.
- T16-Basing the design, implementation context and evaluation of all units of work and decisions on a technacy framework, particularly when designing the types and tools of learning that myself and my students will experience.
- T17-incorporating a wide range of resources to aide my teaching. I wish to explore and implement new and exciting projects for my students.
- T18-Better programs and units involving sustainable practice and design, and work that will foster innovation in my students.

Open Feedback:

Please consider writing below and over leaf any other feedback.

- T2-Thank you.
- T4-Many thanks for such an invaluable experience
- T6-gave me more insight into future education & methodologies
- T7-We need more of this. Luxurious to have time to think, develop, reflect & do this in a collegiate environment. Developmental work [technacy & innovation chart] done by SCU teacher associates, under excellent leadership [Dr Seemann], was invaluable.
- T8-Thank you Kurt, for your inspiration and continuing support which has been invaluable throughout this project. You have a wonderful team [teacher associates and staff] that you have built – I know why! Karin.
- T9-thanks for an amazing experience. This is just the beginning I think. Next stage!!! Where's the funding for this? It was challenging at times. Also enjoyed the guest speakers [Dr Bruce Walker CEO & CAT inc Abl staff, Dr Gregory Ramsey (Chair Teaching Australia; Mr Parnell, sustainability consultant]
- T11-This has been a wonderful experience in professional development which has expanded my knowledge and enthusiasm to engage with issues affecting Australia's future on a number of levels. Thanks Kurt!
- T12-I now think differently regarding design of solutions to everyday problems.
- T13-Thanks to Kurt and Team for your efforts in giving me the opportunity to use my brain, my experience and my heart for the betterment of students – our future.
- T16-This project has brought back the inspiration and goals that I had lost. I now have direction for future learning and know the value of me following that path. Thank you for my life!
- T17-Fantastic. This is the way of the future and as a beginning teacher: I feel like the builders of the Giza pyramid, in the education 'context' of course.
- T18-A most rewarding project to be apart of and something that I will monitor with great interest and hope to be able to help in future.
- NT20-It was a really good experience to be out here and explore technacy and just the outback.

1991+ and 2007+ My Research work on technacy was reviewed in 1001 and placed in the National Australian Macquarie Dictionary (full edition) by the Editors. Since then, the technacy theory and lexicon has entered the formal language of the National VET Dictionary of NCVET and the Concise Macquarie Dictionary in 2007 indicating a wider user base of the new concept for technological capability spreading in Australian language. This suggest my work on this aspect of STEM research is now officially adding to ways of thinking in Australian Language

RESEARCH ACTIVITY

I have been instrumental in two significant competitive Research Grants (outcomes pending as at June 2012):

- ARC-Linkage “*Indigenous Participation in a Low-Carbon Economy*” Strong positive assessor reviews (based on an initial unsuccessful resubmission from 2010) - \$334,246. as Chief Investigator.
- NBN National Grants, as Chief Investigator: “MiTurn: A New Pathway to Education and Skills”, *NBN-Enabled Education and Skills Services (NBN-EESS) Program*, \$2.8million cash.

Grants Outcomes (recently unsuccessful, as evidence of continual efforts)

- 2010 ARCL (\$276,682) as part of a team of 4 CIs – “old version of *Indigenous Participation in a Low-Carbon Economy*”

Grant successfully approved for Funding, (but not funded due to major Canadian budget reforms)

- 2011, (\$495,350) as part of a team of 4 CIs, “*Regenerating Indigenous Technological Ecoliteracies: Canada, Peru, Australia, Kenya*”, through the Social Sciences and Humanities Research Council of Canada (SSHRC).

