



**ISFIRE 2009**

**International Symposium for Innovation in Rural Education**  
***Innovation for Equity in Rural Education***



# Symposium Program

University of New England, Armidale, NSW, Australia

11-14 February 2009



**NURI-TEIC**  
KONGJU NATIONAL  
UNIVERSITY



**UNE**  
UNIVERSITY OF  
NEW ENGLAND



**ISFIRE 2009**  
**International Symposium for**  
**Innovation in Rural Education**

***Innovation for Equity in Rural Education***

**Symposium Program**

**11 – 14 February 2009**  
**University of New England**  
**Armidale, NSW, Australia**



ISFIRE 2009 is a joint initiative of the SiMERR National Centre, at the University of New England, Australia and the NURI Teacher Education Innovation Centre, at Kongju National University, Republic of Korea.

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# ISFIRE 2009

## Welcome

Welcome to the first International Symposium For Innovation in Rural Education (ISFIRE), *Innovation for Equity in Rural Education*. We welcome participants from around the world to attend this important meeting at the University of New England in Armidale, New South Wales, Australia. We are drawn together with the common goal of improving the learning outcomes of students in rural and regional areas. ISFIRE emphasises the obligation of the global education community towards influencing policy aimed at delivering equitable and socially just outcomes for rural students. Importantly, ISFIRE offers an international forum for sharing research findings, innovative ideas and evaluated approaches linked to positive, practical action.

The overarching theme of ISFIRE 2009 concerns innovative strategies for improving equity in rural education. International data confirm that for many countries the learning achievements of students in rural areas are often significantly below those achieved by peers in metropolitan areas. This geographical divide in student achievement challenges principles of equity in education and underscores a most significant challenge currently facing global education.

In order to address this rural challenge ISFIRE has assembled an impressive list of speakers to address issues around six themes. These themes are: Promoting Rural Policy Initiatives; Nurturing the Rural Teacher Experience; Enhancing Rural Student Experience/Growth; Optimising the Curriculum; Improving Resources in Rural Schools; and Addressing Special Issues in Rural Education. These speakers will focus on important achievements in research and professional development initiatives that they have undertaken or in which they are involved.

This first ISFIRE Symposium is co-organized and financially supported by the SiMERR National Centre at the University of New England here in Australia and the NURI Teacher Education Innovation Centre (TEIC) at Kongju National University in the Republic of Korea. The facilitation of bringing these two research centres from Australia and the Republic of Korea together was through a grant from the Australia-Korea Foundation under the Australian Department of Foreign Affairs and Trade. In addition, we acknowledge financial support from NURI-TEIC at Kongju National University, the Office of the Vice Chancellor, University of New England and the Faculty of the Professions, University of New England. The commitment of these groups to the improved learning outcomes of students in rural and regional areas is acknowledged and appreciated.

This International Symposium comes at a critical time for rural and regional education. In a time when a strong education background influences more and more aspects of people's everyday lives and underpin more overtly a nation's prosperity, it appears that rural and regional communities are being marginalised. Nothing can be more destructive for rural communities than for their children to under-perform in school through reduced opportunities. Nations need to identify these limiting conditions in rural areas and address them so that all students have the opportunity to achieve their potential.

We look forward to the input, ideas, discussions and plans that will evolve out of our deliberations. We believe the problems facing students and teachers in rural and regional areas are complex but innovative solutions can be found. We also believe it is through the combined expertise of committed, knowledgeable workers in the field, such as those gathered here, that real progress can be made.



**John Pegg**  
Director, SiMERR National Centre  
University of New England  
Armidale, Australia



**Youn-Kee Im**  
Director, Education Research Institute  
Kongju National University  
Kongju, Republic of Korea



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# Wednesday 11 February: Overview

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10:00    **Registration**  
Foyer, Level 1, Education Building

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12:00    **Opening Ceremony**  
*Chair: Chris Reading*  
**Tiger Room**

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1:00    **Lunch**

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2:00    **Keynote Address: Associate Professor Patricia Hardré**  
*Chair: Terry Lyons*  
**Tiger Room**

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3:00    **Afternoon Tea**

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3:30    **Parallel Session Presentations**

**Kangaroo Room**  
Session on Enhancing Rural  
Student Experience/Growth  
Chair: Susen Smith

A1: *E-learning for Rural and  
Isolated Australians: Satellite  
delivery and improving outcomes*  
Stephen Crump

A2: *E-GATS!: Our places, our  
spaces*  
Jennifer Andrews, Michael Wilson,  
Joseph Bell

A3: *Interactive Pedagogy : The 4  
Ps*  
Darron Watt, Jean Dyason

**Kookaburra Room**  
Session on Nurturing the Rural  
Teacher Experience  
Chair: Yvonne Masters

B1: *How Will This Make Me a  
Better Teacher?: Theory, literacy  
learning, and survival*  
Michael Corbett

B2: *“Teaching in the Country  
Would Not Be So Bad”: How much  
does it cost to find out?*  
John Halsey

B3: *Improving Professional  
Learning in Rural Areas:  
Implications for teacher education  
practice from Australia and Korea*  
Myung-Sook Auh, John Pegg

**Koala Room**  
Session on Promoting Rural  
Policy Initiatives  
Chair: Jo-Anne Reid

C1: *Clustering Rural Schools in  
Korea*  
Joon-Yul Choi

C2: *Teachers’ Motivations for  
Working in Rural Schools*  
Terry Lyons

C3: *Innovation in School Science  
Through School-Community Links:  
Learning from the rural experience*  
Russell Tytler, David Symington,  
Cliff Malcolm, Valda Kirkwood

5:00    **Session Discussion**

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6:00    **Bus to dinner departs from the Symposium venue**

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6:30    **BBQ dinner at the New England Regional Art Museum**

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9:30    **Bus to Mary White College, Quality Hotel Powerhouse and Sandstock Motor Inn**

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## Keynote Address: Associate Professor Patricia Hardré

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Dr. Patricia L. Hardré holds a Ph.D. in Educational Psychology from the University of Iowa, specializing in Instructional Design and Technology, with minors in Motivation, and Measurement and Evaluation. She is an Associate Professor of Instructional Psychology and Technology at the University of Oklahoma, in Norman. She serves as a trainer and consultant to educational organizations on topics such as professional development of teachers in American Indian tribal schools, teacher utilization of educational technologies, faculty development through action research, building educational technology infrastructure and supports, and the professional development of teaching assistants.

Dr. Hardré has conducted research involving students, teachers and administrators in rural education for over a decade. Her research includes student learning, development, and retention; teacher professional development and strategic practice, school climate and teacher retention; and administrators creating a culture of place in rural schools. Her research has been published in numerous educational journals including: *The Journal of Educational Psychology*; *Educational Research and Evaluation*; *Learning and Individual Differences*; *Teacher Education and Practice*; *Leadership and Policy in Schools*; *The Journal of Experimental Education* *The Asia-Pacific Journal of Education*; *The Asia-Pacific Journal of Teacher Education*; *Motivation and Emotion*; and, *British Journal of Educational Technology*.

She serves as Chair of the National Research Committee of the National Rural Education Association (NREA) in the United States, and as Program Co-Chair of the American Educational Research Association's (AERA) Rural Special Interest Group. She was selected as a Panel Member for the National Leaders in Rural Education symposium, sponsored by the National Center on Rural Education Support, USA. Her research on the motivational strategy development of rural teachers earned the Best Research Paper Award for NREA in 2006. Her other awards include the T. Anne Cleary Distinguished Psychological Research Award, and the Hancher-Finkbine Distinguished Leadership in Graduate Education Award.

### Abstract

Rural places and schools are diverse, presenting challenges for teaching and for understanding the needs of rural teachers. The recent NCES Report on Status of Education in Rural America indicates “no measurable differences” in rural and non-rural education. However, the voices of rural teachers tell us a different story. How can we understand the needs of rural teachers? How do we nurture them, so they can give their best to teaching rural children and youth? Some answers include: accepting and supporting them and their families; supporting their efforts at all levels of school and community; educating rural community members beyond schools; reaching out and reaching in with professional development opportunities; and, creating and supporting professional communities of practice. This paper views the needs of rural teachers from both broad and close-up views, considers issues of recruiting and retaining high quality teachers, and includes the perspectives of teachers from across the US.

# Thursday 12 February: Overview (Morning)

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8:00 **Bus Pick-up to Symposium from Quality Hotel Powerhouse and Sandstock Motor Inn**

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8:30 **Wednesday in Review: John Pegg**  
*Tiger Room*

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9:00 **Keynote Address: Professor Dennis Mulcahy**  
*Chair: Greg McPhan*  
*Tiger Room*

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10:00 **Morning Tea**

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10:30 **Parallel Session Presentations**

***Kangaroo Room***

**Session on Enhancing Rural Student Experience/Growth**

**Chair: David Symington**

**A4: *Senior Secondary Mathematics and Science Lessons Using Remote Learning Teams***  
Vincent Connor

**A5: *The Reenchantment of Science Education: Towards a new vision of engaging rural gifted children in science***  
Ron Laura, Susen Smith

**A6: *The Potential of Place-based Education to Enhance Rural Students' Educational Experiences***  
Pam Bartholomaeus

***Kookaburra Room***

**Session on Nurturing the Rural Teacher Experience**

**Chair: Lorraine Graham**

**B4: *Growing Our Own: Teacher education for remote Indigenous communities in the Northern Territory***  
Alison Elliot, Brenda Keenan

**B5: *Getting Them Out There: A rural education field trip***  
Elaine Sharplin

**B6: *Encouraging & Nurturing Teachers in Small Rural Communities in Australia***  
Maxine Cooper, Jo-Anne Reid, Bill Green, Wendy Hastings, Graeme Lock, Simone White

***Koala Room***

**Session on Optimising the Curriculum**

**Chair: Dagmar Arthur**

**C4: *Superheroes in Technology***  
Sue Belford, Dale Cain

**C5: *Teaching the World's Children: Theory and practice in mixed-grade classes***  
Linley Cornish

**C6: *Developing Context-based Learning Sequences in Science: Insights into the professional development needs of rural and regional teachers***  
Greg McPhan

12:00 **Session Discussion**

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1:00 **Lunch**

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## Keynote Address: Professor Dennis Mulcahy

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Dennis is a professor in the Faculty of Education, Memorial University of Newfoundland, Canada. Before joining Memorial in 1988, he worked for eleven years as a high school English Teacher. He completed his undergraduate education at MUN (B.A. and B.Ed.) and his graduate work at the University of Toronto (Masters and Ph.D. in curriculum studies). He has taught a wide variety of courses in the general area of curriculum and instruction at both the graduate and undergraduate levels. Since 1991, he has focused his research and development work in the area of rural education and small schools. Informing this work is his interest in and commitment to the value of community-based education and small-scale school organization.

Part of his responsibility as a university professor is to play an active role in public policy debates that impact on the viability of small schools and rural communities. Dennis' interests in rural education include community-based education, multi-grade classrooms, multi-age pedagogy, the role of the local school in community development, and community resistance to school closure and consolidation. He follows closely the increased reliance on distance education as a program delivery model for small and remote rural high schools. This technology has enormous potential but also has its own challenges in providing equitable educational opportunities for rural students.

