



TLRI 2010: Building knowledge about teaching and learning

One aim of the TLRI is to build *cumulative* knowledge about teaching and learning. Commonly proposers do this by clearly linking their proposal to the national and international literature in the field and by making a case for the usefulness of an investigation into a selected area. In addition proposers are encouraged to explicitly build on the learning from completed TLRI projects and other relevant initiatives. To support project teams the following information is provided:

1. Brief summaries about the published TLRI projects to date. These are provided for the early childhood, school, and postschool sectors. Further information can be found on the TLRI website.
2. Summaries of this year's interviews conducted with leading educators involved in New Zealand-based research initiatives linked to teaching and learning. Each year (beginning in 2008) we ask leading educationalists to comment on a research wishlist for their particular sector. Previous wishlists can be found on the TLRI website.

TLRI projects as at 1 February 2010

Early childhood sector

Completed

1. Under-three-year-olds in kindergarten: Children's experiences and teachers' practices

Funding: 2 years

Research team

Judith Duncan, Children's Issues Centre, University of Otago, with Carmen Dalli, Institute of Early Childhood Studies, Victoria University of Wellington

Brief description

This project investigates the experiences of under-three-year-olds and teachers' practices in New Zealand kindergartens. Historically, kindergartens provided an early childhood environment for three- to five-year-olds. As enrolments and waiting lists dropped, kindergartens have opened their door to children under three years of age, taking them into an environment that was often structured for older children in a larger group setting.

http://www.tlri.org.nz/assets/pdf/9203_summary.pdf

<http://www.tlri.org.nz/assets/pdf/9203afinalreport.pdf>

http://www.tlri.org.nz/assets/pdf/9203_b_finalreport.pdf

2. Whakawhanaungatanga—partnerships in bicultural development in early childhood care and education

Funding: 2 years

Research team

Jenny Ritchie and **Cheryl Rau**, University of Waikato

Brief description

This project is premised on the findings of Ritchie (2002)—that strengthening provision of the bicultural aspirations of the early childhood curriculum within ECE settings other than kōhanga reo is a central professional responsibility for educators, and that a key strategy for achieving this is to build relationships with the whānau Māori of children in their settings (whakawhanaungatanga). A further context for the study is the research of Rau (2002) that identified and employed key concepts in kaupapa Māori education and research theories, and focused on intergenerational transmission of Māori values through whānau relationships and practices. Whakawhanaungatanga approaches have the potential to increase Māori participation in early childhood education.

http://www.tlri.org.nz/assets/pdf/9207_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9207_finalreport.pdf

3. Enhancing mathematics teaching and learning in early childhood settings

Funding: 2 years

Research team

Maggie Haynes, Carol Cardno, and Janita Craw, School of Education, Unitec, with Avondale Kindergarten, Birdwood Kindergarten, and Don Buck Kindergarten

Brief description

Researchers such as Carr, Peters, and Young-Loveridge (1994); Young-Loveridge, Carr, and Peters (1995); and Wylie (2001) have for some time now highlighted how children's mathematical competencies in the early years impact on children's successes in mathematics in the school years. However, there has been little documented on mathematical learning and teaching in the early childhood sector from the perspective of the *teacher*, and particularly within Aotearoa New Zealand. Consequently, areas that this study explores include:

- how mathematics teaching and learning is conceptualised in early childhood settings
- teachers' attitudes to providing learning experiences that support and extend mathematical learning
- what helps and hinders effective teaching and learning of mathematics
- what can be done to improve practices that enhance mathematical learning outcomes for children.

http://www.tlri.org.nz/assets/pdf/9219_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9219_finalreport.pdf

4. Training on the job—how do home-based co-ordinators support carers to notice, recognise, and respond?

Funding: 1 year

Research team

Tracey Hooker, Frances Bleaken, and Sue Bigger, Hamilton Childcare Services Trust, and Sally Peters, University of Waikato

Brief description

The focus of this research is on exploring the impact of training and support that co-ordinators provide for home-based carers in an early childhood service. The aim is to identify what factors seem to be important in helping carers to recognise and support children's learning. At the end of the research period, individual reflective interviews took place with the carers and co-ordinators about the factors they believe have been influential in improving the carers' practice.

http://www.tlri.org.nz/assets/pdf/9246_finalreport.pdf

http://www.tlri.org.nz/assets/pdf/9246_summaryreport.pdf

5. Key learning competencies across place and time

Funding: 3 years

Research team

Margaret Carr, Wilf Malcolm Centre for Educational Research, University of Waikato, with Sally Peters, University of Waikato; teacher-researchers from three schools and three early childhood centres in Rotorua and Christchurch; and associated co-ordinators

Brief description

The aim of this project is to investigate pedagogy designed to develop learning competencies over time in a number of early childhood centres and early years school classrooms that have already begun to explore in this area.

http://www.tlri.org.nz/assets/pdf/9216_finalreport.pdf

http://tlri.org.nz/assets/pdf/9216_summaryreport.pdf

6. Te Pūāwaitanga—partnerships with tamariki and whānau in bicultural early childhood care and education

Funding: 2 years

Research team

Jenny Ritchie, School of Education, Unitec, with Cheryl Rau, University of Waikato; the Thames/Coromandel Playcentre Association; and teachers from kindergartens in the Tauranga area

Brief description

This project aims to document the narratives of a diverse group of children and families as they engage with early childhood services that are committed to honouring the bicultural intent of the early childhood curriculum document *Te Whāriki*.

http://www.tlri.org.nz/assets/pdf/9246_finalreport.pdf

http://www.tlri.org.nz/assets/pdf/9238_summaryreport.pdf

7. Strengthening responsive and reciprocal relationships in a Whānau Tangata centre: An action research project

Funding: 2 years

Research team

Jeanette Clarkin Phillips, Wilf Malcolm Institute of Educational Research, University of Waikato, with Margaret Carr, University of Waikato; teachers from Taitoko Kindergarten, Levin; and the Wellington Region Free Kindergarten

Brief description

This project's aim is to investigate the teaching and learning at Taitoko Kindergarten in the light of the impact of the development of a Whānau Tangata centre. Through action research, the team will address the teachers' questions associated with teaching and learning as they implement changes in response to establishing a Whānau Tangata centre at the kindergarten as part of a Parent Support and Development Contract.

http://tlri.org.nz/assets/pdf/9249_summaryreport.pdf

http://tlri.org.nz/assets/pdf/9249_finalreport.pdf

In Progress 2010 (continuing or at final editing stage)

8. Home-based early childhood education (family day care): The visiting teachers' role in improving educators' practices—what makes a difference?

