NEWS and VIEWS

Creating Contexts for including Indigenous Knowledges and Pedagogies in Science Learning - The Role of Teacher Identity, Self-Efficacy and Agency

Call for Participation

The University of Winnipeg is seeking participants for a project exploring teacher self-efficacy and identity development while including Indigenous Knowledges and pedagogies in science learning programs. The goal is to gain a better understanding of: how Indigenous knowledges and pedagogies are being expressed and taught; educator confidence level in reintroducing Indigenous knowledges and pedagogies; the role of teacher identity in reintroducing Indigenous knowledges and pedagogies; and institutional and/or individual motivators and inhibitors towards reintroducing Indigenous knowledges and pedagogies into education programs, research, and other activities.

If you would like to be involved or require additional information, please contact: Natalie Swayze: E: n.swayze@uwinnipeg.ca, T: 1-204-996-2784

Understanding Language Initiative

I am pleased to announce the launch of our new national initiative entitled "Understanding Language." The Common Core State Standards in English language arts and mathematics have already generated reform energy in education. Our initiative seizes this moment to develop a new level of awareness about the role of language in understanding and displaying knowledge of academic content. We want to leverage this realization to improve academic outcomes, especially for English Language Learners (ELLs) but for all students, through effective instructional practices and necessary policy supports at the state and local levels.

On the initiative website, you will see our first step – an in-depth analysis of the language demands and opportunities contained in the Common Core State Standards and Next Generation Science Standards. You can find papers by national experts specially prepared for this initiative, and discussed at a major national conference held at Stanford this past January. The main message is that language matters -- it has always mattered, but it matters especially so with the new standards. The implication is that content and language specialists need to collaborate to effectively educate ELLs, and we need to develop the necessary tools and systems to make this happen.

Practical guides will soon follow. The content and language partners on the Understanding Language team, collaborating with school districts and states through the Council of Great City Schools and the Council of Chief State School Officers, are taking the next step of identifying, developing, testing, and sharing
exemplars of language-rich practices in the content areas. This next step for our initiative will be shared through this website in the upcoming months. And further steps are being taken to engage the education community with our resources and our message to create better supports at the federal, state, and local levels.

Please take a look through our foundational papers on this site, sign up for our webinars and our feeds, and please collaborate with us. We plan to make this into a good example of a true online learning community.

Okhee Lee
Founding Partner, Understanding Language with Kenji Hakuta and Maria Santos, Co-Chairs
http://ell.stanford.edu/

Indigenous knowledge has authentic place in higher education system
By Patrick Nelson
Dr Payi Linda Ford from Charles Darwin’s University’s Northern Institute has drawn from traditional knowledge and the wisdom of the Tyikim Elders to propose an alternative model for Indigenous higher education.

Dr Ford outlined her ideas in the book "Aboriginal Knowledge Narratives and Country: Marri Kunkimba Putj Putj Marrideyan", launched by Pro Vice-Chancellor, Indigenous Leadership, Professor Steve Larkin in Darwin recently.

"The book is based on a participatory action research project that I undertook with the Rak Mak Mak Marranunggu people (of the Finniss River region, southwest of Darwin) that allowed me to examine the metaphors and stories of their spirituality that underpin their knowledge systems," she said.

As a mother, academic, researcher, educator and an Elder of the Mak Mak Marranunggu people, Dr Ford is uniquely placed to comment on Indigenous knowledge systems and the benefit they hold for all Australians.

Dr Ford addresses a series of teaching and learning principles in her model, including narrative as pedagogy, relationality as pedagogy, discursiveness as pedagogy, political integrity as pedagogy, indigenist research as pedagogy and a holistic approach to Indigenous higher education.

She said Australian universities needed to move beyond the colonising constructions of Indigenous peoples and their knowledge systems in education, research and access to higher education for Indigenous students.

"There is an authentic place for Indigenous Knowledge in Australia's Higher Education system and that the Mirrwana/Wurrkama model of Indigenous higher education provides Aboriginal people with a firm foundation for bringing forth their own knowledge systems to serve their own educational interests."

(From Charles Darwin University E-News 4-8 May 2012)

INDIGENOUS ASTRONOMY

Eagle Dreaming
Paul Curnow recently revised Eagle Dreaming on his website. It can be visited at:
Guest lecture
Dr Ragbir Bhathal gave a guest lecture to students studying Aboriginal Studies at the University of New South Wales last week. He discussed the social cultural astronomy of the Aboriginal people and their interpretations of the night sky. Since Captain Cook took possession of Australia in 1770 in the name of King George III, he posed the question as to whether the present Queen of England owns Australia? [Perhaps your readers can answer this interesting question. I would like to hear from my Aboriginal friends.]