Dennis is an active member of the U.S.-based National Rural Education Association and the Rural Education Significant Interest Group of the American Education Research Association (AERA). He has served as program Chair and Chair of the Rural Significant Interest Group. He is a member of the Editorial Board of the *Journal of Research in Rural Education*, and *Education in Rural Australia*.

### Abstract

A policy of school closure and consolidation dominated rural education and schooling in Canada for most of the 20<sup>th</sup> century. In the name of reform, thousands of small community schools were improved out of existence. Children of all ages were bussed away from their home communities so as to attain the purported better education only to be had in larger, single graded schools. At the turn of the 21<sup>st</sup> century there was a realization that the small schools that could be eliminated had been and those that remained were so situated that bussing was not an option. These remote and isolated schools are mostly all-grade schools, rely heavily on combined classrooms and distance education, have fewer than 100 students and have difficulty recruiting and retaining teachers. This paper advocates that governments and educational authorities should accept the reality of these schools and develop educational policies responsive to their unique characteristics. Policy areas discussed include programming, funding, and teacher professional development and distance education. If these schools are to be successful in providing quality education, policy changes are necessary in these areas.

## Thursday 12 February: Overview (Afternoon)

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1:45 **Keynote Address: Professor Youn-Kee Im**  
*Chair: Terry Lyons*  
**Tiger Room**

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2:45 **Afternoon Tea**

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3:00 **Parallel Session Presentations**

***Kangaroo***

**Session on Enhancing Rural Student Experience/Growth**  
*Chair: Greg McPhan*

*A7: Scientists in Schools: A rural focus*  
Marian Heard, Leanne Parker

*A8: Rural Medical Education on the North Coast*  
Hudsen Birden, Sue Page

*A9: Developing a Science Challenge to Support Partnerships and Pedagogy in Rural and Regional Science*  
Coral Campbell, Damian Blake

***Kookaburra***

**Session on Nurturing the Rural Teacher Experience**  
*Chair: Linley Cornish*

*B7: The Hot Topic Community: Videoconferencing to reduce the professional isolation of teachers in rural Western Australia*  
Tania Broadley, Don Boyd, Emma Terry

*B8: Quality of Worklife for Rural and Remote Teachers; A model of protective and risk factors*  
Elaine Sharplin

*B9: Using Social Computing Tools to Connect Regional and Remote Teachers and Students in Western Australia*  
Sue Trinidad

***Koala***

**Session on Improving Resources in Rural Schools**  
*Chair: John Halsey*

*C7: Boys Building Together*  
Sue Belford

*C8: Enhancing Curriculum Choices in Vocational Education for Isolated Rural Secondary Students*  
Brendan Maher, Shelly Riddell

*C9: Technology: Improving resources in rural schools*  
Duncan Barrie

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4:30 **Session Discussion**

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5:30 **Bus to Mary White College, Quality Hotel Powerhouse and Sandstock Motor Inn**

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6:30 **Pick-up for dinner from Quality Hotel Powerhouse and Sandstock Motor Inn**

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7:00 **Symposium Dinner at Booloominbah (UNE)**

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10:30 **Bus to Quality Hotel Powerhouse and Sandstock Motor Inn**

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## Keynote Address: Professor Youn-Kee Im

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Professor Youn-Kee Im is Head of the NURI Teacher Education Innovation Center and Director of the Educational Research Institute at Kongju National University, the Republic of Korea.

### Abstract

Korean rural areas and the schools in these areas are being rapidly devastated and marginalized. Some people have been pessimistic for a long time to the extent that they believe the areas cannot be worse. In addition, the future of the schools in these areas is uncertain due to low fertility rates and an aging population. However, the future of education in the region may be optimistic depending on what philosophy we have for education. Indeed, rural areas have the potential to improve human life. In addition, we can reach a consensus to invest public resources in rural areas because these regions have been hit hard by the government policy to boost free trade and develop industry.

The purpose of this paper is to suggest future directions for the education of rural communities, which are considered as one of the most educationally disadvantaged groups. To do this, an analysis was undertaken of the existing policies, the Acts and articles that provide the context of this study. A chronological framework was adopted for analysing a series of policies after Korean Independence day.

Three key stages were identified: the first stage of quantitative expansion of educational opportunity in the 1960s, the second stage of the mergers and closures of small schools, and the last stage of the qualitatively expansion of education in the areas. The main focus of the first stage was to expand the compulsory education in the rural areas. The second stage was basically attributed to the sudden and rapid decrease in the number of students in the areas. The government started 'the small schools' merging and closing policy' of which the targets were schools suffering severely from limited number of students enrolled. The final stage was characterised by the special Act that facilitates improvement and enhancement of the quality of rural education by the collaborative efforts of all government agencies concerned.

The future directions of the policy were finally suggested. First, the focus of the policy needs to shift from the nominal expansion of educational opportunities to the real expansion of employment opportunities. Second, rural education should apply a developmental model reflecting the nature of rural life style rather than simply duplicating the model used at schools in metropolitan cities. Finally, the staffing policy for rural schools should be focused on making qualitative improvements.

# Friday 13 February: Overview

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8:00 **Bus Pick-up to Symposium from Quality Hotel Powerhouse and Sandstock Motor Inn**

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8:30 **Thursday in Review: John Pegg**

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9:00 **Keynote Address: Professor John Pegg**  
*Chair: Terry Lyons*  
**Tiger Room**

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10:00 **Morning Tea**

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10:30 **Parallel Session Presentations**

***Kangaroo***

**Session on Enhancing Rural Student Experience/Growth**

**Chair: Pam Bartholomaeus**

*A10: Katherine School of the Air QuickSmart Trial 2008*  
Sally Mackander

*A11: Freeing Working Memory to Enhance Student Growth*  
Mark Monaghan

*A12: Enhancing Rural and Regional Gifted Student Experiences: Exemplars of innovative enrichment practice*  
Susen Smith, Raymond Smith

***Kookaburra***

**Session on Nurturing the Rural Teacher Experience**

**Chair: Will Morony**

*B10: Building Sustainable Education in Science, Mathematics and Technology Education in Western Australia*  
Sue Trinidad, Tania Broadley

*B11: Answering the Needs of Teachers Who Teach K-6 Grammar: A professional development model for rural and regional schools and systems*  
Vincent Connor

*B12: Professional Development Provision for Teachers of Science and Mathematics in Rural and Regional Victoria*  
Russell Tytler, David Symington, Cliff Malcolm, Valda Kirkwood

***Koala***

**Session on Addressing Special Issues in Rural Education**

**Chair: Simone White**

*C10: Education, Relevance and Rural Development*  
Constance Khupe, Moyra Keane, Ann Cameron

*C11: Effects of School Location on the Shaping of School Organisation Culture in Korea*  
Sam-Chul Park

*C12: Enhancing Professional Experience for Isolated Pre-service Teachers*  
Yvonne Masters

12:00 **Session Discussion**

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1:00 **Lunch**

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2:00 **Keynote Panel 1 – Kangaroo Room:**  
How Can We Improve the Achievement of Student Learning Outcomes in Rural Areas?  
**Professor Im, Associate Professor Hardré** *Chair: Greg McPhan*

**Keynote Panel 2 – Koala Room:**  
How Can We Counsel and Guide Student Self-respect and Self-efficacy in Rural Areas?  
**Professor Pegg, Professor Mulcahy** *Chair: Lorraine Graham*

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3:00 **Excursion Afternoon – Including Afternoon Tea: Tour 1 – Saumarez Homestead; Tour 2 – McCrossin’s Mill-Uralla-Gostwyck**

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5:30 **Wine tasting at Petersons Wines Armidale**

6:30 **Bus to restaurants**

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7:00 **Restaurant dinner – Participants make own arrangements for returning “home”**

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## Keynote Address: Professor John Pegg

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John Pegg is Professor and Director of the National Centre for Science, ICT and Mathematics Education for Rural and Regional Australia (SiMERR National Centre). John leads a diverse team including academics in hub universities in each state and territory. Over the past four years SiMERR has been involved in over 130 projects, aimed at enhancing student-learning outcomes as well as addressing teacher professional learning and isolation in rural areas. John's work is far ranging, and is particularly known internationally and nationally for his contribution to theory-based cognition research in Assessment and Mathematics Education.

Recently he has been involved with many large-scale nationally significant projects linked to: underachieving students in basic Mathematics and Literacy, state-wide diagnostic testing programs in science, developmental-based assessment and instruction in mathematics, the validation of the NSW professional teaching standards, the ÆSOP study investigating faculties achieving outstanding student-learning outcomes, the Maths? Why Not? Project, and the Partnerships in ICT Learning Project.

### Abstract

The quality of learning outcomes should not be dependent on where a person lives. In Australia, students in rural and regional areas perform less well on international and state/territory or federal tests than their peers in metropolitan areas. The fact underscores a serious challenge for education policy and practice in Australia.

Recommendations from the SiMERR National Summit and the SiMERR National Survey point to the importance of three factors (i) an integrated approach to tackling education issues in rural Australia, (ii) an inclusive agenda including areas outside of education such as rural and regional development, infrastructure, health and social services, and (iii) a coordinated, collaboratively designed and research-supported package of programs to address the needs of rural teachers and students, rather than a collection of separate initiatives. Without each of these agendas working together, then true sustainability of any improvements will not be achieved.

Australia has not managed to bring these agendas together as yet. However, in 2004 the federal government did provide substantial funds to establish a research group involving academics from each state and territory to begin to address rural issues in a more holistic and integrated form. Overall, members of SiMERR Australia have undertaken more than 130 projects. The results of this initiative are described in this paper, as are three large-scale projects undertaken. These research programs, while very different are able to complement one another and provide a clearer picture on ways to meet different policy objectives.