Funding: 2 years

Research team

Judith Duncan, Children's Issues Centre, University of Otago, with The Dunedin Community Childcare Association, and its director Mrs Pat Irvine; the visiting teachers; and the Children's Issues Centre, University of Otago

Brief description

This project proposes to investigate the role of the visiting teacher in improving the quality of educators' practices and children's learning outcomes in the home-based settings supervised by the Dunedin Community Childcare Association. The visiting teachers will be examining:

- the teaching practices of the educators
 - the roles of the visiting teachers in supporting and improving the practices of the educators
 - the wider support roles of the Dunedin Community Childcare Association
 - the role of professional development opportunities for both the educators and the visiting teachers.
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9. Titiro Whakamuri, Hoki Whakamua: We are the future, the present, and the past: Caring for self, others, and the environment in early years' teaching and learning

Funding: 2 years

Research team

Jenny Ritchie, Early Childhood Teacher Education, School of Education, Te Wānanga o Wairaka, Unitec, with Unitec and kuia, kaumātua, a research facilitator, and a teacher from the Dunedin Kindergarten Association, together with nine kindergartens from throughout New Zealand

Brief description

This project focuses on global issues of ecological sustainability in a variety of national/local early childhood contexts. The research aims to illuminate, document, explore, and explain possibilities for early childhood pedagogies that reflect and enact an ethic of care for self, others, and the environment. The project draws from both kaupapa Māori and western perspectives.

10. Learning wisdom

Funding: 2 years

Research team

Margaret Carr, School of Education, Wilf Malcolm Institute of Educational Research, University of Waikato, with university researchers and 10 early childhood teacher-researchers

Brief description

This project defines wisdom as knowing why, when, and how to engage with learning opportunities. Early childhood teachers will research their own practice as they revisit children's learning stories with them. The strategies and insights from this phase will contribute to longitudinal studies of changes in case study children's learning dispositions—their wise engagement—as evidenced from conversations during episodes of revisiting their learning over time, and the stories themselves.

11. Our place: Being curious at Te Papa

Funding: 2 years

Research team

Jeanette Clarkin-Phillips and Margaret Carr, School of Education, Wilf Malcolm Institute of Educational Research, University of Waikato, with *Wellington Regional Free Kindergarten Association and Te Papa*

Brief description

Based at a new education and care centre at Te Papa in Wellington, this project will research the ways in which young children make meaning from artefacts and exhibitions at Te Papa. It will investigate how they construct knowledge and the opportunities that make this possible and interesting.

12. Infants and toddlers as learners: Pedagogy in the first years

Funding: 2 years

Research team

Carmen Dalli, Institute for Early Childhood Studies, Jessie Hetherington Centre for Educational Research, Victoria University of Wellington, with University of Auckland, AUT University, Auckland, and a variety of urban early childhood centres in Auckland and Wellington

Brief description

The historical emphasis on young children receiving care rather than education means that understanding infants and toddlers as learners can be challenging for many teachers. Using case study methodology, this collaborative two-year project investigates infants' and toddlers' opportunities for learning; how teachers construct children as learners; how teachers' constructions influence their pedagogy; and how learning opportunities may be strengthened.

13. Moments of wonder, everyday events: How are young children theorising and making sense of their world?

Funding: 2 years

Research team

Keryn Davis and **Sally Peters** from the University of Canterbury and the University of Waikato, with the Canterbury Playcentre Association

Brief description

The focus of this research is on exploring children's working theories in action; how they are expressed and how working theories are understood and fostered in Playcentre environments. This project will consider the features of environments that encourage children to theorise and make sense of their worlds.

Projects funded 1st January 2010 (selected from the 2009 funding round)

14. Active adult participation in ECE: Enhancing child learning and community wellness

Funding: 2 years

Research team

Associate Professor **Judith Duncan**, and **Sarah Te One** with University of Canterbury, Victoria University of Wellington, and Whanganui Central Baptist Kindergarten and Creche Trust.

Brief description

This project will investigate reconceptualising early childhood centres as places for adult participation and active teacher-whānau partnership for positive holistic outcomes for children and their whānau within the community. The research team will consist of practitioners from three of the five ECE centres, staff from the parent support centre, teaching, management and senior staff, and the two university researchers.

School sector

Completed

15. Primary students' and teachers' experiences of collaborative learning online

Funding: 1 year

Research team

Pat Street, The South Learning Centre, with Christchurch East Primary School, Waltham Primary School, and Ultralab South

Brief description

This project researches the use of an online learning environment to teach a collaborative unit involving three classes in two primary schools.

http://www.tlri.org.nz/assets/pdf/9226_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9226_finalreport.pdf

16. Zeroing in on quality teaching

Funding: 1 year

Research team

Christina Harwood, Massey University College of Education, with Opunake Primary School and Eltham Primary School

Brief description

Zeroing in on quality teaching: reducing disparities by building teachers' capacities/capabilities with respect to integrative approaches to curriculum delivery using allied pedagogies. The overall aims of the research project are to collaboratively explore and identify the multiple impacts of curriculum and pedagogical innovation on learning outcomes for students, and especially Māori students.

http://www.tlri.org.nz/assets/pdf/9227_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9227_finalreport_1.pdf

17. Investigating responses to diversity in a secondary environment

Funding: 1 year

Research team

Lindsey Conner, Christchurch College of Education, with Linwood College

Brief description

This project examines how Linwood College is responding to the diversity of its students and provides some insights for future policies and practices for Lynwood College and schooling in general.

http://www.tlri.org.nz/assets/pdf/9228_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9228_finalreport.pdf

18. A collaborative self-study into the development of critical literacy practices

Funding: 1 year

Research team

Susan Sandretto, University of Otago, with East Taieri Primary School and Port Chalmers School

Brief description

This pilot project consists of collaborative self-study research into the development of critical literacy practices within primary schools. Two teachers from each of two primary schools in the Dunedin area, with the assistance of the researchers, collaboratively investigate the development and implementation of an enhanced critical literacy focus within everyday guided-reading practices in their classrooms.

http://www.tlri.org.nz/assets/pdf/9231_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9231_finalreport.pdf

19. Early algebraic thinking: Links to numeracy

Funding: 1 year

Research team

Chris Linsell, Dunedin College of Education, with John McGlashan College; King's High School; Otago Boys High School; and researcher Jan Savell, Numberworks

Brief description

The aim of this project is to make explicit the knowledge and strategic thinking of students as they make the transition from arithmetic to algebra. A diagnostic interview, similar to that used in numeracy assessment, was developed. The results from this research will not only enhance students' learning of algebra in their own schools, but will also inform mathematics educators who are extending the implementation of the Number Framework into high schools.

http://www.tlri.org.nz/assets/pdf/9242_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9242_finalreport.pdf