International Research Programs and Collaborations

After my research work in the Solomon Islands in the mid 1980s, almost all my fieldwork has been devoted to the complex issues of cross-cultural technology design, transfer, development and education among remote and traditional Australian Aboriginal Communities. As a result of this work I won significant senior leadership roles in Desert Knowledge research (including, Post Doctorial Fellowship with CSIRO as a Research scientist in the expert field of “socio-technical housing and urban systems analysis”; Project Leader, and later Core Program Leader/Manager of the successful Desert Knowledge CRC). My research in cross-cultural design, and technology education transfer was instrumental in the development of Federal and State government bilateral policy and related publications. Highlights include:

- **Australian Science Technology and Engineering Council. (1996).** *Developing Long-Term Strategies for Science and Technology in Australia: Outcomes of the Study: Matching Science and Technology for Future Needs 2010*. Canberra: AGPS [Priority Action 8, of 8 national priority actions to 2010, was entirely based on my research in cross-cultural technacy education]
- **Ramsey, G. (2003).** *Report on Future Directions for Secondary Education in the Northern Territory*. Darwin: Northern Territory Government, Department of Employment, Education and Training, and Charles Darwin University. [several lead recommendations to the NT Government, and over 30 references were dedicated to my research in technacy studies: Dr Ramsey was Chair of Teaching Australia]
- In late 2010, **The Federal Government’s COAG initiative “Closing the Gap” identified me as Australia’s Lead expert** to advise on Aboriginal policy related to the sustainability and best practice policy requirements on remote Aboriginal community housing systems.

Sponsored Keynote for the Technology Educators in Aotearoa – New Zealand, 7-9 Oct 2013

- My national reputation in innovation education and design is increasingly recognized in a broad range of areas in international networks.
URL: <http://www.techlink.org.nz/stories.cfm?area=1&SID=155>

Asia Pacific Symposium on Cultures Based Innovation – New Zealand. (2013+)

- A ‘by international peer invitation only’ symposium of design leaders who have demonstrated a cross-disciplinary career capability that is also experienced in the

complexity of cross-cultural innovation and design research.

URL: <http://cbinnovation.net/index.html>

British Collaboration with University of London, Faculty of Design, Goldsmiths. (2012+)

- Joint publication projects with University of London, Faculty of Design. Prof. Stables, and Reader Stephen Keirl. I have been an invited scholar to Goldsmiths' Faculty of Design to speak to their exclusive "Design Means" series, my Title in 2012 was: "*Understanding the 'Lores' of the Made world through Cross-cultural insights*".

URL: <http://www.gold.ac.uk/calendar/?id=5315>

Norwegian Collaboration (2012+)

- Currently involved in both a review of the with the Trondheim International Baccalaureate school on the role of Technology Innovation in education, as well as supervising the principal of that school through his PhD studies focusing on Leadership in Innovation and the impact of the knowledge economy on international schools.

Canada Collaborations University of British Columbia (UBC), (2010+) (linked to Peruvian and African collaborations)

- International research collaborations namely with **Indigenous Canadian scholars** at UBC (A/Prof. Peter Cole, and A/Prof. Patricia O'Riley, see noted book collaboration and later in research grant work noted with the Canadian SSHRC (Social Sciences and Humanities Research Council). This work is current and in Partnership with colleagues in Peru and Africa.
- Board member of, and invited paper to, the International Conference at UBC for *Technological Learning & Thinking: Culture, Design, Sustainability, & Human Ingenuity, 2010*.

American Collaboration (2003-2008)

- In 2003, the Technical Foundation of America (TFA) undertook a bi-lateral research and academic program to identify via peer analysis, and pair up work by Australia's Leading scholars with their counterpart from USA. I was peer identified as Australia's lead academic in design and cultural diversity research of the 10 specialists selected. As a result, I have contributed to a book chapter produced by the TFA.

Solomon Island Collaboration (1983-86)

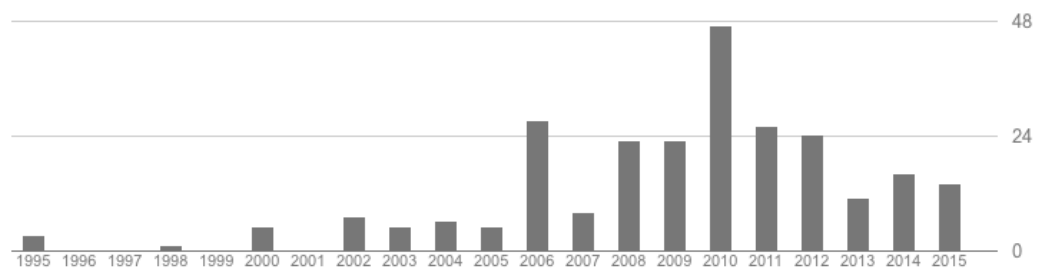
- Initially set up through my advanced BSc Ethno-technology research project of University of Technology Sydney's (then NSWIT) APACE unit, I played an instrumental roles in the both technology system competent design (the redesign of pelton cups to enable them to be better manufactured), as well as whole of village ethno-sustainability research to support the hybrid Western and Village technology system that underpinned the a micro-hydro electricity scheme installation. The installation in early mid 1980s was a success, and was able to be locally maintained ever since. I was also sponsored and also for APEX Australia, to chart the first stage of a water supply program also in the Solomon Islands.
<http://www.apace.uts.edu.au/docpublish/iriri.html>