# Saturday 14 February: Overview

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8:00 **Bus Pick-up to Symposium from Quality Hotel Powerhouse and Sandstock Motor Inn**

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8:30 **Friday in Review: John Pegg**

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9:00 **Keynote Address: Professor Karl Jan Solstad**  
*Chair: Chris Reading*  
**Tiger Room**

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10:00 **Morning Tea**

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10:30 **Parallel Session Presentations**

***Kangaroo***

**Session on Enhancing Rural Student Experience/Growth**

Chair: Coral Campbell

A13: *The effect of “Cyber Home School” on Korean Students’ Mathematics Achievement*  
Young-Wha Choi, Hee-Chan Lew

A14: *Social Computing: Reducing isolation in remote Australian schools*  
Chris Reading

A15: *Bullies in Cyberspace: How rural and regional Australian youth perceive the problem of cyberbullying and its impact*  
Catherine McLoughlin, Jill Burgess

***Kookaburra***

**Session on Optimising the Curriculum**

Chair: Sue Trinidad

B13: *Using Collaborative Technologies to Optimise Curriculum Outcomes for Small Rural Schools*  
Sue Belford, Dale Cain, Mike Tom

B14: *QuickSmart Numeracy: Closing the Gap in the Northern Territory*  
Jo-anne Jefferson

B15: *Giving Continuing Professional Education More Impact: Adding Bhutan-related classroom practices in Australia and action research in Bhutan to the Bhutanese Multigrade Attachment Program (BMAP) – participants’ perspectives*  
Tom Maxwell, Warren Halloway

***Koala***

**Session on Addressing Special Issues in Rural Education**

Chair: Kerry Anne Merry

C13: *Situating Practice in Rural Schools: Transience, adaptation and opportunity*  
Linley Cornish

C14: *Capturing Their Imagination: Strategies for stakeholder communication when implementing innovation in rural education*  
Cherry Stewart

C15: *The Education of Gifted Children in Rural Contexts*  
Peter Merrotsy

12:00 **Session Discussion**

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1:00 **Lunch**

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2:00 **Closing Ceremony**  
*Chair: Chris Reading*  
**Tiger Room**

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3:00 **Symposium Concludes**

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## Keynote Address: Professor Karl Jan Solstad

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Karl Jan Solstad, born 1936, was brought up in a small rural island community in the county of Nordland, Northern Norway. After finishing his teacher education in 1957, he served as a primary school teacher in small multi-grade rural schools for three years, before taking up further studies at the universities of Bergen and Oslo. His studies included mathematics, physics and psychology, and were concluded with a higher degree in education (Mag. art. 1966). He also carried out a year's research work at the University of Aberdeen, Scotland, resulting in an M.Litt. degree. In 1995 he was awarded a Dr.Philos. (PhD) at Oslo University.

Solstad was a university lecturer at Oslo University until he moved to Tromsø University, newly established in the north of Norway, where he was appointed Professor of Educational Research. During the period 1985-1999 Solstad served as Director of Education, Nordland County. In 1999 Solstad returned to full time research as a Senior Researcher at the Nordland Research Institute in Bodø. Since 2000 he has also been a Professor 2 (a part time appointment) at Nesna University College.

Since the mid-1960s Solstad has carried out research and development work, mainly concerning the challenges involved in the provision of an adequate and equitable education for young people and communities in rural areas. More specific themes that have been covered include the relationship between education and rural-urban migration, the relevance of national curricula for rural pupils and communities, the functioning of small rural schools, and the consequences of long school journeys for the well-being and physical development of the pupils. At present he is in particular engaged in three research or evaluation projects: the implementation of a new national curriculum for the Sami minorities; the effects of an ongoing process in Norway of small rural school closures; and an evaluation of the introduction of small multi-grade schools in rural Ethiopia.

### Abstract

The concern of this paper is to discuss the impact of globalisation processes on rural communities and rural schools. Although the argumentation draws primarily on experiences from the Scandinavian countries Sweden and Norway, it is supported by reference to empirical material from other European countries. Taken to the extreme, it is pointed out that small and remote rural communities may not have a future at all if the globalised market economy and an urban based global mass culture are to prevail unchallenged. Still, the declared political will of both Sweden and Norway is to keep also the sparsely populated areas populated. Education is seen as one policy area with a potential to counteract these negative trends if the applied curriculum makes room for local knowledge and themes, active learning approaches and, possibly, pupil enterprises. For education to play such a role the small and remote communities must have their own school having reasonable working conditions. A Norwegian survey demonstrates that these conditions are seriously threatened in circumstances of decentralised public management applying market economic principles for public services. With tight local budgets local level centralisation becomes a necessary choice causing both threats of, and actual closure of schools.

# Abstracts

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## Session 1 – Wednesday 11 February 2009

3:30 PM – 6:00 PM

**A1**

**Kangaroo Room**

**E-LEARNING FOR RURAL AND ISOLATED AUSTRALIANS: SATELLITE DELIVERY AND IMPROVING OUTCOMES.**

**Presenter(s):** Stephen Crump  
**Theme:** Enhancing Rural Student Experience/Growth  
**Paper type:** Abstract (Refereed)

E-learning for isolated Australians has allowed them in their own words, to “open their eyes” to the rest of Australia, and the world. In 2003, students and families in rural and remote areas of Australia began to participate in interactive distance e-learning (via satellite) as part of their ‘School of the Air’ lessons. The students had previously been reliant on two-way radio. Now, for the first time, they saw their teachers, were able to watch demonstrations, and view video-clips, PowerPoint slides, close up images from a document camera, graphic illustrations and computer animations. Students and families were brought into contact with broader national and international events through ready access to the World Wide Web as well as “closer” access to each other through email and vision. Also for the first time, adults became learners through undertaking vocational training through e-learning. This presentation will report on an ARC Linkage study headed by the author on how satellite delivery is redefining educational opportunities, self-concepts and their place in the world for the participants in our research.

**B1**

**Kookaburra Room**

**HOW WILL THIS MAKE ME A BETTER TEACHER?: THEORY, LITERACY LEARNING AND SURVIVAL**

**Presenter(s):** Michael Corbett  
**Theme:** Nurturing the Rural Teacher Experience  
**Paper type:** Paper (Refereed)

This paper is a reflection on the way that a background in sociological theory and research actually saved my teaching career by allowing me to shift from being a dispenser of knowledge to a cultural neophyte attempting to understand where he is. Teaching then is understood as a reading exercise which is undertaken in a particular place which itself needs to be read by the effective teacher. I conclude with some thoughts on what this perspective implies for literacy instruction.

**C1**

**Koala Room**

**CLUSTERING RURAL SCHOOLS IN KOREA**

**Presenter(s):** Joon-Yul Choi  
**Theme:** Promoting Rural Policy Initiatives  
**Paper type:** Paper (Refereed)

To know the effective and efficient idea for improving rural education cooperating small schools, managing educational program regionally, and clustering rural schools were reviewed. As rural schools have fewer students than urban ones, they have many difficulties to teach students. Especially small number students caused small school not to do big group activity such as a soccer or baseball. To solve these problems cooperating, managing regionally, and clustering ideas were suggested and done. They are common in terms of making a bigger group and solving small school’s problem. Even though three programs make small schools a bigger group, they do not try to integrate or close a school. They try to find an idea to solve their problems keeping their small schools. To solve small school’s problems three programs have tried to share educational programs, teachers, and facilities by using transportation system or managing regionally. Integrating small schools is needed depending on the situation. But as rural education is also important the idea keeping rural small school should be considered at first. The three ideas are very useful for rural small schools.

## E-GATS!

**Presenter(s):** Jennifer Andrews, Michael Wilson, Joseph Bell

**Theme:** Enhancing Rural Student Experience/Growth

**Paper type:** Abstract (Refereed)

Whilst Australia still parades under the mantra of “the clever country”, in 2001 a NSW Senate Committee Report endorsed previous findings into Gifted and Talented education. These findings highlighted a distinct lack of a systematic approach to Gifted and Talented education. This identified lack has continued to foster marginalization and educationally disadvantage Gifted and Talented students. Furthermore, State data indicate that Rural areas still emerge as an educationally disadvantaged group behind their metropolitan peers.

Drummond Memorial Public School is a rural primary school located in Armidale and, in partnership with local secondary schools and the New England Region, it is piloting online tailored Gifted and Talented programs in the areas of English, mathematics and science. Through a web based communication system called *Sharepoint*, identified GATS students and their teachers communicate and engage in a quality GATS program. Students who have been identified as Gifted and Talented in the areas of English, mathematics and science are provided with secondary trained teachers who act as mentors who post tasks, projects, feedback and discussions in the designated academic areas. Through mentoring, *Sharepoint* technology, and enrichment days Gifted and Talented students are able to access learning opportunities and communicate with other Gifted and Talented students to build communities of learners. Teachers are using this tool to provide for and extend students in their classroom.

## “TEACHING IN THE COUNTRY WOULD NOT BE SO BAD”: HOW MUCH DOES IT COST TO FIND OUT?

**Presenter(s):** John Halsey

**Theme:** Nurturing the Rural Teacher Experience

**Paper type:** Paper (Refereed)

Attracting and retaining high-quality teachers for rural and remote Australia continues to be a major issue for education departments and other teacher employing authorities. Historically, a wide range of incentives including extra salary, bonded scholarships and accelerated promotion have been used to staff rural schools. Expanding the number of pre-service teachers who experience teaching and living in a rural community first hand *before* they graduate may be another way to reduce problems of staffing of rural schools. Doing this would require addressing the costs for an individual to take a country pre-service placement. Using data from a national survey, the financial and personal costs of taking a rural pre-service teaching placement are quantified, together with the benefits and disadvantages, as a contribution towards achieving better resourced and more professionally designed rural pre-service teaching experiences.

## TEACHERS' MOTIVATIONS FOR WORKING IN RURAL SCHOOLS

**Presenter(s):** Terry Lyons

**Theme:** Promoting Rural Policy Initiatives

**Paper type:** Paper (Refereed)

This paper reports on the analysis of qualitative and quantitative data concerning Australian teachers' motivations for taking up, remaining in, or leaving teaching positions in rural and regional schools. The data were collected from teachers ( $n= 2940$ ) as part of the SiMERR National Survey, though the results of the qualitative data analysis were not published with the survey report in 2006. The teachers' comments provide additional insight into their career decisions, complementing the quantitative findings. Content and frequency analyses of the teachers' comments reveal individual and collective priorities which together with the statistical evidence can be used to inform policies aimed at addressing the staffing needs of rural schools.

**A3****Kangaroo Room****INTERACTIVE PEDAGOGY: THE FOUR PS**

**Presenter(s):** Darron Watt, Jean Dyason  
**Theme:** Enhancing Rural Student Experience/Growth  
**Paper type:** Abstract (Refereed)

This presentation will highlight the four key areas that lead to effective use of pedagogy in technology-supported interactive learning. They are planning, pedagogy, procedures and promotion.

**B3****Kookaburra Room****IMPROVING PROFESSIONAL LEARNING IN RURAL AREAS: IMPLICATIONS FOR TEACHER EDUCATION PRACTICE FROM AUSTRALIA AND KOREA**

**Presenter(s):** Myung-Sook Auh, John Pegg  
**Theme:** Nurturing the Rural Teacher Experience  
**Paper type:** Paper (Refereed)

This paper discusses implications for professional teacher learning that emerged in the process of developing research collaborations between two university-based research centres in Australia and South Korea. Several issues emerged as common. These include:

1. the low academic achievement of students in rural areas compared to those in metropolitan areas;
2. the willingness of Federal Governments in both countries to provide funds to help address concerns of rural education;
3. the difficulty to recruit and retain teachers in rural areas; and
4. the importance of having highly experienced and qualified teachers in rural areas.

The approach adopted by both countries to meet their common concerns was different. In Australia the focus was on school students and working professionally with in-service teachers. In Korea the focus was on improving the preparation of pre-service teachers so that they are better equipped to meet the demands of a rural placement.

This paper starts with the empirical evidence for the impact of education on economic growth; then briefly describes the purpose and structure of the two research groups. This is followed by an analysis of student performance. Some current endeavours are discussed to elaborate the approach adopted in each country. Finally, implications that inform teacher education practice are drawn from the research and professional learning activities carried out.