20. Classroom questioning by teachers: An investigation of how teachers formulate, select, and present questions to guide student learning

Funding: 1 year

Research team

Linda Bonne, Redwood School and **Ruth Pritchard**, Victoria University of Wellington College of Education, with Seatoun School, Windley School, Rangikura School, Churton Park School, Te Aro School, and Redwood School

Brief description

In collaboration with Ruth Pritchard from Victoria University of Wellington College of Education, and using research consultant Dr Don Miller for specialist support, this project aims firstly to develop the research capability of a group of teachers, and secondly to investigate their use of questioning to help students' mathematics learning. A group of teacher-researchers work in partnership with the research team leaders to analyse their own practice and identify aspects of questioning behaviour, conditions that support effective use of questioning, and barriers that inhibit the use of certain types of questioning. By adding the "teacher's voice" to the existing body of research, it is intended the project will develop a deeper understanding of teachers' unique perspectives of teaching and learning.

http://www.tlri.org.nz/assets/pdf/9244_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9244_finalreport.pdf

21. The Art of the Matter: The development and extension of ways of knowing in the arts

Funding: 2 years

Research team

Deborah Fraser, University of Waikato, with the Wilf Malcom Institute of Educational Research, and teachers from six Waikato-based schools. These schools range from urban to rural and deciles 1 to 10.

Brief description

The Art of the Matter project focuses on learning and teaching in the arts, and investigates how children develop their ideas and related skills in each of the arts' disciplines (dance, drama, music, and visual art) in the primary school. It also scrutinises the nature of any "ritual patterns" (Efland, 2002; Nuthall, 2001) of teaching that support or constrain arts education, and, by doing so, considers pedagogical processes that deepen children's experience and understanding in the arts. As a major outcome, the project seeks to further knowledge of how generalist teachers can enhance and extend children's learning in the arts.

The project team comprises of 10 generalist primary school teacher-researchers working alongside three university researchers over a period of two years in eight schools, with children across the Years 0–6 age range. The project is also informed by the expertise of two consultants: Viv Aitken (drama education) and Sue Cheesman (dance education).

http://www.tlri.org.nz/assets/pdf/9218_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9218_finalreport.pdf

22. Conceptions of assessment and feedback in secondary school mathematics and English and their impact on learning and pedagogy

Funding: 2 years

Research team

Elizabeth Peterson and Earl Irving, The University of Auckland, with Pakuranga College, Papatoetoe High School, Tangaroa College, and Waitākere College

Brief description

This project aims to investigate ways of identifying secondary school students' and teachers' conceptions of assessment and feedback. It outlines the modification of one inventory (Students' Conceptions of Assessment) and the development of two new inventories (Conceptions of Feedback and Conceptions of Learning). We also outline the design of a series of classroom activities that teachers can use to identify students' conceptions of specific assessment and feedback practices. Finally, this project documents the development of teachers as researchers, highlighting some of the benefits and some of the difficulties.

http://www.tlri.org.nz/assets/pdf/9222_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9222_finalreport.pdf

23. Investigating teachers' pedagogical approaches in environmental education that promote students' action competence

Funding: 2 years

Research team

Chris Eames, Centre for Science and Technology Education Research, University of Waikato, with Auckland University of Technology, Christchurch Polytechnic Institute of Technology, and Waikato Institute of Technology

Brief description

This study investigates the pedagogical approaches in environmental education that teachers use that can promote students' action competence. The investigation will be based around a series of case studies of New Zealand school classrooms where regional environmental education co-ordinators partner teachers to research classroom practice in environmental education. This study contributes to a better understanding of environmental education in New Zealand schools, informing principles not only of pedagogy but also student achievement.

http://www.tlri.org.nz/assets/pdf/9224_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9224_finalreport.pdf

24. Numeracy and practices and change

Funding: 2 years

Research team

Glenda Anthony and **Margaret Walshaw**, Department of Technology, Science and Mathematics Education, Massey University

Brief description

This multifaceted collaborative investigation draws upon diverse populations of teachers and students and addresses issues of equity, proficiency, and sustainable practice through the opportunities made available in recent numeracy reforms.

http://www.tlri.org.nz/assets/pdf/9201_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9201_finalreport.pdf

<http://www.tlri.org.nz/assets/pdf/14130.pdf>

<http://www.tlri.org.nz/assets/pdf/14131.pdf>

25. Mathematics enhancement project: Professional development research

Funding: 2 years

Research team

Bill Barton and Hannah Bartholomew, Department of Mathematics, The University of Auckland, with 27 teacher-researchers and six university researchers

Brief description

As part of a major research and development project in Manukau secondary schools, this project focuses on the delivery of professional development to secondary mathematics teachers, and on the mathematics classroom as a learning environment.

http://www.tlri.org.nz/assets/pdf/9202_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9202_finalreport.pdf

26. Great expectations: Enhancing learning and strengthening teaching in primary schools with diverse student populations through action research

Funding: 2 years

Research team

Mary Hill, School of Education, University of Waikato

Brief description

Teacher-researchers from six schools, ranging from deciles 1–10 and located in Auckland, Hamilton, and Taumarunui, investigate how teaching and learning can be systematically improved, and how teachers' expectations of their students are implicated in this.

http://www.tlri.org.nz/assets/pdf/9204_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9204_finalreport.pdf

27. Making sense of learning at secondary school: An exploration by teachers with students

Funding: 2 years

Research team

Ruth G Kane, College of Education, Massey University, with Nicola Maw and Christopher Chimwayange

Brief description

This project, using teachers as researchers and students as active respondents, examines ways in which students' learning processes are shaped by what happens in secondary school classrooms.

http://www.tlri.org.nz/assets/pdf/9205_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9205_finalreport.pdf

28. Enhanced teaching and learning of comprehension in Years 4–9: A research–practice collaboration for Mangere schools

Funding: 2 years

Research team

Stuart McNaughton, Woolf Fisher Research Centre, The University of Auckland

Brief description

A researcher–practitioner partnership works to determine the extent of the challenges for effective teaching of comprehension and to create better teaching methods to meet those challenges.

http://www.tlri.org.nz/assets/pdf/9206_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9206_finalreport.pdf

29. Developing rich mathematical language in Māori immersion classrooms

Funding: 1 year

Research team

Tamsin Meaney, University of Otago

Brief description

Documents and evaluates the scaffolding and modelling strategies of teachers in a Māori-medium school.

http://www.tlri.org.nz/assets/pdf/9230_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9230_finalreport.pdf

