NEWS and VIEWS

National Aboriginal and Torres Strait Islander Education Conference

The 2011 National Aboriginal and Torres Strait Islander Education Conference, *Strong Start, Bright Future* was held in Darwin 17-20 October 2011.

PowerPoint presentations can be examined by visiting the conference website at http://www.natsiec2011.org/home.

Research project to preserve Indigenous languages in NT

Literature in more than 16 Northern Territory Aboriginal languages will be preserved after Charles Darwin University researchers secured $430,000 as part of the Australian Research Council's 2012 Major Grants Announcement.

New researcher to identify better education models for bush

Charles Darwin University’s The Northern Institute will make a significant contribution to a research project into remote education when Senior Research Fellow Dr Melodie Bat takes up a new position at Alice Springs campus in January.

“The core of the project will be to identify better ways to deliver education in the bush,” Dr Bat said. “It’s part of a broader strategy to invest in Aboriginal and Torres Strait Islander people, to redress economic disadvantage and to strengthen the voice of the community.”

Dr Bat said the research project was being run by the Cooperative Research Centre for Remote Economic Participation, a partnership organisation led by Ninti One that seeks to deliver solutions to economic disadvantage in remote Australia.

Charles Darwin University is a key participant in the CRC REP.

The project will seek to identify education models that can achieve higher retention rates among Aboriginal and Torres Strait Islander children, higher quality teaching programs that recognise local needs and cultures, and higher retention rates of quality teachers and principals who see a career in remote education.
“I’ll be gathering the wisdom from previous research projects … and distil what has been shared, said and thought in the past, as well as seeking to understand the current and very complex education systems in remote communities today.

“It will be the biggest project of its kind in remote communities; my dream job,” she said.

Dr Bat will come to CDU from the Batchelor Institute of Indigenous Tertiary Education (BIITE), where she has worked for the past six years.

She has extensive research experience in remote and Indigenous education, leadership and working in Central Australia.

Her Masters in Education was one of the first early literacy research projects undertaken in remote NT Aboriginal communities and her doctoral research into teacher education at BIITE was timely, given the ongoing national review into Indigenous higher education in Australia.

(Charles Darwin University media unit, http://ext.cdu.edu.au/newsroom/a/2010/Pages/Newresearchertoidentifybettereducationmodelsforbush.aspx)

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**INDIGENOUS ASTRONOMY**

“Aboriginal Astronomy”

There is a video of Ray Norris’s presentation at CONASTA 60 in Darwin in July this year. It can be seen at http://moodle.asta.edu.au/mod/page/view.php?id=58.

CONASTA is the annual conference of the Australian Science Teachers Association and Ray’s presence there was sponsored by the CSIRO.

**Aboriginal Astronomy Project**

It’s been an exciting few months for the Aboriginal Astronomy Project. On 22 September, I flew to Melbourne to appear on a panel about Indigenous Astronomy for the Australian Centre for Moving Image (ACMI) exhibition, “Visions of Space”. Nick Lomb wrote a piece about the event for Sydney Observatory’s blog. On 4 October, BBC World Service – Discovery ran an 18-minute radio program on Aboriginal astronomy discussing our research, mostly related to Wurdi Youang. Our work on Aboriginal stone arrangements and a possible link to astronomy was also featured in the Sydney Morning Herald on 11 October. Our blog recently surpassed 25,000 views and was featured in an article entitled “Dreaming on the Stars” in the Campus Review on 17 October. I have been helping Sydney Observatory with their Indigenous Astronomy program and I recently submitted my doctoral thesis on Aboriginal Astronomy. Finally, we were elated to receive a generous grant from Melbourne Community Foundation to continue our work!

Duane Hamacher – The Aboriginal Astronomy Project, Macquarie University.

The following are topics that have been dealt with on the project blog in the past two months.

**November** (1)

- A Call for Students

**October** (5)
Aboriginal astronomy videos
I thought this may be of interest to your readers:

http://www.youtube.com/playlist?list=PL6E95437241445B23

Kind regards, Paul Curnow

This is a video of an outside presentation by Paul Curnow at Lake Tyrrell last year. There are also links to other You Tube videos which might be of interest.

You should also consider visiting Paul’s website, if you haven’t already, at http://sa.apana.org.au/~paulc/index.html.