**C3****Koala Room****INNOVATION IN SCHOOL SCIENCE THROUGH SCHOOL-COMMUNITY LINKS: LEARNING FROM THE RURAL EXPERIENCE**

**Presenter(s):** Russell Tytler, David Symington, Valda Kirkwood, Cliff Malcom  
**Theme:** Promoting Rural Policy Initiatives  
**Paper type:** Abstract (Refereed)

There is an increase in school-community linked initiatives in school science, and a substantial proportion of these involve rural schools. This presentation will examine ways in which these initiatives offer possibilities for improved engagement of students with school science, and for teacher professional learning. The presentation draws on information obtained primarily through interviews with participants in a number of school-community linked science initiatives in rural areas, including 'innovation exemplars' from the recent Australian School Innovation in Science, Technology and Mathematics (ASISTM) project. The initiatives are analysed in terms of an 'innovation framework', concerning the ideas and purposes underlying them, the knowledge and pedagogies used, the 'actors' that were enlisted to define and support them, and their potential for sustainability. The framework provided a powerful way of understanding the synergies that operated for schools and their communities in generating and sustaining new practices in schools, and the potential of these practices to provide effective ways to engage students in science. The presentation will explore the usefulness of innovation as a way of conceptualising and supporting such initiatives, and understanding their role as productive

directions for schools, teachers and communities in rural areas. We discuss the challenges and policy directions that need to be pursued at a system level to encourage and support these practices.

## **Session 2 – Thursday 12 February 2009**

### **10:30 AM – 1:00 PM**

**A4**

**Kangaroo Room**

#### **SENIOR SECONDARY MATHEMATICS AND SCIENCE LESSON STUDY USING REMOTE LEARNING TEAMS**

**Presenter(s):** Vincent Connor  
**Theme:** Enhancing Rural Student Experience/Growth  
**Paper type:** Abstract (Refereed)

Over the past few years, participation rates in senior mathematics and science in regional New South Wales non-government schools have differed from the other sectors in the state. Of note, participation in the higher levels of mathematics (Extension I, Extension II and 2 Unit courses), chemistry and physics tend to be below state percentages, whilst General Mathematics, Senior Science and biology courses tend to be above state percentages. Coupled with this, generally, there is a weaker performance in the higher levels of mathematics, chemistry and physics courses and a stronger performance in General Mathematics, Senior Science and biology courses.

In response to this the sector has formed a Taskgroup to identify, analyse and plan appropriate responses to the issues of participation and attainment. A key element is the capacity building of significant staff members, the establishment of peer networks and learning teams. This presentation identifies the activities used to date, summaries teacher identified successful professional learning and outlines planned future strategies, including an extension of the project into junior secondary.

**B4**

**Kookaburra Room**

#### **GROWING OUR OWN: TEACHER EDUCATION FOR REMOTE INDIGENOUS COMMUNITIES IN THE NORTHERN TERRITORY**

**Presenter(s):** Alison Elliott, Brenda Keenan  
**Theme:** Nurturing the Rural Teacher Experience  
**Paper type:** Abstract (Refereed)

Remote schools in predominantly Indigenous (Australian) communities are notoriously hard to staff. City-based teachers are rarely in the position to move thousands of miles to remote communities away from family and friends. Remote schools in the Northern Territory can have a complete staff turnover in a semester or a year. Building a more sustainable school staff from within local Indigenous communities is an important goal for education authorities. A recent partnership between Charles Darwin University (CDU) and the Catholic Education Office in the Northern Territory of Australia has developed an in-place initial teacher education program (Growing Our Own) for Teacher Assistants to be delivered in five remote Northern Territory communities commencing at the beginning of the 2009 school year.

Growing Our Own is an intensive, 'place-based' and mentored teacher education program funded by DEEWR. Students are enrolled in the standard Bachelor of Teaching and Learning program and will meet normal CDU teacher education course requirements and NT Teacher Registration Board graduate competencies. The program is personalised and customised to meet each students' learning needs and delivered intensively across four school terms, rather than standard university semesters. Importantly, it draws and builds on the cultural skills and expertise of Indigenous Teacher Assistants and simultaneously aims to enrich classroom teachers' and academic staff understandings of local Indigenous cultures, knowledges and ways of knowing, being, learning and doing.

The 'two-ways' approach recognises Indigenous educators' strong sense of personal and cultural identity, their quest for positive educational futures for their communities and a desire to gain an initial teacher qualification and Northern Territory Teacher Registration. Equally, it recognises that academic staff must work in culturally effective and educationally significant ways with Indigenous learners.

This presentation reports on pedagogical, resource, logistical and cultural challenges to developing and delivering this in-place teacher education program. It highlights the core features and pedagogy of the program, the importance of transferability across curricula and across cultural domains, and its focus on communication,

thinking and problem-solving, including collaborative knowledge-building, and assessment issues. Key foci of the teaching approach are on sensitivity to conceptual and contextual considerations, integrating traditional course components in practical classroom settings, transferability of pedagogical knowledge and skills across contexts and from classroom to community, and one-to-one teaching. Indigenous teachers, like all teachers, need skills that can be applied in both specific domains and more broadly. Finally, Growing Our Own highlights ways of progressively documenting student learning outcomes to meet CDU course and teacher registration requirements.

#### **C4**

**Koala Room**

##### **SUPERHEROES IN TECHNOLOGY**

**Presenter(s):** Sue Belford, Dale Cain  
**Theme:** Optimising the Curriculum  
**Paper type:** Abstract (Refereed)

The presentation will showcase the work of a group of small rural schools in New South Wales. The presenters will share exemplar practice in the effective integration of technology into English through a collaborative mechanism involving 100 students and 40 staff and parents across 35 isolated schools.

The presentation will:

- Share the practice of a group of teachers and students using technology and higher order thinking in a collaborative manner;
- Explore the use of a problem based authentic assessment task;
- Discuss the use of narrative, dialogue and persuasive text work for primary grade students using collaborative groups and peer tutoring; and
- Identify the management tools utilised by students such as time management charts and self reflection processes to monitor their own work, along with capacity matrices to measure growth in their technology skills.

The presenters will illustrate their responses using examples of work developed by the collaborative groups.

#### **A5**

**Kangaroo Room**

##### **THE REENCHANTMENT OF SCIENCE EDUCATION: TOWARDS A NEW VISION OF ENGAGING RURAL GIFTED CHILDREN IN SCIENCE**

**Presenter(s):** Ron Laura  
**Theme:** Enhancing Rural Student Experience/Growth  
**Paper type:** Paper (Refereed)

For Albert Einstein the experience of scientific discovery involves a sense of mystery and awe at the seemingly endless wonders of nature. We believe that science education no longer captures the mystery and awe of nature in what is taught because the epistemology of how we seek to know the world is itself in large part the source of our disconnection from the world. We have lost the experience of the mysterious in our scientific dealings with nature because we have lost our connection with nature. This is why the making of good teachers into better teachers of science is not enough. In the end, better teachers are simply better at promulgating the current epistemological presumptions of science which themselves covertly encourage detachment from nature on the one hand and its sterile reconstruction on the other.

When science education loses its connection with nature, it also loses its capacity to engage students, especially those in rural contexts where distance can prohibit resources and provisions. At the affective level, gifted students in particular, need more than the intellectual challenge science might offer them. They need to be inspired by their emotional involvement within the educational process, which links with and translates into a purposeful and meaningful personal life. In the present paper, we endeavour to show that contemporary science cannot foster the mysteriousness of seeing the world scientifically without first reconceptualizing the epistemology of detachment which underpins it. The reenchancement of science and the awe of its teaching depend upon an epistemology which is itself enchanted. 'Reenchancement' pedagogy has the potential to re-engage gifted children by stimulating in them a sense of awe, mystery, purpose, and engagement that connects their perspectives, thinking, living and learning of science both empathetically and emotionally to the mystery and awe that teaching scientifically should engender.

**GETTING THEM OUT THERE: A RURAL EDUCATION FIELD TRIP**

**Presenter(s):** Elaine Sharplin  
**Theme:** Nurturing the Rural Teacher Experience  
**Paper type:** Paper (Refereed)

In order to improve recruitment of teachers to rural schools, preservice teachers need opportunities to become familiar with rural education contexts, overcome anxieties promoted by negative stereotypes and build confidence in their professional and personal abilities. Traditional approaches involve rural practicums which are not feasible for many preservice teachers. The Rural Education Field Trip provides an alternative mechanism for promoting familiarity with rural schools in a cost and time effective manner. This paper describes the Rural Education Field Trip offered by The University of Western Australia, identifying the benefits perceived by a variety of stakeholders.

**TEACHING THE WORLD'S CHILDREN: THEORY AND PRACTICE IN MIXED-GRADE CLASSES**

**Presenter(s):** Linley Cornish  
**Theme:** Optimising the Curriculum  
**Paper type:** Paper (Refereed)

Research studies consistently demonstrate that mixed-grade classes in primary schools are not inferior to single-grade classes in terms of both cognitive factors (student achievement) and non-cognitive factors (such as self-concept, confidence, liking for school, independence and responsibility). Mixed-grade classes can be formed by choice (multi-age classes) or necessity (multi-grade classes). Multi-age classes are typically urban whereas multi-grade classes are typically rural. Caution must be exercised when generalising research results because what goes on inside the classroom is more important than the label attached to the class. Nevertheless, the general question of whether established multi-age teaching strategies can be successfully adopted by multi-grade rural teachers is relevant. Teachers in developed countries have more flexibility to use a range of innovative strategies to encourage student learning. A selection of these strategies is described, and the question of their applicability in rural multi-grade schools is explored.

**THE POTENTIAL OF PLACE-BASED EDUCATION TO ENHANCE RURAL STUDENTS' EDUCATION EXPERIENCES**

**Presenter(s):** Pam Bartholomaeus  
**Theme:** Enhancing Rural Student Experience/Growth  
**Paper type:** Paper (Refereed)

Effective and socially just education for rural students needs to enable these students to achieve their aspirations. Education should also contribute to building sustainable futures for rural communities. Place-based education has the potential to deliver a quality and engaging curriculum for rural students (Hass & Nachtigal 1998; Sobel 2004). The 'Special Forever' project (Murray-Darling Basin Commission and Primary English Teaching Association) is an example of a place-based program that has promoted literary and artistic responses to the local environment amongst students in the Murray-Darling catchment area. Anthologies of oral histories are an example of place-based focus on the cultural elements of the community. There are many examples of vocational education that provide secondary school students with opportunities to prepare to participate in local industries such as aquaculture or viticulture. Less likely to be developed is a literacy or numeracy curriculum that builds on the knowledge and abilities students have already developed in these learning areas and is valued locally outside the classroom. Instead it is more likely that the literacy curriculum becomes a colonising experience for students.

This paper will review some of the literature on place-based education and critique its potential to provide opportunities for the development of engaging curriculum and contribute to the sustainability of rural communities.