30. Effective teaching in different cultural contexts: A comparative analysis of language, culture, and pedagogy

Funding: 2 years

Research team

Tanya Samu; Leonie Pihama, Director International Research for Māori and Indigenous Education; Tupeni Baba, Professor of Pacific Studies; and Trish Stoddart, Professor of Classrooms and Schools, with the International Research Institute for Māori and Indigenous Education (IRI), Centre for Pacific Studies, and School of Education at The University of Auckland

Brief description

A collaborative team of Māori, Pasifika, and Pākehā researchers and practitioners will conduct a crosscultural comparative study of instructional policies, practice, and student outcomes in three intermediate Year 7–8 school contexts where the degree of cultural engagement varies.

http://www.tlri.org.nz/assets/pdf/9208_finalreport.pdf

31. Addressing the needs of transient students: A collaborative approach to enhance teaching and learning in an area school

Funding: 2 years

Research team

Jude MacArthur; **Nancy Higgins**, Donald Beasley Institute, Dunedin, with an area school in South Otago

Brief description

This project emerges out of a request from the principal and teachers involved in earlier research that highlighted childrens' perspectives on their learning and social lives at school. In a small area school, student transience was observed to complicate the learning and social experiences of some of the students. This research aims to enhance the learning and social experiences of transient students through professional development focused on a community of practice, and action research in the school.

http://www.tlri.org.nz/assets/pdf/9243_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9243_finalreport.pdf

32. Write on: Implementing an evidence- and strengths-based whole-school writing programme for secondary students in order to raise achievement

Funding: 1 year

Research team

Ruth Boyask and Kathleen Quinlivan, University of Canterbury; Sue Carswell, Aranui High School

Brief description

This pilot study investigates possibilities for teacher intervention in the learning and achievement of diverse students in low-decile secondary schools in the context of a whole-school writing programme intended to raise student achievement.

http://www.tlri.org.nz/assets/pdf/9240_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9240_finalreport.pdf

33. The impact of technology use on the teaching and learning of mathematics in the secondary classroom

Funding: 2 years

Research team

Mike Thomas, Mathematics Education Unit, The University of Auckland, with Senior College of New Zealand; Pakuranga College, Auckland; and Texas Instruments

Brief description

The key aims are to analyse, in the light of international theories of learning, the current role of technology in mathematics learning in NCEA standards and identify, support, and extend best practice in the use of technology for learning mathematics.

http://www.tlri.org.nz/assets/pdf/9225_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9225_finalreport.pdf

34. Enhancing teachers' beliefs, knowledge, and practice about bilingualism and bilingual/immersion education through critical action research

Funding: 1 year

Research team

Hayley Read and **Donald McLean**, Richmond Road School, with a research-associate team from the Faculty of Education, The University of Auckland; outside consultant Stephen May, School of Education, Waikato University; senior staff of The A'oga Fa'a Samoa; and Māori and Pasifika elders associated with the school

Brief description

This pilot project aims to assist the school's practitioners to develop and apply critical research methods to identify the existing strengths in multicultural–bilingual policy and practice. It will also identify gaps and needs, and provides critical assessment and analysis in relation to current best evidence in critical multicultural and bilingual education theory.

http://www.tlri.org.nz/assets/pdf/9241_finalreport.pdf

35. The classroom InSITE project: understanding classroom interactions and learning trajectories to enhance teaching and learning in science and technology

Funding: 3 years

Research team

Bronwen Cowie, Centre for Science and Technology Education Research, University of Waikato, with teachers from six Waikato-based schools. These schools range from urban to rural and deciles 1–10.

Brief description

The goal of this three-year collaborative research project is to develop a more robust understanding of the interactions between teachers, students, the important ideas and attitudes of science and technology, and the tools and knowledges that teachers use to support student learning. This is a longitudinal study carried out in six schools with groups of teachers and their students (Years 1–8).

http://www.tlri.org.nz/assets/pdf/9215_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9215_finalreport.pdf

36. Enhanced teaching and learning of comprehension in Years 5–8

Funding: 2 years

Research team

Stuart McNaughton, Woolf Fisher Research Centre, The University of Auckland, with eight Otago schools: Wymondley Road School, East Tamaki School, Ferguson Intermediate School, Flat Bush School, Mayfield School, Rongomai School, Sir Edmund Hillary Collegiate Middle School, and Yendarra School

Brief description

The second phase of this project develops, through collaboration with schools and researchers, a cluster-wide intervention for all teachers with classes at Years 5–8 in the eight schools. This requires extensive school-based professional development as well as systematic collection of achievement data and classroom observations within a rigorous research design. The research-based intervention is designed to test both the discrete components of effective teaching in school-wide implementation and the model developed for a research–school practice partnership which is based on properties of a professional learning community.

http://www.tlri.org.nz/assets/pdf/9220_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9220_finalreport.pdf

37. A collaborative self-study into the development and integration of critical literacy practices

Funding: 2 years

Research team

Susan Sandretto, University of Otago, with four local primary schools: Balaclava School, Brockville School, East Taieri School, and Port Chalmers School

Brief description

This project consists of collaborative self-study research into the development and integration of critical literacy practices. Teachers from four primary schools in the Dunedin area, with the assistance of the researchers, collaboratively investigate the development and implementation of an enhanced critical literacy focus within guided reading (Phase 1) and integrated throughout the curriculum (Phase 2).

http://www.tlri.org.nz/assets/pdf/9237_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9237_finalreport.pdf

38. A research partnership to enhance capacity to analyse students in writing, using the English Exemplars (2003)

Funding: 2 years

Research team

Libby Limbrick, The University of Auckland, with participating schools in the Manurewa Enhancement Initiative

Brief description

The aim of the project is to collect evidence that can be used to modify writing instruction in order to raise student achievement in writing. It is a partnership between lead teachers and teachers in the Manurewa Enhancement Initiative and the University of Auckland Faculty of Education. It focuses on enhancing teachers' capacity to analyse students' writing, using the English Exemplars (2003), and strengthening teacher practice by using evidence to inform teaching. It investigates the role of professional discussion in quality learning circles (focused on students' writing), and in enhancing teachers' knowledge about, and confidence and competence in implementing, writing processes and pedagogy.

http://www.tlri.org.nz/assets/pdf/9239_finalreport.pdf

39. Pasifika teachers in secondary education

Funding: 1 year

Research team

Tony Brown, School of Education, University of Waikato

Brief description

This project examines the experiences of Pasifika secondary teachers and initiatives for their recruitment and retention.

http://www.tlri.org.nz/assets/pdf/9229_finalreport.pdf

40. Developing teacher–researcher partnerships to investigate best practices: Literacy learning and teaching in the content areas of the secondary school

Funding: 2 years

Research team

Trevor McDonald, Education Associates Ltd, with Teulia Consultancies, Auckland SDA High School, Roxburgh Area School, and Waitaki Girls' High School