RESEARCH PUBLICATIONS

H-Index for Citation Impact

Citation indices	All
Citations	258
h-index	9
i10-index	9

Citations per year



Scholarly Books: 5

Scholarly Chapters: 10

Academic Journals: 12

Scholarly Peer reviewed Published Conference proceedings: 31

Commissioned Research Reports: 3

Theses: 1x Phd (UNSW), 1x Honours (UNSW), 1x Advance Project Research (UNSW)

Ten Career Best Publications (*DEEWR Peer Reviewed)

1. *** Seemann, K.** (2010). *Learning How Everything Is Connected: Research in Holistic and Cross-Cultural Indigenous Technacy Education*. Invited Paper presented at the International Conference of Research in Technological Learning & Thinking. Retrieved from <http://learningcommons.net/>

[This international conference is rated in the worlds top three for Design and Technology education research. As one of only 3 invited published papers, it received international peer recognition by Convenors]

2. ***Seemann, K.** (2009). Technacy Education: Understanding Cross-Cultural Technological Practice. In J. Fien, R. Maclean & M.-g. Park (Eds.), *Work, Learning and Sustainable Development: Opportunities and Challenges* (Vol. 8, pp. 117-131). Bonn: Springer.

[The Editors (international peers) invited my authorship as Australia's lead scholar for a chapter on cross-cultural Aboriginal Technology education with an emphasis on linking Aboriginal employment to emerging sustainability sectors]

3. ***Seemann, K., Parnell, M., McFallan, S., & Tucker, S.** (2008). *Housing for Livelihoods : The Lifecycle of Housing and Infrastructure through a Whole-of-System Approach in Remote Aboriginal Settlements*. Alice Springs, N.T.: Desert Knowledge CRC, 129.

[Significant research towards Aboriginal livelihoods development through housing policy capability reform, this text was instrumental in my recognition by Closing the Gap as Australia's expert in field]

4. *Stafford-Smith, M., Moran, M., & **Seemann, K.** (2008). The 'Viability' and Resilience of Communities and Settlements in Desert Australia. *The Rangeland Journal*, 30(1), 123-135.

[With a 2009 journal impact factor of 1.164, the paper remains one of a few in Australia that directly redresses the viability policy debate of remote Aboriginal communities]
5. ***Seemann, K.** (2006). Preparing Learners for the Innovation Economy: It's Time to Rethink Almost Everything About Technology Education. *Design and Technology Education: An International Journal*, 11(2), 31-40. Retrieved from <http://trentham-books.co.uk/pages/jdestec.htm>

[Published in the second most respected Design and Technology Research journal available, this article has been used widely by teacher practitioners in on line forums in the USA and Australia]
6. ***Seemann, K.** (2003). Basic Principles in Holistic Technology Education. *Journal of Technology Education*, 14(2), 11. Retrieved from <http://scholar.lib.vt.edu/ejournals/JTE/v14n2/seemann.html>

[Ranked second highest QScore in its field 2007, ERA (A) preliminary 2008, 2009, and (B) 2010, this paper earned my peer Status in 2003 as Australia's lead expert in field]
7. ***Seemann, K.**, & Fee, A. (2003). The Knowledge Economy. What Is It? Where Does It Come from and What It Means to Technology Education in Australian Schools? *Quality Schools Branch, Department of Education, Science and Training*, Australian Federal Government. Retrieved from <http://www.curriculumsupport.education.nsw.gov.au/primary/scitech/prolearn/refer/index.htm>

[Produced for the Quality Schools Branch of DEST to distribute to all Technology teachers K-12, my paper remains the single most definitive resource to all teachers engaged in innovation education]
8. ***Seemann, K.** (1997). *The Socio-Technical Sustainability of Shelter Systems and Hardware in Remote Indigenous Australian Communities*. Unpublished PhD, University of New South Wales, Sydney.