Aboriginal astronomy at the Melbourne Museum
Melbourne Museum is going to erect an interactive wall panel of Aboriginal constellations to engage visiting children (while Bunjilaka is being redeveloped)"who can press buttons to see different constellations light up". The southern sky of the Boorong, Stellarium version, will be a key feature in this display. Further information from Dr Tanya Hill, Curator, Astronomy. Melbourne Planetarium, Scienceworks.

John Morieson

RESOURCES

Call for papers – special issue
2012 International Journal of Science and Mathematics Education

Introduction to the Special Issue
Pedagogies of Hope: Conscientizing Culturally Relevant Teaching for Indigenous Learners in Science and Mathematics

Guest Editors
Eleanor Abrams, University of New Hampshire
Peter Taylor, Curtin University
Chorng-Jee Guo, National Changwha University of Education

For over 20 years, mathematical and scientific literacy for all students has been the goal for many national and international reforms in mathematics and science. However, indigenous students are still underachieving in mathematics and science when compared to majority students (National Center for Education Statistics, 2010; Battiste, 2002; Fu, 1999, 2003; Chien, 1998). Strong contributions have been made in recent years examining the achievement gap and contributing to our understanding of indigenous knowledge, mathematics and science education and the aspirations of indigenous students (McKinley, 2007; Barnhardt, 2005; Aikenhead, 2001; Cajete, 2000). The research is rich with descriptions about the inequalities that exist in mathematics and science education classrooms and the contexts in which they occur but less is written about how those inequities occur and are maintained.
There is a call within mathematics and science education to create culturally relevant pedagogy as a way to support mathematics and science learning among indigenous students by educating teachers about indigenous peoples’ lifestyles, suitable teaching methods, and how to integrate traditional ecological knowledge (TEK) into the curriculum (Ogunniyi, 2007; Van Eijck & Roth; 2007; Gibson & Puniwai, 2006; Russell & Russell, 1999; Ogawa, 1995). However, McKinley (2001) makes clear that researchers and educators cannot ignore power relationships in the classrooms that arise from the “relations between dominant and subordinate groups marked by histories of oppression” (pg 75).

Most mathematics and science curricula, teaching methodologies, and assessment strategies associated with mainstream schooling are based on a worldview that does not adequately recognize or appreciate indigenous knowledge or worldviews (McKinley & Stewart, 2009; Kawagley et al. 1998). Therefore, indigenous students potentially internalize negative images of their culture created and propagated by the institution of schooling as unable, historically and currently, to be producers of mathematical and scientific knowledge and indigenous students as low-achieving mathematics and science learners (Kidman, Abrams McRae, 2011). Other factors implicit in role of schooling may be causing indigenous learners to “opt out” of the learning of science and mathematics (Abrams et al, 2009).

This special issue will take a contextualized and international view of the teaching and learning of indigenous students in mathematics and science classrooms. The focus of the papers within this issue will be on the conscientization, or the making explicit, the knowledges and resources of repressed groups and to examine the structures that are designed to maintain the status quo of the majority class. Research papers will reflect international perspectives that support the excellence of indigenous students in science and mathematics and create mathematics and science classrooms that consciously build an inclusive learning community. To provide the reader with an informed perspective, the issue will include a paper that examines some of the reasons that may cause indigenous students to disengage with mathematics and science learning. These causes include power structures implicitly residing within schools as institutions, the testing regimes existing within many countries and tensions that may exists between the goals of education between majority and indigenous communities.

We invite papers from educational researchers who have conducted research with indigenous schools, teachers and communities on examining how to support the learning of indigenous students in the areas of mathematics and science. The guest editors are especially interested in contributions in the area of mathematics education. We are intending that this special issue of IJMSE be published in December of 2012. The deadline for submission of manuscripts is April 1st, 2012—earlier if possible to facilitate prompt review and revision.

Please forward any indications of interest and participation to Eleanor Abrams at the University of New Hampshire (eleanor.abrams@unh.edu).

References
Conference report: 3rd International Conference of the Science and Indigenous Knowledge Systems Project


The Science and Indigenous knowledge systems group in South Africa held their third International conference on integrating Science and IKS into the curriculum at the University of the Western Cape. The conference theme “The Melting Pot: IKS and Science” implying the oneness of knowledge was hands-on and practically oriented.