Brief description

A teacher–researcher partnership, this research investigates crosscurricula literacy teaching and learning in secondary schools. Teachers from three schools and the researchers focus on the collaborative development and implementation of pedagogical approaches and teaching content that will assist students to develop the strategies required to improve their literacy learning and assessment outcomes. The project team also document, theorise, and evaluate the process as an approach to professional development.

http://www.tlri.org.nz/assets/pdf/9235_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9235_finalreport.pdf

41. Mathematics: She'll be write!

Funding: 1 year

Research team

Tamsin Meaney, University of Otago, with teachers at Kura Kaupapa Māori o Te Koutu; Tony Trinick, The University of Auckland; and Uenuku Fairhall, principal of Kura Kaupapa Māori o Te Koutu

Brief description

This project aims to document the written mathematical genres that students are currently using and identify the linguistic features that are associated with each. It will also explore ways to improve students' mathematical writing. This will include investigating different pedagogical approaches and considering other genres that could be used effectively in mathematics.

<http://ttri.org.nz/assets/pdf/9252-FinalReport1.pdf>

<http://ttri.org.nz/assets/pdf/9252-Finalreport2.pdf>

42. Teaching literature in the multicultural classroom

Funding: 2 years

Research team

Terry Locke, University of Waikato School of Education, with Henderson Intermediate School, Wymondley School, Somerville School, Macleans College, and the University of Waikato

Brief description

The overall goal of this project is to find effective ways of teaching literature in multicultural and multilingual classrooms at primary and secondary level by developing a range of effective classroom approaches and practices.

Two secondary aims are to link the research associated with this project with research being done in relation to other Level 1 curriculum, and to produce at least one teachers' resource on the subject of teaching literature in the multicultural classroom.

<http://ttri.org.nz/assets/pdf/9248-FinalReport.pdf>

<http://ttri.org.nz/assets/pdf/9248-Summaryreport.pdf>

43. Teachers learning mathematics

Funding: 1 year

Research team

Bill Barton and **Judy Paterson**, Department of Mathematics, The University of Auckland, with eight secondary teachers from eight different schools in the Auckland region will work as part of a wider project in collaboration with teams lead by Deborah Ball, The University of Michigan; and Anne Watson, Oxford University

Brief description

This study aims to investigate the development of mathematical knowledge for teaching amongst secondary teachers while they are in the classroom. Each of the eight teachers will examine one aspect of their mathematical knowledge in close detail. This will give an insight into the nature of the mathematical knowledge they need for teaching and their perceptions of the effectiveness and practicality of classroom-based mathematics learning as ongoing professional development.

<http://ttri.org.nz/assets/pdf/9256summaryreport.pdf>

<http://ttri.org.nz/assets/pdf/9256-FinalReport.pdf>

44. Measuring classroom literacy practice

Funding: 2 years

Research team

Judy Parr, School of Education, The University of Auckland, with New Market Primary School; Māngere Central School; and Learning Media and Education Associates, Dunedin

Brief description

This project aims to develop and trial classroom-observation instruments for examining literacy practice in Years 1–8 in partnership with two clusters of schools. Observation and subsequent feedback and reflection around classroom-practice are key factors in improving practice. Quality teaching impacts most on student outcomes, particularly for underachieving students.

The project further seeks to investigate the utility of the instrument by applying it in a research setting involving peer feedback. One cluster of schools would be involved in the first phase—the development and trial of the instrument—and another in the second phase—application in classrooms.

http://ttri.org.nz/assets/pdf/9221_summaryreport.pdf

http://ttri.org.nz/assets/pdf/9221_finalreport.pdf

45. A school for the 21st century: Researching the impact of changing teacher practice on student learning

Funding: 1 year

Research team

Michal Denny, Alfriston College, with the New Zealand Council for Educational Research

Brief description

The aims of this project are:

- to investigate whether the innovative approaches to scheduling time for teaching and learning at Alfriston College are having a significant impact on student learning
- to identify best practice for the use of extended periods of learning time
- to widen discussion about the nature of “evidence” of student learning.

<http://ttri.org.nz/assets/pdf/9255-summaryreport.pdf>

46. Investigating the impact of whole-school approaches to Education for Sustainability on student learning

Funding: 2 years

Research team

Chris Eames, University of Waikato, with national Education for Sustainability school advisers, who are in turn partnered with specified staff at each case study school. There is also an overarching partnership between the whole team and the Enviroschool Foundation.

Brief description

The project aims to build on previous work in action competence and to design a valid and reliable framework for investigating this. It also aims to understand the practice of whole-school approaches to Education for Sustainability (EfS) in New Zealand schools, and the impact of these approaches on the school community and student learning. The framework will be used to construct research instruments for collecting data in five schools as case studies. This approach will aim to build capacity for research within the EfS community and the schools.

<http://ttri.org.nz/assets/pdf/9245summaryreport.pdf>

In progress (continuing or at final editing stage)

47. Mathematics classrooms: Explorations into the teaching/learning nexus

Funding: 2 years

Research team

Glenda Anthony and **Margaret Walshaw**, Massey University College of Education, with three secondary schools

Brief description

The aim of this project is to investigate the teaching/learning nexus in Year 9 New Zealand mathematics classrooms, with a commitment to identifying teachers' and students' constructed social and mathematical meanings. The project involves working with Year 9 teachers and students over a two-year period. The principal data-gathering and analytical strategy is technology intensive and will involve video sequences of 30 lessons taken from three cameras in each classroom.

48. Sustainability of effective teaching and school practices: Developing a model for sustaining and extending literacy achievement

Funding: 3 years

Research team

Mei Kuin Lai, Associate Director, Woolf Fisher Research Centre, The University of Auckland, and 13 schools from the Māngere AUSAD Cluster and Ōtara

Brief description

The research aims to develop a crosscontext model for sustaining effective teaching and school practices to continue improving student achievement after the end of the intervention. This involves identifying and explaining the conditions that enable schools to continue improving achievement (e.g., increased teacher pedagogical content knowledge, use of inquiry); explaining how the conditions interrelate; and how these relationships result in differing patterns of achievement after the intervention. The focus is on sustaining gains in reading comprehension made through two TLRI-funded research-development projects in South Auckland, representing 13 decile 1 schools with primarily Māori and Pasifika students.

49. Researching understanding of learning and teaching (RULT): A case study in using practice-based research to develop a school-wide learning community

Funding: 1 year

Research team

Elaine Mayo and Lindsey Conner, College of Education, University of Canterbury, with Avonside Girls' High School

Brief description

This research project investigates how teachers who are using a peer-coaching model to help each other gain a deeper understanding of teaching and learning can distil and share their emerging experiential knowledge, and how this influences future praxis (thinking and acting) in teaching. The school aims to build a reflective learning community where teachers collaborate deliberately to support improved outcomes for students.