New book on aboriginal astronomy
Dr [Ragbir Bhathal](#) is working on a new book on Aboriginal astronomy. He would like to receive any information that is relevant to Aboriginal astronomy from people working in this area or who are just interested in Aboriginal astronomy. All contributions will be duly acknowledged in the usual manner.

Boorong Astronomy
John Morieson

I’m pleased to report that Boorong astronomy is being showcased in the Macedon Ranges Shire during Reconciliation Week 2012. This astronomy was recommended by the Macedon Ranges Reconciliation Group and it featured at the official opening at the Kyneton Town Hall on Monday 28th May. This was the fifteen minute SEAC conference presentation at Evora in Portugal in September 2011. SEAC is the European Society for Astronomy in Culture. John Morieson has done the cultural research from the account by William Stanbridge and Alex Cherney and his designers have placed it into the free Stellarium computer program. Downloaded as a DVD, along with a copy of the explanatory booklet *Stars Over Tyrrell*, it becomes a handy educational kit for an introduction to Aboriginal astronomy as well as traditional culture. So the MRRG gave these two items to each of the six secondary schools in the Shire. The DVD tells the story of the Boorong clan’s travel to the north to visit their Dadi Dadi relations who lived along the Murray River. And their travel south back home again, walking at night to avoid the heat of the day. So they walk towards their Totemic Ancestors in the northern sky on the way there, and on the way back they walk towards their Creator Being Ancestors in the southern sky. In his concluding remarks, Adam Mooney, co-chair of the MRRG said; “In his friendship with the Boorong family and his respect for their culture William Stanbridge provides a model for reconciliation for us today.”

Copies of the DVD and the explanatory booklet are available from John Morieson, 03 54223390, 31 Hillsboro St, Carlsruhe Vic 3442, or starman@vtown.com.au

Australian Aboriginal Astronomy
The blog of the Aboriginal Astronomy Project
[http://aboriginalastronomy.blogspot.com/](http://aboriginalastronomy.blogspot.com/)

Recent additions include:
- Sky-Shaping (A Poem by Michele Bannister)
- Cultural Astronomy Lecture Tour by Clive Ruggles
- Eagle Dreaming
- Meamei - The Seven Sisters
- Ngadjuri Astronomy, South Australia
- Monuments Tied to the Sky: Ancient Astronomy and its Global Heritage
- The Magellanic Clouds

Cultural Astronomy Lecture Tour by Clive Ruggles.
Professor Clive Ruggles will be giving a lecture tour in Australia and New Zealand from late-May until mid-June. His lectures will cover various aspects of cultural astronomy, from the astronomy of megalithic structures in Europe to archaeoastronomy and ethnoastronomy in Peru and Hawaii.
For information about each lecture, click on the links below or visit the blog above.

**Australia**

- **Wednesday, 30 May:** [Public Lecture](#), Sydney Observatory (Sydney)
- **Friday, 1 June:** [Research Seminar](#), Macquarie University (Sydney)
- **Saturday, 2 June:** [Public Lecture](#), Adelaide Planetarium (Adelaide)
- **Monday, 4 June:** [Public Lecture](#), Australian Museum (Sydney)
- **Tuesday, 5 June:** [Research Seminar](#), University of Sydney (Sydney)
- **Wednesday, 6 June:** [Transit of Venus](#), Macquarie University (Sydney)

**New Zealand**

- **Thursday, 7 June:** [Research Seminar](#), University of Otago (Dunedin)
- **Thursday, 7 June:** [Public Lecture](#), Classical Association of Otago (Dunedin)
- **Saturday, 9 June:** [RASNZ Beatrice Hill Tinsley Lecture](#) (Christchurch)
- **Mon-Wed, 11-13 June:** [Third International Starlight Conference](#) (Tekapo)
- **Thur-Fri, 14-15 June:** [IAU Astronomy & World Heritage WG meeting](#) (Mount Cook)
- **Sunday, 17 June:** [RASNZ Conference 2012](#) (Carterton)
- **Sunday, 17 June:** [RASNZ Beatrice Hill Tinsley Lecture](#) (Carterton)
- **Monday, 18 June:** [RASNZ Beatrice Hill Tinsley Lecture](#) (Napier)
- **Tuesday, 19 June:** [RASNZ Beatrice Hill Tinsley Lecture](#) (Auckland)

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**RESOURCES**

**Indigenous primary school experiences**


Kate Reid discusses the findings of a seven-year study of the literacy and numeracy achievement of Indigenous students as they progress through primary school.