[The research underpinning my PhD thesis, generated the first national award winning (Australian Association of Adult and Community Education's Innovation and Curriculum Award) Aboriginal technical curriculum in Australia addressing health hardware factors in communities]
9. ***Seemann, K.**, & Talbot, R. (1995). Technacy: Towards a Holistic Understanding of Technology Teaching and Learning among Aboriginal Australians. *Prospects*, 25(4). 17.

[This paper formed the foundation research for ASTEC's Science and Technology Foresight Report 1996 on DEST endorsed Priority Action 8 for Advancing national Technacy Education targets by 2010]
10. ***Seemann, K.**, Walker, B., Centre for Appropriate Technology, Australian Conference of TAFE Directors, & Alice Springs College of TAFE. (1990). *The Aboriginal Technical Worker Feasibility Study Report (Atwork) : A National Co-Operative Curriculum Development Project of the Australian Conference of TAFE Directors*. Alice Springs: Centre for Appropriate Technology, Alice Springs College of TAFE. 129.

[This document articulates the first nationally accredited and peer acclaimed Aboriginal Technology Education curriculum in Australia, producing over 3000 Aboriginal graduates into employment or further studies by 2009]

ALL Books (* DEEWR peer reviewed)

Scholarly Books

***Seemann, K.**, Parnell, & Marinova, D. (contract signed) *Greening Frankenstein*, Springer Publications – Science and Business Division. Contract Themes: *Technology Theory, Design, Global Innovations and Sustainability Policy research*. URL: <http://www.springer.com/law/environmental/book/978-94-007-2012-1>

***Seemann, K.**, Parnell, M., McFallan, S., & Tucker, S. (2008). *Housing for Livelihoods: The Lifecycle of Housing and Infrastructure through a Whole-of-System Approach in Remote Aboriginal Settlements*. Alice Springs, N.T.: Desert Knowledge CRC.

*Guerin, B., Guerin, P., & **Seemann, K.** (eds.) (2010). *Seeds of Sustainability: Growing Your Desert Communities*. Alice Springs, N.T.: Desert Knowledge CRC.

Seemann, K. (Ed), (1996) "Quality Measures: Technical Training For Remote Indigenous Communities", Report to the Australian National Training Authority on two integrated national research projects with the Centre for Appropriate Technology, Alice Springs. (140 pages)

***Seemann, K** (1991) *Remote Controlled Waste: Research Study of Waste in Remote Aboriginal Communities in Central Australia for the Northern Territory Dept of Health and Community Services*. Alice Springs, Centre fore Appropriate Technology.

***Seemann, K.** and Walker B. (1989) *The Aboriginal Technical Worker Feasibility Study: Report to the Australian Directors of TAFE*, Centre fore Appropriate Technology, Alice Springs.

OTHER (Contributions to significant scholarly Books (acknowledged) & Books in preparation and/or accepted for contract schedule)

Cole, P., O'Riley, P., & **Seemann, K.** (in progress). *In(di)genuity in design and technology education*. (Canada UBC).

Seemann, K (proposal submitted to Primrose Hall Publishers, and accepted for future 2013 contract schedule). Nominal title: *Technological Entanglement: Technacy Genre Theory and other radical ideas for understanding the made world*.

***Foreword of Book:**

Newman P, Marinova D, Armstrong R, Marley J, McGrath N, Raven M, Spring F 2008, Desert Settlement Typology: Preliminary Literature, ISBN: 1 74158 044 7, Desert Knowledge CRC, Alice Springs. **Foreword by Dr Kurt Seemann.**

***Research Team Member (acknowledged) for Federal State of Environment Report 1996 Ch3 – Human Settlements Book:**

1996 Research Officer (acknowledged) selected as expert in remote waste management research by Professor Peter Newman. State of the Environment Report: Chapter 3 - Human Settlements. See page 3-57 in CH3. URL: <http://www.environment.gov.au/soe/1996/publications/report/pubs/chap03.pdf>