The project involves four cycles of activity in which the "learning stories" from the peer-coaching model will be documented and used to promote fresh questions about individual and collective learning.

50. Linking culturally responsive teaching, learning, and assessment to enhance the engagement of diverse students in the primary science classroom

Funding: 2 years

Research team

Bronwen Cowie Wilf Malcolm Institute of Educational Research (WMIER), the University of Waikato, with Arataki Primary School, Tauranga; and Peachgrove Intermediate School, Hamilton

Brief description

This study will explore possible synergies between current understandings of culturally responsive pedagogy and assessment for learning in the context of primary science classes with a high proportion of Māori students. Classroom interactions and relationships between three teachers, science, and their diverse students will be traced over two units (one per year) through the use of video and observation. The project aims to illuminate student and teacher positioning around science, knowledge and their understandings of synergies with Māori cultural knowledge, as well as the development of student knowledge of, and affiliation with, science.

51. Mathematics classrooms: Explorations into the teaching/learning nexus

Funding: 2 years

Research team

Roberta Hunter and Glenda Anthony (Team Researcher), with Massey University; School of Education, Auckland, and West Harbour School Teachers.

Brief description

This is a collaborative design research study exploring communication and participation patterns in mathematics classrooms. It draws on the expertise of researchers and teachers to examine the pedagogical practices that provide equitable access to mathematical discourse for students. The data will offer ways to increase our knowledge of the sorts of teaching and learning practices which strengthen diverse learners' mathematical proficiency, both socially and academically. We aim to help connect policy with practice in a sustainable way.

52. Arts e-learning and the online specialist teacher: Increasing opportunities for quality student outcomes

Funding: 2 years

Research team

Jan Bolton, Jan Bolwell, and Delia Baskerville, Victoria University of Wellington, with Manutuke School, Gisborne Intermediate, Ormond School, Whakarongo School, and Rangikura School.

Brief description

The project researches the potential of an arts e-learning environment to provide quality arts teaching and produce successful learning outcomes for students. It involves the implementation of an innovative, web-based programme that makes possible the expertise of dance and drama specialists online in Year 6–8 classrooms where such expertise would not normally otherwise be available.

Using the principles of design research, a project team comprising researcher/specialist practitioners and classroom teachers will document the changing process of the implementation and produce insights into the potential ongoing viability of such models to make a positive difference to students' arts learning opportunities.

53. SCIANtICT—Science Classroom Investigations of the Affordances in Teaching with ICT

Funding: 2 years

Research team

Kathrin Otrell-Cass, Malcolm Institute of Educational Research (WMIER), The University of Waikato, with St. Andrew's middle school

Brief description

This study works with primary science teachers to explore the potential of ICT for teaching and learning science with diverse groups of students. It aims to capture and analyse the ways teachers use ICT tools to support student interest, motivation, expression of ideas, and understanding. Video case studies will be carried out focusing on ICT that is available to teachers including the Internet, interactive whiteboards, data projectors, CD-ROMs, and other digital technologies.

54. Building students' inferential reasoning: Statistics curriculum Levels 5 and 6

Funding: 2 years

Research team

Dr Maxine Pfannkuch, The University of Auckland and **Pip Arnold**, Malcolm Institute of Educational Research (WMIER), The University of Waikato, and six teachers from a variety of schools

Brief description

There is an urgent need to understand how students can progressively develop informal statistical inferential reasoning from Levels 5 to 8 of the new curriculum. Through the partnership, Web applications and new ways of teaching will be developed and implemented. Student responses to pre- and post-tests, student interviews, and teachers' reflections on student learning will be used to ascertain the type and level of informal statistical inferential reasoning students can achieve for curriculum Levels 5 and 6. The findings from the research will have a direct impact on practice and assessment at the national level.

55. Developing secondary school students' understanding of statistical literacy in a data-analysis environment

Funding: 2 years

Research team

Sashi Sharma, Malcolm Institute of Educational Research (WMIER), The University of Waikato, with Marcellin College, Auckland

Brief description

Researchers will conduct two cycles of teaching experiments in two Pasifika-dominated Year 9 classes. There will be three phases: preparation, teaching, and a retrospective analysis phase. The research team will plan activities and envision how dialogue and statistical activity will unfold as a result of planned classroom activities. The teaching phase will involve video-recordings of all classroom sessions, copies of all the students' written work, audio-recorded interviews conducted with students, and field notes of the classroom sessions. Data will be analysed using grounded theory approach and a hypothetical teaching sequence proposed.

56. Designing learning environments that encourage a wide range of mathematical abilities and understandings

Funding: 2 years

Research team

Caroline Yoon, The University of Auckland, in partnership with Auckland Girls Grammar School and Northcote College.

Brief description

Researchers will conduct two cycles of teaching experiments in two Pasifika-dominated Year 9 classes. There will be three phases: preparation, teaching, and a retrospective analysis phase. The research team will plan activities and envision how dialogue and statistical activity will unfold as a result of planned classroom activities. The teaching phase will involve video-recordings of all classroom sessions, copies of all the students' written work, audio recorded interviews conducted with students, and field notes of the classroom sessions. Data will be analysed using grounded theory approach and a hypothetical teaching sequence proposed.

Projects funded 1st January 2010 (selected from the 2009 funding round)

57. Blended learning: The impact of vocational and distance learning initiatives on students' school experiences

Funding: 2 Years

Research team

Keryn Pratt, and Ken Pullar, University of Otago College of Education, OtagoNet and its member schools.

Brief description

This research project aims to explore students' experiences of a blended form of learning, characterised by non-classroom, non-traditional forms of learning, such as distance and vocational, alongside more traditional forms. It will explore the experiences of students in the OtagoNet videoconference cluster of schools, both within the 'classes' and outside of them, including their learning outcomes and the impact this form of learning is having on them, their teachers, schools, and communities.

58. School and home contributions to overcoming the summer learning effect in decile 1 schools

Funding: 2 years

Research team

Professor Stuart McNaughton, Woolf Fisher Research Centre, The University of Auckland together with the Mangere AUSAD Management Team.

Brief description

The aim of the research is to identify those school-based and family-based practices that support continued development of literacy in Year 4–8 students in urban decile one schools over the summer. The primary outcome will be research-tested information that will enable schools and their communities to further build practices that support literacy achievement and ameliorate the summer learning effects.

59. Teaching Algebra Conceptually in Years 9 and 10

Funding: 2 years

Research team

Dr Chris Linsell, University of Otago College of Education, St Hilda's Collegiate, King's High School.