**Indigenous Education Resource Update Newsletter (Australia)**


**International Journal of Environmental and Science Education**

I am happy to inform you that special issue of International Journal of Environmental & Science Education on Mind, Brain, and Education has now been released and you may access its content freely from the website: [http://ijese.com/currentissue.htm](http://ijese.com/currentissue.htm)

Dr. Mehmet Bahar, Editor-in-Chief

**Aboriginal Knowledge Narratives & Country: Marri Kunkimba Putj Putj Marrideyan**

EURASIA Journal of Mathematics, Science & Technology Education
I am happy to inform you that the May 2012 issue of the EURASIA Journal of Mathematics, Science & Technology Education has been published online.

You can search, view, and download all published articles for free since 2005 by visiting the journal website: www.ejmste.com. The Eurasia Journal is a peer reviewed journal published four times a year in February, May, August, and November.

Muhammet UŞAK
Executive Editor

Contemporary Issues in African Sciences and Science Education
In this careful articulation of science, the editors provide an intellectual marriage of Indigenous science and science education in the African context as a way of revising schooling and education. They define science broadly to include both the science of the natural/physical/biological and the 'science of the social'. It is noted that ... Click here for a free preview and full description.

Capes of Good Hope
The art of creating cloaks made of possum skin was almost lost. Now these ancient skills are being revived, using modern tools.

IHPST Newsletter
The May IHPST newsletter is now available on the web at: http://ihpst.net/newsletters/

Please note at item #1 that the current journal issue contains Select Proceedings of the First IHPST Latin American regional conference. And at item #4 that submission date for the First IHPST Asian regional conference is June 1st.

Recent papers
Abstract: Some Indigenous students are at risk of academic failure and science teachers have a role in salvaging these equally able students. This article firstly elucidates the research entailed in Indigenous science education in Australia and beyond. Secondly, it reviews the cultural and language barriers when learning science, faced by middle and senior year students of Aboriginal and Torres Strait Islander descent. Finally, it outlines the effective strategies that science teachers could adopt to better engage these students in learning school science. In summary, the article will highlight the need for teachers to realise the importance of crossing borders from teachers' school science culture to students' culture. This holds implications for teaching practice and teacher identity in today's classroom.

Byline: Indigenous Ways of Knowing has been making its way out of tribal colleges into mainstream universities, but this method of teaching has its critics.
CONFERENCES

9th International Conference on Hands-on Science (HSCI'2012)
Antalya, Turkey
17-26 October 2012

The 9th International Conference on Hands-on Science (HSCI'2012) including 1st Children Summit on Science and Environmental Education (HSCI-EE) will be held on 17th - 26th October 2012 in Antalya, Turkey.

For further information on the conference please visit www.hsci2012.org

2012 IHPST Conference
Seoul National University (SNU), Seoul, South Korea
18-20 October 2012.

The theme of the Conference is Exploring Science: Contributions from History, Philosophy and Education of Science. Invited speakers for the conference include Dr. Hasok Chang (Cambridge University), Dr. Igal Galili (Hebrew University of Jerusalem), Dr. Alice Wong (University of Hong Kong), Dr. Norman Lederman (Illinois Institute of Technology), and Dr. Yung Sik Kim (Seoul National University). It is hoped that two academic traditions, the history and philosophy of science and science education, will be meaningfully integrated in the conference through an active exchange of ideas, research results and expertise shared both disciplines.


Please visit the website to submit proposals and register for the conference http://ihpst2012.snu.ac.kr
The second STEM in Education Conference is in Beijing this year. You may have heard about this already. Here are some important dates:

- Paper submission: 1 March to 30 June, 2012.
  - Research papers (Long paper, 8 pages; Short paper, 4 pages; Poster paper, 3 pages)
  - Workshop/Showcase (1-2 pages, only abstract needed)
- Notification of acceptance: 30 July, 2012
- Last date for registration: 1 September, 2012

For more details, please visit to the conference website: [http://stem2012.bnu.edu.cn/cfp.html](http://stem2012.bnu.edu.cn/cfp.html)

The 2012 National Indigenous Health Conference
Gold Coast, Queensland
5-7 December 2012

Many Pathways, One Outcome is designed to bring together both government and non-government agencies who are working in the field of Indigenous health with the belief that working together can close the gap between the state of Indigenous Health as compared to the health of mainstream Australians. It is envisaged that up to 200 delegates will attend the 2012 National Indigenous Health Conference which is scheduled on 5th – 7th of December 2012 in the Gold Coast.

For many years, the provision of Aboriginal health services had been broken and fragmented when it comes to delivery of primary health services. There were government providers and grassroots communities’ Aboriginal medical services where in many cases, duplication of services occurred.

However over time, service providers have joined forces in not just the physical provision of services but also in such fields as research, health education and even the training of staffs in order to improve Indigenous health, in general.