Book Chapters (*DEEWR peer reviewed):

- *Seemann, K. (2015) Design in Tourism Education: a Design Anthropology Perspective. In D. Dredge & M. Gross (Eds.), *Handbook of Tourism, Hospitality and Events Education*. Australia: Routledge
- *Seemann, K. (2015). Culture in design, technology and environment: reflecting on field experience. In S. Keirl & K. Stables (Eds.), *Environment, Ethics and Cultures: Design and Technology Education's Contribution to Sustainable Global Futures, Chapter 4*, pp. 53-66 UK: Sense.
- *Seemann, K. (2015). Designing for cultural groups and humanization: Two ideas from design anthropology. In S. Keirl & K. Stables (Eds.), *Environment, Ethics and Cultures: Design and Technology Education's Contribution to Sustainable Global Futures, Chapter 7*, pp. 101-118. UK: Sense.
- *Turner, A., & Seemann, K. (2013). Technology, teaching practice and innovation: a case study into technology teaching. In B. A. Knight & R. V. d. Zwan (Eds.), *Teaching Innovations Supporting Student Outcomes in the 21st Century* (pp. 97-106). Australia: Oxford Global Press
- *Whittle, S., & Seemann, K. (2012). Venice - is it the new Atlantis? In R. vanDerSwan (Ed.), *Current Trends in Technology and Society* (1st ed., Vol. 1, pp. 11-16). Brisbane: Primrose Hall Publishing Group.
- *Seemann, K., Newcombe, J., & Turner, A. (2012). The Green Growth Knowledge Economy: Implications for Technology and Design Teachers. In R. vanDerSwan (Ed.), *Current Trends in Technology and Society* (1st ed., Vol. 1, pp. 40-46). Brisbane: Primrose Hall Publishing Group.
- *Kennedy, A., & Seemann, K. (2012). 'Plain English instead of hard words': English language encounters in a remote Aboriginal Community. In R. vanDerSwan (Ed.), *Current Trends in Technology and Society* (1st ed., Vol. 1, pp. 59-72). Brisbane: Primrose Hall Publishing Group.
- *Turner, A., & Seemann, K. (2012). Food innovation and Technacy Genre Theory: strategies for teaching and learning. In R. vanDerSwan (Ed.), *Current Trends in Technology and Society* (1st ed., Vol. 1, pp. 104-114). Brisbane: Primrose Hall Publishing Group.
- *Seemann, K. (2009). Technacy Education: Understanding Cross-Cultural Technological Practice. In J. Fien, R. Maclean & M.-g. Park (Eds.), *Work, Learning and Sustainable Development: Opportunities and Challenges* (Vol. 8, pp. 117-131). Bonn: Springer.
- *Seemann, K. (2003) Book Chapter *Innovation Through Diversity: Beyond the Know-How to the Know-Why and Who-With in Cross-Cultural Technology Education*. Chapter in "Initiatives in Technology Education – Comparative Perspectives", Technical Foundation of America, 4-8 January, Gold Coast, QLD, Australia.

Academic Journals (* DEEWR peer reviewed)

NOTE: the academic community in Technology and Design is highly driven by double blind peer reviewed full papers published and debated at International Research Conferences: journal papers are less read (and indeed there are very few of them globally), as the view is that Design and Technology is a fast evolving field of knowledge and more so is driven by current understanding in professional practice. For this context, I have tended to devote more writing for this research area into international peer reviewed full paper research conference of publications.

Turner, A., & **Seemann, K.** (2013 – in print). Building a conceptual framework for environmental consciousness in food technology education. *Australian Journal of Environmental Education*, Special Issue. .

*Turner, A., & **Seemann, K.** (2011). The teaching of food technology in schools. *Food Australia: Official Journal of the Australian Institute of Food Science and Technology (AIFST Inc.)*, Volume 63 (11), pp.34-42.

* **Seemann, K.** (2010) "Introduction Desert Knowledge CRC Special Edition," *Journal of Economic and Social Policy*: Vol. 13: Iss. 2, Article 1.