Brief description

This project aims to develop approaches to teaching in years 9 and 10 that will assist students in developing a sound conceptual understanding of algebra. Although recent studies have detailed students' algebraic thinking, there has been no research to date on teaching approaches that make use of these findings.

60. Connecting curriculum, connecting learning; Negotiation and the arts

Funding: 2 years

Research team

Associate Professor Deborah Fraser, The University of Waikato, School of Education with Omanu, St Thomas More and Welcome Bay schools.

Brief description

The project builds on a previous TLRI project and on a current pilot project on arts-based integration. Arts-based integration specifically links teaching and learning in an arts-based discipline to other areas of the curriculum. The project will focus on ways in which children seek, use and create knowledge when learning this way. It will also examine how teachers and the wider community are influenced by and engaged in arts-based integration.

61. Understanding the pedagogy of school-based marae: A culturally responsive learning context in secondary schools

Funding: 2 years

Research team

Dr. Jenny Lee and Dr. Leonie Pihama, Rautaki Ltd and three Auckland based school marae.

Brief description

This research project will investigate the role of school-based marae as a culturally responsive pedagogy in mainstream secondary schools. The project involves the participation of students, teachers, whānau and community representatives of three urban school marae within the Auckland region. It will examine the pedagogy of school marae and the way it impacts on the educational achievement of Māori learners and their whānau.

62. Developing a place-based approach to outdoor education in Aotearoa/New Zealand

Funding: 2 years

Research team

Dr Mike Brown, University of Waikato, Mt Maunganui College and Ngaruawahia High School.

Brief description

This project will work with teachers to understand how they conceptualise teaching and learning in outdoor education. The researchers will explore the possibilities made available by linking outdoor education with sites of local significance and meaning for participants. They will investigate how both teachers and students respond to a place-based approach, and they'll disseminate these findings to the broader outdoor education community.

Post School Sector

Completed

63. Effective teacher-education practice: The impact of written assessment “feedback” for distance learners

Funding: 1 year

Research team

Valerie Margrain, Trish Muirhead, and Angela Edlin, The Open Polytechnic of New Zealand, joined by Anne Meade, Anne Meade Associates

Brief description

The overall aim of this project is to investigate the role that lecturers' written assessment feedback to student teachers plays in student learning. It aims to add to the knowledge base about tertiary teaching and learning, in particular formative assessment practice in distance/flexible education; enhance the links between educational research and distance/flexible teaching practices; and build research capability among lecturers involved in an early childhood teacher education programme.

http://www.tlri.org.nz/pdfs/9232_summaryreport.pdf

http://www.tlri.org.nz/pdfs/9232_finalreport.pdf

64. Narratives of beginning Māori teachers: Identifying forces that shape the first year of teaching

Funding: 1 year

Research team

Paora Stucki and Te Wānanga o Aotearoa Bachelor of Teaching (Primary) lecturers and their ex-students, with Ruth Kane from Massey University as adviser

Brief description

Beginning teachers find the reality of “real” teaching overwhelming. Decisions are often made early to leave the profession and evidence suggests this is particularly so for Māori teachers.

Te Wānanga o Aotearoa had its first BTchg graduands in 2003. This project enlists the mentoring of an experienced researcher (Ruth Kane, Massey University) to support wānanga staff and their new graduates in a collaborative narrative enquiry into the lived experience of the first year of teaching.

Findings identify the forces that shape the ways beginning Māori teachers negotiate this first year and signal ways for teacher education and schools to support beginning Māori teachers.

http://www.tlri.org.nz/pdfs/9214_summaryreport.pdf

http://www.tlri.org.nz/pdfs/9214_finalreport.pdf

65. The relationship between English language and mathematics learning for non-native speakers

Funding: 1 year

Research team

Pip Neville-Barton, School of English and Applied Linguistics, Unitec; and **Bill Barton**, The University of Auckland

Brief description

This study examines the language factors in secondary and tertiary mathematics learning for students who do not have English as their first language; in particular the characteristics of spoken and written language they find difficult.

http://www.tlri.org.nz/assets/pdf/9211_summaryreport.pdf

http://www.tlri.org.nz/assets/pdf/9211_finalreport.pdf

66. Improving tertiary student outcomes in their first year of study

Funding: 2 years

Research team

Nick Zepke and **Linda Leach**, Massey University, in partnership with Northland Polytechnic, Manukau Institute of Technology, Waikato University, Universal College of Learning, Wellington Institute of Technology, and Christchurch College of Education

Brief description

What can New Zealand Tertiary Education Institutions (TEIs) and teachers do to adapt their current processes and practices to improve retention, persistence, and completion of diverse students in their first year?

This research question arises from an international best-evidence synthesis that identified a dearth of New Zealand research into student outcomes. It is answered by:

- surveys to identify current institutional and teaching practices that improve the outcomes of diverse students
- surveys of students who have persisted with their study after considering withdrawing to identify factors enabling them to stay
- guidelines for future practice, developed from the data gathered, in collaboration with practitioners in seven TEIs.

http://www.tlri.org.nz/pdfs/9209_summaryreport.pdf

http://www.tlri.org.nz/pdfs/9209_fullreport.pdf

67. Understanding and enhancing learning communities in tertiary education in science and engineering

Funding: 2 years

Research team

Mike Forret and **Chris Eames**, Centre for Science and Technology Education Research, University of Waikato

Brief description

This project aims at enhancing the quality of teaching and learning experiences in tertiary science and engineering education. The study seeks to develop a better understanding of how existing systems, processes, and practices influence both students' and lecturers' perceptions of, and attitudes towards, science and engineering, and science and engineering education. The study addresses the nature of tertiary learning communities and seeks to understand, from the perspective of the participants, what it means to teach and learn tertiary science and engineering.