## ENCOURAGING AND NURTURING TEACHERS IN SMALL RURAL COMMUNITIES IN AUSTRALIA

**Presenter(s):** Maxine Cooper, Jo-Anne Reid, Bill Green, Wendy Hastings, Graeme Lock, Simone White

**Theme:** Nurturing the Rural Teacher Experience

**Paper type:** Abstract (Refereed)

What makes rural teaching an attractive, long-term career option for Australian teachers? In what ways can rural communities, education systems and teachers work to encourage and nurture teachers to work in small rural communities throughout Australia? How does the physical and social space affect teachers work in rural communities? This presentation will focus on the ways that rural schools and their communities attract, encourage and nurture the rural teacher experience by exploring innovative approaches to education through case studies of five schools in rural communities throughout Australia.

Rural communities in Australia are multilayered and complex places with great diversity of people and social spaces. Recent economic, political, environmental, social and cultural changes alongside the impact of new technologies and broader global economic forces have drastically changed the lives of many people in rural communities.

The data for analysis in this presentation will be drawn from initial findings that are part of a larger ARC funded research project. The larger project entitled TERRAnova (new ground) in Teacher Education for Rural and Regional Australia seeks to discover the nature of successful strategies for preparing, attracting and retaining high quality teachers for rural and remote schools in five Australian states. This three year (2008-2010) investigation involves a national study of pre-service preparation and rural incentive schemes offered by both University and State teacher recruitment programs, and a study of communities where teacher retention is high.

In this presentation, the case studies of rural schools identified by communities and systems as successful in retaining good teaching staff will be analysed in order to identify initial themes about what makes rural teaching an attractive and long-term career option. What characterises and constructs rural social space today and the ways schools and communities nurture new teachers in these changing social contexts will be discussed. Themes arising from the data relating to connections to communities and professional networks that sustain teachers in such places and spaces will be examined alongside innovative professional experiences and rural learning. Key factors relating to leadership, ongoing teacher learning, school support and community practices that are successful in retaining and nurturing staff in their communities will be examined. New possibilities and solutions will be highlighted alongside the significant challenges confronting rural education globally.

## DEVELOPING CONTEXT-BASED LEARNING SEQUENCES IN SCIENCE: INSIGHTS INTO THE PROFESSIONAL DEVELOPMENT NEEDS OF RURAL AND REGIONAL TEACHERS

**Presenter(s):** Greg McPhan

**Theme:** Optimising the Curriculum

**Paper type:** Abstract (Refereed)

This presentation will report on a professional development project involving a group of teachers in rural and regional New South Wales. During the curriculum oriented project, teachers were involved in the writing of learning sequences for students in the early years of secondary schooling (Stage 4, 12-14 years age group). The starting point for the development of these units was the rationale contained in the New South Wales Junior Science syllabus that engaging learning experiences for students should be built on their prior knowledge and be set in meaningful contexts. The project provided an opportunity for teachers to work collaboratively and to reflect on relevant aspects of unit development. These included approaches to context-based learning, the development of scientific literacy, pedagogy, resourcing needs, and assessment practices. During the project, teachers were interviewed and the transcripts of these were analysed for key themes associated with their professional development. The content of these interviews forms the basis of this presentation and they provide some insights into documenting ways in which the professional development of rural and regional teachers can be met.

## Session 3 – Thursday 12 February 2009

3:00 PM – 6:00 PM

**A7**

**Kangaroo Room**

### SCIENTISTS IN SCHOOLS: A RURAL FOCUS

**Presenter(s):** Marian Heard  
**Theme:** Enhancing Rural Student Experience/Growth  
**Paper type:** Abstract (Refereed)

*“My confidence as a science teacher has increased profoundly and I have renewed passion for teaching and learning science. This enthusiasm is contagious and my students are picking it up too!”*

This is a comment from a teacher involved in Scientists in Schools, a national program that creates and supports ongoing partnerships between scientists and teachers. There are over 830 partnerships across Australia, covering many areas of science, all school sectors and all year levels. Around 45% of partnerships involve rural and remote schools.

The program aims to

1. bring the practice of real world science to students and teachers,
2. inspire and motivate teachers and students in the teaching and learning of science,
3. provide teachers with the opportunity to strengthen their knowledge of current scientific practices,
4. enable scientists to act as mentors or role models for students,
5. broaden awareness of the types and variety of careers available in the sciences,
6. enable teachers and scientists to share ideas and practices with other teachers and scientists, and
7. increase scientists' engagement with the broader community, thus raising public awareness of their work and its social and economic importance.

In this session, hear an overview of the Scientists in Schools program and learn about successful Scientists in Schools partnerships involving rural schools. Hear about the activities scientists and teachers are doing together, their successes and challenges, and the impact that the partnership has had on them and their students.

**B7**

**Kookaburra Room**

### THE HOT TOPIC COMMUNITY: VIDEOCONFERENCING TO REDUCE THE PROFESSIONAL ISOLATION OF TEACHERS IN RURAL WESTERN AUSTRALIA

**Presenter(s):** Tania Broadley, Don Boyd, Emma Terry  
**Theme:** Nurturing the Rural Teacher Experience  
**Paper type:** Paper (Refereed)

Access to quality professional learning and the opportunity to collaborate with other educators can be limited for teachers in rural and remote areas of Western Australia. A recognised need to enhance the skills of rural teaching professionals and encourage teachers in small communities to join collegial networks was established by the members of several professional organisations. A working group consisting of representatives from the Australian College of Educators-WA (ACE-WA), the Rural and Remote Education Advisory Council (RREAC), the Society for the Provision of Education in Rural Australia (SPERA) and the School of Isolated and Distance Education (SIDE) provided teachers in rural areas with the opportunity to reduce professional isolation through the provision of relevant, convenient, and cost effective in-service education. Through a videoconferencing system, accessed within the Western Australian Telecentre Network and other educational organisations, the audience connected and participated with the presenter and studio based audience for two *Hot Topics Seminars* in 2008. This paper reports on the challenges and successes encountered by the working group and the findings of the research conducted throughout 2008.

## BOYS BUILDING TOGETHER

**Presenter(s):** Sue Belford  
**Theme:** Improving Resources in Rural Schools  
**Paper type:** Abstract (Refereed)

The presentation will showcase the work of two small rural schools in New South Wales in developing a more engaging curriculum for boys. The project focused on a hands-on collaborative project between the two schools that was entirely developed through the use of remote technologies. These included video conferencing, bridgit software and the creation of a wiki to record the project and their reflections. The presenters will share the processes and product of the project.

The presentation will:

- Identify the project parameters;
- Share the processes involved in developing a collaborative practical project between two isolated small schools;
- Identify the key success strategies and the issues around remote collaboration; and
- Share the on-line product of the project and student reflections on the process.

The presenters will illustrate their responses using examples of work developed by the collaborative groups.

## RURAL MEDICAL EDUCATION ON THE NORTH COAST

**Presenter(s):** Hudson Birden, Sue Page  
**Theme:** Enhancing rural Student Experience/Growth  
**Paper type:** Abstract (Refereed)

The North Coast Medical Education Collaboration (NCMEC) is as a joint venture of the University of Sydney, the University of Wollongong, and the University of Western Sydney Schools of Medicine. This presentation introduces the NCMEC model of collaborative, interprofessional medical education and reviews the start-up phase of the program. The model focuses on the attainment of clinical and leadership skills and the development of personal and professional development traits through immersion in the clinical experience of regional/rural medical practice. The patient orientated clinical encounter drives the process. Students from the three Schools are offered comprehensive long term (one academic year) regional-rural clinical learning experiences with an emphasis on primary care at contracted primary health care delivery sites in the region.

The NCMEC model presents several challenges for providing a sound medical education experience. These include ensuring that students are exposed to a suitably varied case mix and that preceptors are capable of delivering a sound educational experience and are consistent across the region in doing so. Advantages include that the rural experience is more interdisciplinary and team-focused than the urban clinical experience, and that long term placements give students a better orientation to providing care on a long term, rather than episodic, basis. Logistical challenges have included the development of a conceptual framework agreeable to all three universities, the need to create additional clinical preceptor capacity in the region, acquisition of student accommodation, and methods of attracting students and ensuring that they are welcomed and feel a part of the communities they will be living in. Finally, the presentation addresses innovative elements of this medical education program, including interprofessional learning systems, personal and professional development of medical students, and a research agenda for students that links to existing research programs in the region.

**B8****Kookaburra Room****QUALITY OF WORKLIFE FOR RURAL AND REMOTE TEACHERS: A MODEL OF PROTECTIVE AND RISK FACTORS**

**Presenter(s):** Elaine Sharplin  
**Theme:** Nurturing the Rural Teacher Experience  
**Paper type:** Paper (Refereed)

From a longitudinal qualitative case study of 29 teachers newly appointed to rural and remote schools in Western Australia a theory and model of Quality of Worklife for Rural and Remote Teachers: Person-Environment Fit to Multiple Environments was developed. The theory identifies and synthesises the protective and risk factors associated with relocation to rural and remote schools. It posits that teachers must integrate into multiple environments: the socio-cultural community of rural Australia, the geographic location, the organisation, the workplace and a specific work role, while renegotiating familial and social relationships. By synthesising factors that impact on the quality of worklife in this way, educational systems, communities and individuals can work to minimise risk factors and maximise protective factors to enhance quality of worklife and ultimately improve the retention of teachers in rural and remote areas.

**C8****Koala Room****ENHANCING CURRICULUM CHOICES IN VOCATIONAL EDUCATION FOR ISOLATED RURAL SECONDARY STUDENTS**

**Presenter(s):** Brendan Maher, Shelly Riddell  
**Theme:** Improving Resources in Rural Schools  
**Paper type:** Abstract (Refereed)

This presentation will showcase the work of a group of small rural schools in New South Wales. Schools with very small cohorts of senior students aggregate their numbers across a cluster of schools and present a broad curriculum. Lessons are delivered by electronic and other means, allowing for both synchronous and asynchronous learning activities. Students work within their own schools, but are supported by the combined expertise of the cluster's teachers.

**A9****Kangaroo Room****DEVELOPING A SCIENCE CHALLENGE TO SUPPORT PARTNERSHIPS AND PEDAGOGY IN RURAL AND REGIONAL SCIENCE**

**Presenter(s):** Coral Campbell, Damian Blake  
**Theme:** Enhancing Rural Student Experience/Growth  
**Paper type:** Paper (Refereed)

In 2007 the researchers decided to investigate the development of a "science challenge" as a means of engaging students in science. They wanted to ensure that whatever was developed was sustainable, addressed the needs of students and provided some answers for the dilemma of equitable education in regional and rural areas. A literature search indicated that whilst science competitions were not new, one which was based on school-community partnerships and involved students in the solving of real problems, was quite different. This paper will report on the development of the science challenge with reference to the viewpoints of teachers, community and industry participants.