* **Seemann, K.**, Marinova, D. (2010) "Desert Settlements: Towards Understanding the 'Mutuality of Influence' and "Scale-free Networks" Concepts", *Journal of Economic and Social Policy*, Vol. 13, Issue 2.

* Marinova, D., Lozeva, S., **Seemann, K.** (2010) "Community Conversations and Sustainability in the Desert: Leonora, Western Australia", *Journal of Economic and Social Policy*, Vol. 13, Issue 2.

* Stafford Smith, D. M., Moran, M. and **Seemann, K.**, (2008) The community-settlement nexus - drivers of 'viability' in remote areas, *The Rangeland Journal*, 30. ISSN1036-9872.

* **Seemann, K.** (2007) Waking up the Subject: From Craft to Critical Technacy, *Curriculum Perspectives Journal*, Vol.27, No. 3. 2007. ISSN 0159-7868.

***Seemann, K.** (2006) Preparing Learners for the Innovation Economy: Its time to rethink almost everything about technology education, *Design and Technology Education: An International Journal*, Vol.11 No.2 pp31-40. ISSN 1360-1431.

***Seemann, K.** (2003) Basic Principles in Holistic Technology Education. *Journal of Technology Education*, USA, Vol.14 No.2 pp28-39

Commenced Academic career June 1999: graduated with PhD UNSW 1997

***Seemann, K.** & Talbot, R. (1995) "Technacy: towards a holistic understanding of technology teaching and learning among Aboriginal Australians". *Prospects*, vol XXV, no 4, Dec.

***Seemann, K.** (1993) "Aboriginal Technical Vocational Education: Strategic Program Development in Support of Community Technical Functions and Local Empowerment", *Journal of the Design in Education Conference Australia DECA*, Winter 1993.

*Walker, B and **Seemann, K.** (1989) "Technology and Development In Remote Aboriginal Communities - Technical Training for the Future." *NSW Journal of Industrial Arts Education*, Sept. (17 pages)

Academic Conference Papers (Full published papers, *DEEWR peer reviewed)

***Seemann, K.** (2011). Weaving Virtual Service Networks into Regional Cities: 'nurture the body here, and offer the mind anywhere' - anecdotes from the Coffs Harbour community forums to minimise carbon usage and maximise regional innovation. In F. Chan, D. Marinova, & R. S. Anderssen (Eds.), *MODSIM2011, 19th International Congress on Modelling and Simulation* (Vol. December 2011, pp. 3080-3084). Perth Convention and Exhibition Centre in Perth: Modelling and Simulation Society of Australia and New Zealand. Retrieved from <http://www.mssanz.org.au/modsim2011/H2/seemann.pdf>