The thrust of the conference was to explore science and indigenous knowledge in such a way that both systems of thought were mobilized to improve human welfare rather than destroy our chances of survival on this delicate planet. The conference was also motivated to respond decisively to the challenges facing indigenization in South Africa, where the political will has resulted in the formulation of an IKS policy and a National IKS Office established to spearhead indigenization and the protection of community property rights in all spheres of the education, economic, industrial, law and medical practices. In education, the new curriculum policy drive has been to integrate science with indigenous knowledge, but the construal of reality by the latter is distinctly different from that of science, thus creating tensions and challenges for teachers on the one hand and teacher trainers on the other.

It is these challenges that inspired the Science-IKS group to focus its efforts on developing an exemplary science-IKS curriculum driven by an argumentation framework to accomplish the integration of science and IKS. The conference provided the necessary forum for teachers and conference participants to experience firsthand the enactment of an innovative curriculum.

Keynote Speakers at the conference were:

Prof. Meshach B. Ogunniyi, University of the Western Cape, SA ; “Science and IKS in the melting pot: Prospects and Challenges”

Dr. Mariana Hewson, Synthesis Consulting in Healthcare and Education, USA; “The education of Africa’s children, IKS and Traditional Health Practitioners”
Prof. Paul Webb, Nelson Mandela Metropolitan University, SA; “Bridging the gap between Science, Technology and IKS: Towards a shared epistemology.”


Prof. Mogege Mosimege, North West University, SA; “The Development of an IKS policy and legislation in South Africa: Intellectual Property Implications.”

Prof. Sandy Lazarus, University of the Western Cape, SA; “Creating the melting pot: Some thoughts on the curriculum as a vehicle for integrating diverse knowledges.

Prof. Fred Lubben, University of York, UK and Cape Peninsular University of Technology, SA; “Making sense of the mixture in the melting pot: Developing IKS-based curriculum materials – drawing on experiences with contextualisation”

In addition, the conference workshops allowed the pilot testing of newly developed SIKS curriculum materials using argumentation-based teaching methodologies. These included: Earth and beyond; Matter and materials – acids, bases and batteries; and Nutrition and medical plants. A further workshop focused on traditional healers’ ideas about teaching children and how these ideas might be used in the curriculum.

The conference was officially opened by the South African Deputy Minister for Science and Technology Mr. Derek Hanekom. It was also officially closed on a high note, by the Parliamentary Portfolio Committee Chairperson for Science and Technology, Dr. Nqaba, E. Ngcobo. Participants came from Congo, Namibia, Mozambique, Ghana, Germany, Nigeria, United Kingdom, United States, and South Africa.

Proceedings to this conference will be placed on Science and Indigenous Knowledge website, but in the meantime, you can request your electronic copy of the proceedings from the National Director of the SIKS Project, Prof. Meshach Ogunniyi, by writing an enquiry to: mogunniyi@uwc.ac.za.

This report is written by by Emmanuel Mushayikwa, SIKS National Project Co-ordinator, University of the Witwatersrand, Johannesburg, South Africa. Emmanuel.Mushayikwa@wits.ac.za

**Recent book**


From improved critical thinking to increased self-esteem and school retention, there are many benefits to bringing Aboriginal viewpoints into public school classrooms. In this comprehensive study, Yatta Kanu explores educational frameworks that can be effectively implemented to maximize Indigenous students' engagement, learning, and academic achievement.

Based on six years of empirical research, *Integrating Aboriginal Perspectives into the School Curriculum* offers insights from youths, instructors, and school administrators, highlighting specific elements that make a difference in achieving educational success for Aboriginal students. The work draws on a wide range of disciplines, from cognitive psychology to civics, and its findings are applicable among diverse cultural groups and in a variety of classroom settings.

Kanu combines theoretical analysis and practical recommendations to emphasize the need for fresh thinking and creative experimentation in developing curricula and policy. Amid global calls to improve outcomes for Indigenous students, this work is a timely and valuable addition to the literature on Aboriginal education.

Yatta Kanu is a professor in the Faculty of Education at the University of Manitoba. (Frontispiece)
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.

2011

December 2011
7-10 December: 2nd INTERNATIONAL CONFERENCE ON POPULAR CULTURE AND EDUCATION, Centre for Popular Culture and Education, Hong Kong Institute of Education, Conference website: http://home.ied.edu.hk/~hkpop/conference2011.html (Feb11)

2012

February 2012

March 2012
24-28 March: National Association for Research in Science Teaching (NARST) annual conference, Indianapolis IN, USA (http://narst.org/)

April 2012
13-17 April: American Educational Research Association (AERA) annual meeting, Vancouver, BC, Canada (http://www.aera.net/)

May 2012

June 2012

July 2012