**USING SOCIAL COMPUTING TOOLS TO CONNECT REGIONAL AND REMOTE TEACHERS AND STUDENTS IN WESTERN AUSTRALIA**

**Presenter(s):** Sue Trinidad  
**Theme:** Nurturing the Rural Teacher Experience  
**Paper type:** Paper (Refereed)

This paper describes the research undertaken in Western Australia that was part of the nationally funded National Centre for Science, ICT, Mathematics Education for Rural and Regional Australia (SiMERR) research project investigating 'Social Computing Enhancing Learning in Remote Australia'. Social Computing driven by Web 2.0 technology enable rich social experiences of groups via the Internet. An overview of two case studies using Social Computing is presented; describing how the project was established and run during 2007. Data collected and analysed demonstrate the outcomes that such projects have on students and teachers in regional and remote Western Australia. The findings indicate the potential for social computing to be an extremely powerful educational tool for learners and their teachers. Issues and challenges are also discussed as we attempt to connect geographically dispersed groups via technology in regional and remote areas.

**TECHNOLOGY: IMPROVING RESOURCES IN RURAL SCHOOLS**

**Presenter(s):** Duncan Barrie  
**Theme:** Improving Resources in Rural Schools  
**Paper type:** Abstract (Refereed)

Late last year, the NSW Department of Education and Training (DET) announced a major contract with Hewlett-Packard (HP) to provide schools across New South Wales with access to the best available technology resources for laser printing. The contract will aim to level the playing field between small rural schools and larger schools in urban areas, which have benefited in the past from greater spending power. Rural schools can now purchase printers and supplies at a cost saving under the contract and receive the same service arrangements as their urban counterparts. HP will explain how two major issues for rural schools are addressed through this contractual arrangement and the benefits for schools across NSW.

Issue 1: ICT teachers are in need of support personnel to help them manage ICT resources and assist teachers and other staff to use these resources effectively.

Solution:

1. Training for teachers

- HP installs printing devices into schools and demonstrates the various functionalities of the devices to the teachers.
- Step-by-step trouble shooting options within the devices provide guidance on solving printing issues on the printer display screen.

2. Equipment maintenance

- HP will provide rural schools with a range of services including maintenance, support and consumables using a remote management solution, to allow staff to maximise their focus on teaching.
- HP will audit device usage in schools, to identify school-specific trends and highlight opportunities to improve resource utilisation.

Issue 2: Increasing Global Environmental Sustainability.

Solution:

Ingrain environmental sustainability into daily school practices

- Rural schools can support their local community through the use of 'green' IT equipment.
- Schools can participate in HP's asset recovery and recycling program across all printing hardware and supplies.

**Session 4 – Friday 13 February 2009**  
**10:30 AM – 1:00 PM**

**A10**

**Kangaroo Room**

KATHERINE SCHOOL OF THE AIR *QUICKSMART* TRIAL 2008

**Presenter(s):** Sally Mackander  
**Theme:** Enhancing Rural Student Experience/Growth  
**Paper type:** Abstract (Refereed)

Katherine School of the Air (KSA) is situated on the banks of the Katherine River. It is one of three distance education schools in the Northern Territory, operating under the Northern Territory Distance Learning Service within the Northern Territory Department of Education and Training. *QuickSmart* numeracy was introduced as a trial in 2008. A cohort of eight students was selected. These included 3 at Borroloola – all indigenous students. Also selected were non-indigenous students from Noonamah (1), Melville Island (1), Kalkaringi (2), Edith Farms (1) and Oenpelli (1). As the trial progressed, it became evident that the ways in which *QuickSmart* was being delivered had to change to accommodate the skills of all students and Home Tutors. Subsequently, the program was delivered in three different ways by:

1. Home Tutors who delivered the program at home;
2. Telephone lessons which were delivered from Katherine School of the Air; and
3. IDL (Interactive Distance Learning) that delivered lessons via computer link up to a satellite.

This presentation will focus on the 30 weeks trial of *QuickSmart* that Katherine School of the Air has undertaken using these three methods of delivery. It will provide insights into the difficulties and successes the trial has encountered and information on where it hopes to go next.

**B10**

**Kookaburra Room**

BUILDING SUSTAINABLE EDUCATION IN SCIENCE, MATHEMATICS AND TECHNOLOGY EDUCATION IN WESTERN AUSTRALIA

**Presenter(s):** Sue Trinidad, Tania Broadley  
**Theme:** Nurturing the Rural Teacher Experience  
**Paper type:** Paper (Refereed)

This paper describes three case studies that were part of the *Australian School Innovation in Science, Technology and Mathematics (ASISTM)* project supported by the Australian Government to foster innovation in schools and develop the innovative capacities of students, by promoting teaching that engages students in science, mathematics and technology. Data were collected and analysed to demonstrate the effects that such projects have on student and teachers in the city, regional and remote Western Australia. Building sustainable educational solutions in science, mathematics and technology is a critical part of ASISTM project initiatives and need to be supported. The ASISTM project model provides a support mechanism to encourage schools to develop collaborative partnerships with other educational institutions, organisations and the wider community to bring 'real life' learning into the classroom. It also has the opportunity to promote the teaching profession to school students and Teacher Associates who work on these projects.

**C10**

**Koala Room**

EDUCATION, RELEVANCE AND RURAL DEVELOPMENT

**Presenter(s):** Constance Khupe, Moyra Keane, Ann Cameron  
**Theme:** Addressing Special Issues in Rural Education  
**Paper type:** Paper (Refereed)

Politicians, curriculum planners and policy makers in most developing countries are concerned about the progress of eradicating illiteracy especially amongst their rural populations. It is indeed important to increase access to education and measure progress using the barometers of the numbers of graduates our systems produce annually, but, in most cases these qualifications are only a ticket out of the holders' rural communities, without any meaningful returns to the same. Education for children in rural communities has to be made more relevant to the needs of the rural people, so that schools can help to form productive and informed adults and leaders who are willing to stay in their communities. This does not mean creating a different curriculum for rural schools, but enhancing the existing one to solve both rural poverty and urban problems resulting from the influx of job-seeking school leavers.

## FREEING WORKING MEMORY TO ENHANCE STUDENT GROWTH

**Presenter(s):** Mark Monaghan  
**Theme:** Enhancing Rural Student Experience/Growth  
**Paper type:** Abstract (Refereed)

This session will be an interactive discussion describing the process which led to numeracy students in a rural school demonstrating more than three years growth in learning in one year. How were the learning needs of rural students, in particular Indigenous students, supported in this school? Through the implementation of a numeracy program geared to consolidating students' basic academic skills and freeing up their working memories some students who had not achieved success in the classroom previously were back in the "main game" within the year. Data collected from these students indicate that they are not falling further behind. The journey of this rural school, Driver Primary School, started in 2004. Through systematically dealing with the diversity of student learning needs in rural areas by offering a range of classroom-based and support programs, recent results indicate an effect size of 1.49 for student numeracy improvement in late 2008. The educational journey to be described during this session has challenged standard practice and provided energy and inspiration to all.

## ANSWERING THE NEEDS OF TEACHERS WHO TEACH K-6 GRAMMAR: A PROFESSIONAL DEVELOPMENT PARADIGM FOR RURAL AND REGIONAL SCHOOLS AND SYSTEMS

**Presenter(s):** Vincent Connor  
**Theme:** Nurturing the Rural Teacher Experience  
**Paper type:** Abstract (Refereed)

This presentation reports on a project that has been running since 2006. It responds to the problem of teaching grammar. Teachers either love it or hate it. They either feel a success or a failure. Not only are the conventions needed for 'correct grammar' considered difficult to master, but grammar is considered dry to teach and the meta language distracting. One suggested stem of the problem relates to the number of teachers who were the product of a curriculum that did not explicitly teach grammar. Yet current syllabuses, such as the New South Wales Board of Studies Syllabus *English K-6 Syllabus (1998)*, has specific outcomes related to grammar and punctuation and a dedicated scope and sequence of grammar. Grammar and punctuation are measured against benchmarks in the national tests (and formerly in state tests). This causes a dilemma: *How can teachers teach children concepts and skills they were not taught themselves?* There were two aspects to the project:

- To build confidence and skill levels of teachers in the explicit teaching of grammar in relation to the text types associated with the NSW K-6 English syllabus and the application of the skills, knowledge, values and attitudes to the other Key Learning Areas.
- To determine the professional development model that ensures sustainability of the project and the concepts learned for teachers in rural and regional settings.

An investigation of metropolitan based education systems identified a variety of models, most of which were based around regular workshops linked with staff meetings or a whole school approach specifically targeting schools with high ESL enrolments with regular support from expert staff in the school system. Whilst both models were identified as successful, neither was considered transferable to a rural setting. Travel, staff motivation, complexity of the learning material and explicit teaching models were important variables in establishing an effective and sustainable model.

This presentation considers the demographic profile of a rural teaching workforce and the implications this has on professional development delivery with a particular focus on teaching grammar. It also identifies and responds to the particular constraints that need to be considered in developing a paradigm of professional development that builds teacher capacity and confidence in the knowledge, skills, values and attitudes in the teaching of grammar. Specific reference will be made to the methodology used in one project in a rural non-government system of schools.

**C11****Koala Room****EFFECTS OF SCHOOL LOCATION ON THE SHAPING OF SCHOOL ORGANISATION CULTURE IN KOREA**

**Presenter(s):** Sam-Chul Park  
**Theme:** Addressing Special Issues in Rural Education  
**Paper type:** Paper (Referred)

The purpose of this study is to examine the effects of school location as a variable that influences school organisation culture. The context for the study is secondary schools in Korea under the compulsory transfer system for teaching staff, with school organisation culture being assessed by the perceptions of teachers. The results of the study identified that some aspects of school organization culture, including the area of teaching subjects and student welfare, were strongly determined by the personnel administration policy. On the other hand, three aspects of school organization culture including teaching character, collaboration and relationship with community were influenced by the school's location. The overall findings of this study suggest that the organization culture of a school is generally formed by both school location and the teaching personnel administration policy in Korea.

**A12****Kangaroo Room****ENHANCING RURAL AND REGIONAL GIFTED STUDENT EXPERIENCES: EXEMPLARS OF INNOVATIVE ENRICHMENT PRACTICE**

**Presenter(s):** Susen Smith, Raymond Smith  
**Theme:** Enhancing Rural Student Experience/Growth  
**Paper type:** Paper (Refereed)

The School of Education at the University of New England (UNE) has developed a strong reputation in the area of Gifted and Talented education that encompasses productive research projects, the teaching of undergraduate and postgraduate students, the implementation of teacher professional learning programs, and the planning and hosting of enrichment programs. Supported by funding from SiMERR NSW, an enrichment program for gifted rural and regional school students has been developed and implemented over the past two years. The authors will present in this paper, a series of vignettes to illustrate innovative enrichment practice for gifted school students. These vignettes will also example the innovative use of ICTs and the involvement of educators and parents as a united community of practice to support gifted students. The paper will conclude with the provision of a number of emerging recommendations for future practice, for enriching the teaching and learning of gifted students in rural and regional contexts.