This gathering will highlight some of the existing indigenous health programs currently implemented in Aboriginal communities and provide a unique opportunity for delegates and speakers to see the power of people networking together in one place, at one time with similar goals and exchange information regarding the successes and challenges that workers involve in implementing Aboriginal health programs faced. Hence, we encourage grassroots communities to participate and present their existing, successful programs during the event.

For more details visit [http://www.indigenoushealth.net/](http://www.indigenoushealth.net/).

epiSTEME 5: Fifth International Conference to Review Research on Science, Technology and Mathematics Education
Homi Bhabha Centre for Science Education, TIFR, Mumbai, India
7-11 January 2013

The Conference, epiSTEME-5, is the fifth in a series of biennial conferences aimed at reviewing research conducted world-wide in science, technology and mathematics education. It is being organised by the Homi Bhabha Centre for Science Education, a National Centre of the Tata Institute of Fundamental Research, Mumbai, India.

Science, technology and mathematics education (STME) have, in recent decades, emerged as lively new research areas. This research, inspired by issues of learning and teaching, has clear uniting themes in the
cognitive, pedagogical, historical, philosophical and socio-cultural aspects of the sciences. The epiSTEME conferences occupy a unique position among conferences and bring together researchers in these foundational areas as well as from the domains of science, design and technology and mathematics education. Conference epiSTEME-5 continues this tradition of interdisciplinary exchange.

The name epiSTEME connotes, at one level, a systematic study of knowledge, while as an acronym it suggests a meta-view of science, technology and mathematics education. The previous epiSTEME conferences, episteme-1 in 2004, epistem-e-2 in 2007, episteme-3 2009 and episteme-4 in 2011, have catalyzed collaborative programmes among researchers and educational practitioners in India and abroad. Within India, they have helped to initiate and foster linkages between theory, empirical research and the activities of grass root organizations.

This time, we are also co-hosting the 20th International Conference on Conceptual Structures (ICCS), from January 10-12, 2013. The special theme for this year will be "Conceptual Structures for Education Research". We plan to organize one day of common sessions to facilitate exchange of ideas addressing the two research communities during the epiSTEME 5.

Please check updates from the conference home page: http://episteme5.hbcse.tifr.res.in/.

**International Science, Mathematics and Technology Education Conference (ISMTEC) 2013**
Bangkok, Thailand
17-20 January 2013

The International Science, Mathematics and Technology Education Conference (ISMTEC) 2013 will take place January 17-20, 2013 at the Bangkok International Trade & Exhibition Centre Thailand. The conference theme is, “Transforming Science, Mathematics and Technology Education.”

Proposals for concurrent sessions may now be submitted through the conference website at:
http://www.ismtec2013.org/

Proposals are due by August 31, 2012. If you have any questions, please contact ismtec2013@ipst.ac.th.

**NARST International Conference**
Rio Grande, Puerto Rico
6-9 April 2013


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**CALENDAR OF EVENTS**

This is mostly a summary of upcoming conferences. More details may have been given in this or previous bulletins as shown. A web-based contact is usually included. Inclusion of conferences in this list is not to be read as an endorsement of the conference.
2012

June 2012

July 2012
2-5 July: International Association for the Advancement of Curriculum Studies (IAACS), Rio de Janeiro, Brazil http://www.periodicos.proped.pro.br/iviaacs/ (April12)


September 2012
21-23 September: Oceania Society for Conservation Biology conference, Charles Darwin University, Darwin, NT. (www.oscb2012.org) (June12)

October 2012
12-15 October: International Conference on Science Education 2012 (ICSE2012, Nanjing, China) Nanjing University, Nanjing, China http://edu.nju.edu.cn/zbh/icse2012/ (April12)

17-26 October: 9th International Conference on Hands-on Science (HSCI’2012) including 1st Children Summit on Science and Environmental Education (HSCI-EE), Antalya, Turkey (www.hsci2012.org) (June12)

18-20 October: 2012 IHPST Conference, Seoul National University (SNU), Seoul, South Korea http://ihpst2012.snu.ac.kr (June12)


November 2012

24-27 November: 2nd STEM in Education Conference, Beijing China (http://stem2012.bnu.edu.cn/cfp.html) (June12)

December 2012
5-7 December: The 2012 National Indigenous Health Conference, Gold Coast, Queensland (http://www.indigenoushealth.net/) (June12)

2013

January 2013
7-11 January: epiSTEME 5: Fifth International Conference to Review Research on Science, Technology and Mathematics Education. Homi Bhabha Centre for Science Education, TIFR, Mumbai, India (http://episteme5.hbsce.tifr.res.in/) (June12)

April 2013

June/July 2013
ASERA 2013: Wellington, NZ
CONASTA 62: Melbourne, Vic.

September 2013
29 September – 3 October: ICASE World Conference 2013, Kuching, Sarawak, Malaysia (http://www.icase2013.org/) (April12)