- *Turner, A., & **Seemann, K.** (2011). 'Clarifying food innovation education for the global green new deal'. *Food Studies: An Interdisciplinary Conference 09/12/11-10/12/11*. University of Nevada Las Vegas, Las Vegas NV, USA.
- *Turner, A., & **Seemann, K.** (2010). *The teaching of Food Technology in schools*. Paper presented at the 43rd Annual Australian Institute Food Science and Technology Convention, 'Creating the Future of Food', 25-29 July, held at the Sebel, Albert Park, Melbourne, Australia.
- * **Seemann, K.** (2010). *Learning How Everything Is Connected: Research in Holistic and Cross-Cultural Indigenous Technacy Education*. Invited Paper presented at the *International Conference of Research in Technological Learning & Thinking*, University of British Columbia, Vancouver, Canada. 17–21/06/2010, Retrieved from <http://learningcommons.net/>
- * Elshof, L., Keirl, S., McLaren, S., and **Seemann, K.** (2010). (Re)visioning Technological Learning and Thinking – the Clifftop Manifesto for educational change. Paper presented at the *International Conference of Research in Technological Learning & Thinking*, University of British Columbia, Vancouver, Canada. 17–21/06/2010, Retrieved from <http://learningcommons.net/>
- *Turner, A and **Seemann, K.** (2010). Clarifying Sustainable Food Technology Futures through Technacy Genre Theory. Paper presented at the *International Conference of Research in Technological Learning & Thinking*, University of British Columbia, Vancouver, Canada. 17–21/06/2010, Retrieved from <http://learningcommons.net/>
- * **Seemann, K.**, and Marinova, D. (2009) Understanding Connectivity of Settlements: Implications of the Power Curve, *MODSIM 2009 International Congress on Modelling and Simulation*, Modelling and Simulation Society of Australia and New Zealand, Cairns, Australia, pp. 1209–1174, ERA (C Conf)
- *Turner, A, & **Seemann K.** (2008) The Silent Death Of Food Technology Rigor In School Curriculum, in *Exploring Technology Education: Solutions to issues in a Globalised World*, Proceeding of the 5th International Technology Education Research Centre (TERC), Griffith University, Gold Coast 27-29th Nov 2008
- * Newcombe J,& **Seemann K** (2008) Skilling Out Technological Intelligence and the Skills-Climate Paradox, in *Exploring Technology Education: Solutions to issues in a Globalised World*, Proceeding of the 5th International Technology Education Research Centre (TERC), Griffith University, Gold Coast 27-29th Nov 2008
- * **Seemann, K.** (2008). Desert Knowledge CRC: Overview and emerging insights. *Territory Fair: How do we get there?* Proceedings of The NT Council of Social Service Conference. Darwin Entertainment Centre, 16-18th April.
- * **Seemann, K.** (2008). Dimensions of Australia's Desert Settlements: The Challenge of Sustainable Towns. Proceedings of the *Desert Knowledge Symposium 2008 - Developing Desert Directions: Rethinking the Future*. 3-6 November.
- * **Seemann, K.** (2008). "The Alice Springs Declaration" - Desert Inspiration Connecting Teachers in the Mainstream. Proceedings of the *Desert Knowledge Symposium 2008 - Developing Desert Directions: Rethinking the Future*. 3-6 November.
- * **Seemann, K.** (2006). Housing for Sustainable Livelihoods: the role of schooling. Proceedings of the *Sustainability of Indigenous Communities Conference*. 12-14 July.
- * **Seemann, K.** (2006) The Role Values Plays in Forging Skill and Task Performance: Case Studies In Cross-Cultural And Innovation Education. Conference Proceedings of

the *“Values in Technology Education.”* 4th Biennial International Conference on Technology Education, Centre for Learning Research, Griffith University, 6-9 December. Crowne Plaza, Surfers Paradise, Gold Coast, Queensland, Australia

*Turner, A. & **Seemann, K.** (2006) It’s time to study values at the core of Food Technology Education. Conference Proceedings of the *“Values in Technology Education.”* 4th Biennial International Conference on Technology Education, Centre for Learning Research, Griffith University, 6-9 December. Crowne Plaza, Surfers Paradise, Gold Coast, Queensland, Australia.

*Parnell, M. and **Seemann, K.** (2005) Developing Lifecycle Models for Sustainable Investment in Desert Communities, Published conference proceedings: Building For Diversity National Housing Conference 2005, Perth Convention Centre, Western Australia: pp337-347.

***Seemann, K.** (2004) *Australia’s Innovation Agenda for Technology Teachers.* Conference Proceedings of the *“Learning for Innovation in Technology Education.”* 3rd Biennial International Conference on Technology Education, Centre for Learning Research, Griffith University, 9-11 December. Crowne Plaza, Surfers Paradise, Gold Coast, Queensland, Australia. , Vol: 3, pp. 92-100.

***Seemann, K.** (2004) *Capacity for Abstraction and the Applied Technology Learner.* Conference Proceedings of the *“Learning for Innovation in Technology Education.”* 3rd Biennial International Conference on Technology Education, Centre for Learning Research, Griffith University, 9-11 December. Crowne Plaza, Surfers Paradise, Gold Coast, Queensland, Australia. , Vol: 3, pp. 101-106.

*Turner, A. & **Seemann, K.** (2004) *Innovation Education in NSW Design and Technology Curriculum.* Conference Proceedings of the *“Learning for Innovation in Technology Education.”* 3rd Biennial International Conference on Technology Education, Centre for Learning Research, Griffith University, 9-11 December. Crowne Plaza, Surfers Paradise, Gold Coast, Queensland, Australia. , Vol: 3, pp. 147-155.