**B12****Kookaburra Room****PROFESSIONAL DEVELOPMENT PROVISION FOR TEACHERS OF SCIENCE AND MATHEMATICS IN RURAL AND REGIONAL VICTORIA**

**Presenter(s):** Russell Tytler, Cliff Malcom, David Symington, Valda Kirkwood  
**Theme:** Nurturing the Rural Teacher Experience  
**Paper type:** Abstract (Refereed)

This presentation will report on a study of the provision of professional development for teachers of mathematics and science in rural and regional Victoria. The data gathering began with interviews with six Regional Project Officers with special responsibility for this issue. They were asked to suggest schools which would illustrate best practice in professional development in mathematics and science. From those nominated seven schools were selected that included primary and secondary schools, schools in different districts, and schools of varying sizes.

Interviews were conducted, each of approximately one hour, with seven principals and a total of 37 teachers of mathematics and science, concerning teacher professional learning in rural schools. The interviews were recorded, transcribed and analysed to identify the issues raised and the thinking of the study participants around these issues. The data clearly reveal that, even within these schools which had been identified as illustrating best practice, there are significant problems related to rurality in ensuring that professional development opportunities adequately address the needs of the teachers responsible for science and mathematics. The presentation will identify the main features of these problems, and will present a model which locates professional learning in science and mathematics in three discourse communities; the school, the local

community, and the wider community of science and mathematics education professionals. It will discuss the professional learning problems and possibilities revealed in these interviews in terms of tensions and synergies between these communities. The presentation will consider questions about the allocation of resources and the key sites for decision making in a complex of competing demands.

**C12**

**Koala Room**

**COMPARING THE PERFORMANCE OF RURAL AND METROPOLITAN SCHOOLS ON A STATE WIDE SCIENCE TEST IN NEW SOUTH WALES**

**Presenter(s):** Dagmar Arthur  
**Theme:** Addressing Special Issues in Rural Education  
**Paper type:** Abstract (Refereed)

Essential Secondary Science Assessment (ESSA) is an assessment program in NSW for students at the end of Stage 4, after two years of secondary school. The test is developed and managed by the Department of Education and Training. This test has from its beginnings been at the cutting edge of assessment. The test items and levels of performance are developed from a framework based on the *Structure of the Observed Learning Outcome* (SOLO) model (Biggs & Collis, 1982).

Student performance on ESSA is provided to schools through a unique, sophisticated software analysis package referred to as the School Measurement, Assessment and Reporting Toolkit or SMART. This provides schools with the opportunity to manipulate and investigate student performance data. The data are used by schools to support specific and tailored intervention for improving student learning outcomes.

Analysis of data for government schools from other test regimes has shown that socioeconomic status and geographical isolation are the two community factors which account for the greatest variation in academic outcomes. Data from the SMART package are aggregated to show performance of various groups of schools in NSW referred to as *Like School Groups* or *LSG*. Comprehensive schools have been allocated to nine *Like School Groups* four in the metropolitan area and five rural groups. The aggregated data of student performance on the 2007 ESSA test mapped against six levels of achievement (derived from the ESSA framework) for each of the nine *Like School Groups* has produced interesting results. Data from the ESSA 2007 and 2008 test as well as data from the NSW English Language and Literacy Assessment (ELLA) 2005, 2006 and 2007 tests will be presented. What can this tell us about science teaching and learning in rural and remote schools?

**This presentation was withdrawn due to illness and was replaced by:**

**Presenter(s):** Yvonne Masters  
**Theme:** Enhancing Professional Experience for Isolated Pre-service Teachers  
**Paper type:** Abstract (Refereed)

Many pre-service teachers studying early childhood, primary or secondary education at the University of New England do so through distance education. While a large proportion of these dwell in major cities, a significant number live in country towns in New South Wales or in other Australian states. In the main, these are the people who are most likely to continue living in rural areas, and hence to seek work in rural schools. It is therefore imperative that these students be supported throughout their school experience placements in order to encourage, rather than discourage them through lack of support.

Responding to a major need to enhance rural placements, the UNE professional experience office has introduced a range of online activities to help prepare students for their placements. Forum activities and modules on important topics such as child protection and professional expectations have helped distance education students to approach their placements with more confidence. We have also enhanced the professional experience component of our teacher education awards through a variety of school liaison approaches including phone calls early in placements to maintain our links with schools and to provide an avenue for communication should difficulties arise. Practicum Liaison Officers have been employed, allowing visits to be made to many of our distance education students. This initiative will be further enhanced in 2009 with cyclic visits to other states.

An exciting initiative to be trialled in 2009 is virtual supervision via the use of webcams. This will enable us to reach the more distant school placement locations and to have synchronous viewing of classroom practice as well as discussions with pre-service teachers and supervising teachers. These initiatives will be supportive of pre-service teachers out in the field. The ability to mentor both the pre-service teacher and the supervising teacher should facilitate a more encouraging atmosphere and help to build teacher capacity for rural education.

**Session 5 – Saturday 14 February 2009**  
**10:30 AM – 11:00 PM**

**A13**

**Kangaroo Room**

**THE EFFECT OF “CYBER HOME SCHOOL” ON KOREAN STUDENTS’ MATHEMATICS ACHIEVEMENT**

**Presenter(s):** Young-Wa Choi, Hee-Chan Lew  
**Theme:** Enhancing Rural Student Experience/Growth  
**Paper type:** Abstract (Refereed)

It has been noted in several international comparison studies on math achievement that Korean students demonstrate a high level of achievement. When the data is disaggregated, it shows that urban students are achieving at much higher rates than rural students. This significant difference between urban and rural students may result from an assortment of complex social factors associated with rural areas such as parents' relative indifference toward education, less competitive educational atmosphere, unfavorable working condition for teachers, poor educational surroundings, and insufficient instructional materials. An understanding of Korea's education requires a thorough acknowledgement of the stance of out-of-school education within the overall educational framework of Korea. According to Kim, Yang, Kim and Lee (2001), 84.1% of Korean parents provide some form of shadow education for their children (primary 91.1%, middle school 81.5, high school 70.2%) and it has been reported that this phenomenon is only becoming more severe and public education fees including college tuition in 2000 equaled US\$33.5 billion, whereas out-of-school tutoring fees were calculated at US\$37 billion. In effect parents in Korea are using approximately 10% of their income on their children's out-of-school tutoring fees.

Following several reports and studies showing the significant differences in math achievement among rural and urban students and the social problem out-of-school tutoring fees present to parents, the Korean government proposed the plan to lessen the disparity of educational opportunities between rural and urban students and to reduce out-of-school tutoring fees of parents. One such government-sponsored program is “E-learning” or commonly known as ‘cyber home school’. The program targets low-income families throughout the country and provide them with a free computer, internet access, and cyber tutor.

This study analyzes 'cyber home school' impact on mathematics achievement and mathematical disposition of Korean 8<sup>th</sup> grade students. The content focus for the study is Algebra, which is taken by all Korean students during the second year in middle school (8<sup>th</sup> grade). Generally, the course is tailored to students' different learning abilities. In particular, middle- and low-level achieving students have opportunities to review elementary algebra as needed, whereas high-level achieving students have experiences to deepen their knowledge and to think at higher mathematical levels. Students may change their levels of studying, but most students remain in designated achievement levels.

The study of ‘cyber home school’ was conducted for two months with 20 middle school students from one middle school at one small city in Korea. Students were divided into three achievement groups (high, middle, and low level) by the results of a pre-test. Teachers confirm the process of student ability; manage on-line meetings and e-board discussions to promote two-way communications with students. Some of the students had difficulty using their computer at home, so they were given opportunities to use a computer at school before and after the class or lunchtime.

The post-test of mathematics achievement illustrated the degree of change resulting from the study. This study did a comparison analysis between 20 students who were exposed to the on-line learning environment and another 20 students of the same school who enrolled in out-of-school programs, and had a similar achievement level average to the level of experimental group in the pre-test of mathematics achievement. This study suggests a powerful way for rural students or low-income bracket students who have insufficient educational opportunities to learn mathematics tailored to their levels, and provides an empirical foundation on how to improve public education at a small outlay.

**B13****Kookaburra Room****USING COLLABORATIVE TECHNOLOGIES TO OPTIMISE CURRICULUM OUTCOME FOR SMALL RURAL SCHOOLS**

**Presenter(s):** Se Belford, Dale Cain, Mike Tom  
**Theme:** Optimising the Curriculum  
**Paper type:** Abstract (Refereed)

This presentation will draw on experiences from a successful rural education program called Engaging Connected Learners. Participants will have the opportunity to interact with proponents of the program and examine issues of interest such as:

1. How did people get started with the program?
2. What professional learning resulted for teachers and students?
3. How were networks set up? What were the obstacles and successes?
4. What time management lessons were learned?
5. What are the implications for the widespread use of blended learning?
6. What were the outcomes of the program?

The presenters will illustrate their responses using examples of interaction from schools and students in the program.

**C13****Koala Room****SITUATING PRACTICE IN RURAL SCHOOLS: TRANSIENCE, ADAPTATION AND OPPORTUNITY**

**Presenter(s):** Linley Cornish  
**Theme:** Addressing Special Issues in Rural Education  
**Paper type:** Paper (Refereed)

The 'Bush Tracks' collective is a team of researchers in the University of New England researching rural schooling. In this paper we describe some of the results of two projects investigating rural pedagogy and rural leadership, including accelerated progression to positions of leadership. Our focus has been on discovering factors associated with the process of teachers' learning to situate their practices in the rural context. Transience of teachers and leaders is common in rural areas. The notion of 'transience' is usually viewed negatively, as part of a deficit model of rural education. A conclusion of our research is that transience should be viewed positively, as providing opportunities and acting as a catalyst for the development of good teachers and good leaders.

**A14****Kangaroo Room****SOCIAL COMPUTING: REDUCING ISOLATION IN REMOTE AUSTRALIAN SCHOOLS**

**Presenter(s):** Chris Reading  
**Theme:** Enhancing Rural Student Experience/Growth  
**Paper type:** Paper (Refereed)

With the increasing expectation that schools will make more use of ICT to support learning, more professional development opportunities need to be provided to assist teachers to realise the potential of ICT. Social computing provides a solution to the dilemma of connecting remote schooling communities for both teacher professional learning and student learning. A national project, involving teachers at remote schools in five Australian states, is described. The benefits and challenges of using social computing to enhance learning for both teachers and students are shared. Key project achievements are identified from management, teacher and student perspectives. The way forward is mapped for this project, and for other projects attempting to achieve similar goals, in reducing isolation in remote Australian schools by utilizing social computing.

**B14****Kookaburra Room****QUICKSMART NUMERACY: CLOSING THE GAP IN THE NORTHERN TERRITORY**

**Presenter(s):** Jo-anne Jefferson  
**Theme:** Optimising the Curriculum  
**Paper type:** Abstract (Refereed)

The Northern Territory has a unique context compared to other states, in that a high proportion of NT students live in Remote and Very Remote locations (MCEETYA School Geographical Location Classification categories). A figure of 23% for students in these locations in 2007 contributes to the challenges of improving student outcomes. Research shows that students in these remote locations have lower levels of achievement than their peers in Metropolitan and Provincial locations. In 2005, the Northern Territory Department of Education and Training initiated a pilot project to rigorously research and evaluate the impact of the *QuickSmart*® Numeracy Intervention Program on the numeracy development of targeted Northern Territory (NT) students. The *QuickSmart*® Numeracy Intervention Program was implemented in eight schools across a diverse range of contexts and was a direct response to NT state wide system assessment data.

The data provided a compelling case for the need to identify programs that would improve numeracy outcomes for students performing below the National Numeracy Benchmarks. An essential component of this was to identify approaches that were effective for Indigenous students with a language background other than English (LBOTE) in all contexts across the NT. Quantitative data from 2005 to 2008 has been collected through the administration of baseline pre-intervention and post-intervention assessment tasks. Students who were underachieving in mathematics were chosen for the *QuickSmart*® cohort while 'average' students were selected for the comparison cohort. Student achievement data has consistently shown that the *QuickSmart*® students 'narrowed the gap' with regard to the comparison cohort. The *QuickSmart*® project continues to grow each year within the NT, with 60 schools implementing the program in 2009.

**C14****Koala Room****CAPTURING THEIR IMAGINATION: STRATEGIES FOR STAKEHOLDER COMMUNICATION WHEN IMPLEMENTING INNOVATION IN RURAL EDUCATION**

**Presenter(s):** Cherry Stewart  
**Theme:** Addressing Special Issues in Rural Education  
**Paper type:** Paper (Refereed)

This paper explores the need to 'capture the imagination' of stakeholders when managing innovation and change in rural education. The paper analyses, by means of case example, the impact of conceptual models about how we learn on the acceptance of innovation in distance education. Our individual beliefs about how we gain our professional skills affect how we perceive education should be provided in rural or regional environments. This case study highlights important considerations for managing stakeholder communication. By linking stakeholder conceptual models, their vision of *what distance education is, and how professionals gain their knowledge and skills*, we can plan strategies for 'capturing their imagination' about *what distance education might be* for students of this decade. In this paper the author suggests that 'capturing the imagination' of diverse decision makers is essential when seeking approval and support for innovative curriculum initiatives in provision of distance education.

**A15****Kangaroo Room****BULLIES IN CYBERSPACE: HOW RURAL AND REGIONAL AUSTRALIAN YOUTH PERCEIVE THE PROBLEM OF CYBERBULLYING AND ITS IMPACT**

**Presenter(s):** Catherine McLoughlin, Ramona Meyricke, Jill Burgess  
**Theme:** Enhancing Rural Student Experience/Growth  
**Paper type:** Paper (Refereed)

While access to the Internet continues to become more widespread, along with the demands of the Net generation for constant connectivity and cyber-fun, there is increasing evidence of the disruptive effects of technology. The problem of negative psycho-social behaviors such as cyber violence and cyberbullying in schools has become widely recognised as a significant and serious threat. Acute and sometimes long-term physical and psychological damage to students has remained a major focus for research across the globe in the past decade. With the development of social networking technologies, further challenges for school

communities have arisen and placed considerable pressures on educators to remain informed and vigilant to the developing phenomenon of cyberbullying. This paper investigates the literature on the developing phenomenon of cyberbullying and describes initial findings of a SIMERR (National Centre for Science, Information Technology and Mathematics Education in Rural and Regional Australia) research project investigating the occurrence of cyberbullying in rural and regional schools, together with student perceptions of the phenomenon, its impact and their knowledge of e-safety strategies.

The outcomes indicate that cyberbullying, which impacts students' emotional wellbeing, is occurring in rural schools, but is rarely reported to teachers. In addition, while most students employ safety strategies when using the internet, they have either taught themselves these strategies or learnt them from their peers or parents. Very few reported learning safety strategies in school. These findings suggest that rural schools may need to strengthen their e-safety education programs and develop greater teacher awareness of the problem.

### **B15**

### ***Kookaburra Room***

#### **GIVING CONTINUING PROFESSIONAL EDUCATION MORE IMPACT: ADDING BHUTAN-RELATED CLASSROOM PRACTICES IN AUSTRALIA AND ACTION RESEARCH IN BHUTAN TO THE BHUTANESE MULTIGRADE ATTACHMENT PROGRAM (BMAP) – PARTICIPANTS' PERSPECTIVES**

**Presenter(s):** Tom Maxwell, Warren Halloway

**Theme:** Optimising the Curriculum

**Paper type:** Paper (Refereed)

Multigrade was introduced to Bhutan to address Education for All (EFA) goals. Multigrade schools are those rural schools in which a teacher must teach more than one grade in a class and sometimes all grades from K to 6. The Bhutanese Multigrade Attachment Project (BMAP), involving a phase in Australia and another in Bhutan, was commenced in 1993. Two major changes occurred during the 16 years of implementation following an essentially "one shot" model of continuing professional development (CPD) of the early years. A range of data from these two changes were analysed indicating that the BMAP had had an impact upon the majority of participants. The features of BMAP are identified.

### **C15**

### ***Koala Room***

#### **THE EDUCATION OF GIFTED STUDENTS IN RURAL CONTEXTS**

**Presenter(s):** Peter Merrottsy

**Theme:** Addressing Special Issues in Rural Education

**Paper type:** Abstract (Refereed)

The 'gifted education' literature makes sparse mention of rural issues. Notable exceptions, such as Colangelo et al. (1999) 'Gifted education in rural schools: A national assessment', are already ten years old, and little evidence of research is available from institutions such as the Center for Rural Gifted Education, Indiana University of Pennsylvania.

This presentation will present the findings of the author's research in Australia, Scotland and Canada during the past two years. Issues addressed will include: national and state policy and practice, with examples from community and teacher workshops in rural and remote areas; flexibility of curriculum, with an example on academic acceleration; gifted Aboriginal students, including invisible gifted underachievers (building on the research of Chaffey, 2002); the reality of gifted education in remote communities (comparing and contrasting the status quo in isolated and remote areas of Australia, northern Manitoba and the islands of Scotland); and a discussion of the disadvantages, and the advantages, of gifted education in rural and isolated contexts.

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## Notes

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# Symposium Information

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## Session Information

Unlike a standard conference format, the ISFIRE symposium will have a **Session Discussion** time after each **Parallel Session Presentations** time. Thus a session consists of both presentations and discussion. The audience for one set of three papers (in the presentation time) is then asked to remain in the same room and discuss how the innovations addressed in the three presentations could be implemented in other rural environments. To ensure the smooth running of both the presentations and the discussions Session Chairs have been assigned.

### **Parallel Session Presentations** (90 minutes)

This comprises three 30-minute presentations. Presenters should allow 20 minutes for presentation and 10 minutes for questions. The Session Chair will introduce the speakers, ensure that the speakers keep to time, and restrict questions to those directly related to the presentations. More general questions should be held over until the discussion time after the three presentations.

### **Session Discussion** (60 minutes)

This comprises discussion about how the innovations addressed in the three presentations could be implemented in other rural environments. The following three questions will guide the discussion.

- What innovations have been successful in achieving equity in rural education?
- What has contributed most significantly to the success of these innovations?
- How could these innovations be implemented in other rural locations?

The Session Chair will draw participant attention to the three main discussion questions, facilitate discussion and split the group of participants into smaller discussion groups if necessary. One person will be asked to record key points from the discussion. This record of the key points should be delivered to the **Dragon Room** at the end of the session. These notes will be shared with participants during the symposium and used to prepare a summary which will be shared publicly, via the ISFIRE 2009 website.

## Excursion Information

There is a choice of two tours.

### **Tour 1: Saumarez Historic Building**

This 30 room Edwardian homestead built in 1888, complete with original furnishings, provides a glimpse into the life and times of the family of FJ White. Stroll through Mary White's garden, with its Edna Walling style cottage garden, the picking garden and the lawns. Visit outbuildings complete with 19<sup>th</sup> century tools and equipment.

### **Tour 2: McCrossin's Mill Museum**

The Mill is one of the Uralla's main attractions, and is located in a beautifully restored three-storey flour mill built of brick and granite in 1870 by Samuel McCrossin who opened the town's first inn around 1850. The ground floor and the gardens are available for functions, while the upper two floors house exhibitions focused on Uralla's local history. Attractions around Gostwyck include its stone chapel and the architecturally impressive Deeargee woolshed.

### **Petersons Wines Armidale - Wine Tasting**

After the excursion and before dinner all participants will be taken to Petersons Wines Armidale for a wine tasting. This boutique winery is located in the south east of Armidale in New England, on a rich, red brown basalt hill facing to the north-east, and is planted with Semillon, Sauvignon Blanc, Riesling, Shiraz, Cabernet Sauvignon, Merlot and Pinot Noir. The first harvest was in 2002.

## Parking

For those driving to the Symposium, the recommended car park is the Northern Car Park, which is a short walk to the Education Building. Visitors parking at UNE are required to abide by the UNE Traffic & Parking Rules. The NSW Police Service processes parking infringements issued on the University campus on behalf of the University.

UNE operates under a Restricted Parking Scheme which means that vehicles must park in bays identified by signage. Vehicles that park in areas such as on the grass, on footpaths or anywhere signage is not erected permitting you to park may have a Penalty Notice issued.

UNE has visitor parking bays located in various areas of the Campus. These Bays are identified by a Lime Coupon signs. Coupon holders are also permitted to park in Blue Permit bays if Lime Coupon bays are unavailable.

Visitors are required to pay for parking between the hours of 8.00am & 4.30pm Monday –Friday. There is no requirement to pay for parking outside these hours including weekends or Public Holidays.

Coupons are available from any of the Parking Ticket Machines on campus. The cost of parking on campus is \$10 for 7 days, \$4 for a full day or \$2 for half a day. The Parking Ticket Machines only accept coin and due to limited places on campus to obtain change it is advisable to bring with you enough coin with you to purchase a coupon.

Coupons once purchased must be displayed on the vehicles dashboard so that they can be validated by the Parking Officers.

## Security

UNE Safety and Security operates 24 hours a day on campus. The role of Safety and Security is to provide a safe environment while you are on campus. There are 38 Help Phones located in various areas of the campus. Should you need to use these Help Phones, they automatically dial UNE Safety & Security when activated.

**Lost property:** Lost property from campus is held at the Safety & Security Office located at Shop 4, UNE Union Arcade. Any enquiries regarding lost or found items can be directed to Safety & Security by calling **Ext 2099** (internal phone) or **6773 2099**.

**Security in car parks:** For those who drive to the campus, ensure that all car doors are locked and windows closed, and any valuables are not left in open view.

**Lighting:** Should you be walking after dark use well-lit routes when walking around the campus. It is recommended you walk with a companion or larger group where possible.

**College access after hours:** Your key will provide you with 24 hour access to your college. Should you lose your key or require “after hours” access, you should contact the Duty Assistant at the College.

**Reporting security incidents:** Report all security incidents as early as possible. Contact the UNE Safety and Security Office or the College Principal. All reports remain confidential.

## Emergency Contact

Should you need to contact a member of the Local Organizing Committee urgently during the Symposium, phone either of the following numbers:

Chris Reading 0428 726 313  
Greg McPhan 0427 991 052