***Seemann, K.** (2002) *Constructivist Verses Behaviourist Approaches in Design Computing Education: Implications for the Innovation Economy.* Proceedings of the 2nd Biennial International Conference on Technology Education 5-7 December. Park Royal Surfers Paradise, Gold Coast, Queensland, Australia.

***Seemann, K.** (2002) *Holistic Technology Education.* Proceedings of the 2nd Biennial International Conference on Technology Education 5-7 December 2002. Park Royal Surfers Paradise, Gold Coast, Queensland, Australia.

***Seemann, K.,** Swan, E., Kennedy, P., Babbage, & P., O’Connor, S. (2000) *Exploring Alternate Technology Teacher Education Models: Some Preliminary Findings.* Proceedings of the 1st Biennial International Conference on Technology Education, Surface Paradise, 7-9 December.

***Seemann, K.** (2000) *Can Our Schools Deliver An Education In Technology?* Proceedings of the 1st Biennial International Conference on Technology Education, Surface Paradise, 7-9 December.

***Seemann, K.** (2000) *Technacy Education: Towards Holistic Pedagogy and Epistemology in General and Indigenous/Cross-Cultural Technology Education.* Proceedings of the 1st Biennial International Conference on Technology Education, Surface Paradise, 7-9 December.

Commenced Academic career June 1999: graduated with PhD UNSW 1997

***Seemann, K.** (1998) "Transport Access and Equity for low Income Groups: the impact of housing policy proposals", 20th Conference of Australian Institutes for Transport Research, Sydney University (9 pages)

***Seemann, K.** (1990) *Waste Management in Remote Aboriginal Communities*, 14th Regional UNESCO Seminar on Technology for Community Development, Alice Springs, NT JULY

***Seemann, K.** (1990) *Introduction to Technacy: Concepts and Curriculum in Remote Aboriginal Communities*, 14th Regional UNESCO Seminar on Technology for Community Development, Alice Springs, NT JULY

***Seemann, K.** (1990) *Introduction to Technacy: Concepts, Curriculum and the Technology Message Experienced in Aboriginal Communities*. First National Science and Technology Communicators Conference, National Science and Technology Centre (QUESTACON) ACT August.

Walker, B & Seemann, K. (1989) "*Technology and Development In Remote Aboriginal Communities - Technical Training for the Future.*" World Engineering Conference, Australia, Sydney.

***Seemann, K.** (1987) ATWORK: Features of Similar Programs Overseas, published in the Aboriginal Technical Worker Feasibility Study Report 1989/90, Centre for Appropriate Technology, Alice Springs, NT (18 pages)

Other (Invited papers unpublished, and published foreword)

Seemann K. (2009). "Understanding the Sustainability of Desert Settlements: From gender issues of socio-technical systems to the implications of the power curve with connected towns". Paper presented to the *Curtin University Sustainability Policy Unit - Symposium*. Curtin University, 2nd April, Fremantle.

Commissioned Research Reports

Seemann, K. (1988) *The Aboriginal Technical Worker Project: interim report*, in the National Conference on Science and Technology for Remote Communities, Murdoch University WA July. (25 pages)

***Seemann, K.** and Fee, A (2003) *The Knowledge Economy*

What it is, where it comes from and what it means to Technology Education in Australian schools, A

National Discussion Paper Commissioned by Quality Schools Branch, Department of Education Science and Training (DEST): Available at **NSW Department of Education and Training** via:

<http://www.curriculumsupport.education.nsw.gov.au/primary/scitech/prolearn/refer/index.htm>

Unpublished Thesis by Research Dissertations (*fully peer reviewed and examined)

***Seemann, K.** (1997) "*The Socio-Technical Sustainability of Shelter Systems and Hardware in Remote Indigenous Australian Communities*", Ph.D. Thesis, Faculty of Built Environment, School of Architecture, UNSW, Aust (290pages, +30 pages appendices).

***Seemann, K.** (1986). "*An Argument for Industrial Arts in Education. An alternative to the Current Manual Arts Model*", Education Honours Thesis in Marxist Philosophy of Education, University of NSW. (76 pages)

***Seemann, K.** (1986) "Appropriate Technology in the Solomon Islands: A Micro hydroelectric Project in Iriiri" Major Project Dissertation for BSc, University of NSW. (122 pages)