Paper presented at the New Zealand Association for Environmental Education annual conference, Auckland, January 2006.

http://www.tlri.org.nz/pdfs/9223_summaryreport.pdf

http://www.tlri.org.nz/pdfs/9223_finalreport.pdf

68. Who, what, how, and why? Profiles, practices, pedagogies, and self-perception of adult literacy practitioners

Funding: 1 year

Research team

Robyn Chandler, Canterbury Adult Basic Education Research Network (CABERN), Christchurch

Brief description

This project is designed to fill a gap in understanding the differing pedagogies and practices, motivations, and self-perceptions of adult-literacy practitioners in Aotearoa New Zealand. The project team members are part of a larger local network of practitioners and researchers and profile practitioners in Canterbury using a variety of methods including questionnaires, interviews, focus groups, and practice journals.

http://www.tlri.org.nz/pdfs/9210_finalreport.pdf

69. Addressing obstacles to success: Improving student completion, retention, and achievement in science modules in applied health programmes, with particular attention to Māori

Funding: 2 years

Research team

Kelly Gibson-van Marrewijk, Waikato Institute of Technology, with the New Zealand Council for Educational Research

Brief description

This project will investigate factors that impact on student completion, retention, and achievement rates for science modules in applied health programmes, with particular attention to Māori. The research comprises two stages. The first, in 2006, explores what science knowledge is necessary for new graduates if they are to be competent midwives and nurses. The second phase develops, pilots, and evaluates an intervention in the science modules taught in the applied health programmes at a representative tertiary education institution. This intervention will delineate the necessary science knowledge for new midwifery and nursing graduates.

http://www.tlri.org.nz/pdfs/9236_finalreport.pdf

70. Teaching and learning in the supervision of Māori doctoral students

Funding: 2 years

Research team

Elizabeth McKinley and **Barbara Grant**, The University of Auckland, with The Capability Building programme within Ngā Pae o Te Māramatanga (the National Institute of Research Excellence for Māori Development and Advancement); The University of Auckland; the University of Waikato; Te Whare Wānanga o Awanuiārangi; Les Williams; and current practitioners of supervision who are also supervisors of Māori doctoral students

Brief description

The project aims to enhance understanding of the supervision practice of Māori doctoral candidates (from both students' and supervisors' perspectives), so as to improve outcomes for those candidates and their institutions. This project will be framed within kaupapa Māori methodology.

<http://tlri.org.nz/teaching-and-learning-in-the-supervision-of-m-ori-doctoral-students/>

71. An exploration of the pedagogies employed to integrate knowledge in work-integrated learning in New Zealand tertiary educational institutions

Funding: 1 year

Research team

Richard Coll, Research Director, Science & Engineering, University of Waikato, with AUT, Massey University, Unitec, New Zealand Association of Cooperative Education, and the University of Waikato

Brief description

This project seeks to explore the pedagogies in work-integrated learning programmes (WIL) in the context of full-time undergraduate students undertaking WIL as part of their programme of study in New Zealand TEIs.

<http://tlri.org.nz/assets/pdf/9263-summary-report.pdf>

<http://tlri.org.nz/assets/pdf/9263-Finalreport.pdf>

72. The role of initial teacher education and beginning-teacher induction in the preparation and retention of New Zealand secondary teachers

Funding: 2 years

Research team

Glenda Anthony and **Ruth Kane**, College of Education, Massey University, with Universite du Quebec en Outaouais, Canada; University of Waikato; Auckland College of Education; Massey University; Ruth Mansell, independent consultant, Te Tari Puna Ora o Aotearoa/New Zealand Childcare Association; University of Otago; and Te Whare Wānanga o Awanuiārangī

Brief description

Examines beginning secondary teachers' experiences of initial teacher education (ITE) and induction, identifying factors that promote or hinder teacher capability and retention.

http://www.tlri.org.nz/pdfs/9217_summaryreport.pdf

http://www.tlri.org.nz/pdfs/9217_finalreport.pdf

73. Valid and practical tertiary assessment of learning outcomes

Funding: 3 years

Research team

Luanna Meyer, Victoria University of Wellington, with Massey University, Te Whare Wānanga o Awanuiārangī, and Manukau Institute of Technology

Brief description

This research will investigate policy and strategies for the assessment of student learning outcomes across a wide range of tertiary institutions. The research team will include tertiary lecturers and researchers in various disciplines and professional programmes, and participants in the research will be tertiary practitioners, students, and tertiary leaders. The purpose of the project is to better understand and support evidence-based, valid, and practicable assessment strategies to enhance the teaching and learning process.

<http://tlri.org.nz/post-school-sector/>

In progress (continuing or at final editing stage)

74. Success for all: Improving Māori and Pasifika student success in degree-level studies

Funding: 2 years

Research team

Airini, Associate Dean, Equity, The University of Auckland Faculty of Education, with The University of Auckland Faculty of Education; the Faculty of Medical and Health Sciences; and the National Institute of Creative Arts and Industries, Careers Centre.

Brief description

This evidence-based project targets Māori and Pasifika student success in degree-level tertiary education. The focus is on the ways in which nonlecture teaching and learning helps or hinders Māori and Pasifika student success in preparing for, or completing, degree-level studies. Good practice will be identified.

75. Unlocking student learning: The impact of Teaching and Learning Enhancement Initiatives (TLEIs) on first-year university students

Funding: 3 years

Research team

Kogi Naidoo, Massey University, in partnership with Victoria University of Wellington, University of Otago, Lincoln University, Auckland University of Technology, University of Canterbury, University of Waikato, and The University of Auckland

Brief description

This research will focus on the provision of academic development and its impact on the success of first-year student learning at all universities in New Zealand. It will harness the experience and expertise of academic developers and teachers as partners. The goal of the project is to increase students' learning and success in targeted large first-year classes through the development and implementation of Teaching and Learning Enhancement Initiatives (TLEIs) that make a difference to student learning and success. The study will empirically identify a range of academic development strategies and approaches that directly enhance student success and learning outcomes.

70. Learning environments and student engagement with their learning in tertiary settings

Funding: 2 years

Research team

Nick Zepke and **Linda Leach**, College of Education, Massey University, with nine partners including one wānanga, two universities, four polytechnics, one PTE, and one large community provider

Brief description

This project investigates student engagement with their learning process across the range of providers in tertiary settings and gauges the importance and nature of environmental influences on that engagement. The project has four phases: the first completes a literature review to inform the process; the second adapts international survey instruments on learning climate and student engagement to the New Zealand tertiary climate; the third surveys tertiary teachers to identify their approaches to achieving student engagement; and the fourth interviews selected students in order to follow up key findings identified in the student survey. The findings will provide insight into ways to create learning environments that engage learners.

71. Analysing the transition from secondary to tertiary education in mathematics

Funding: 2 years

Research team

Mike Thomas, The University of Auckland and **Sergiy Klymchul**, Auckland University of Technology, with Mt Albert Grammar and Epsom Girls Grammar schools

Brief description

This project will investigate secondary and tertiary mathematics education and provide evidence of whether key differences exist. Any differences that are discovered will be described qualitatively. It aims to examine the influence of a number of key factors in the transition from secondary to tertiary mathematics education, and consider how to smooth this transition. It will identify and analyse the reasons for any differences at the two levels and explore ways to enrich mathematics teaching and learning, employing ideas from both secondary and tertiary educators.

72. Shifting the conceptualisation of knowledge and learning in the integration of the new New Zealand curriculum in initial and continuing teacher education

Funding: 2 years

Research team

Vanessa Andreotti, The University of Canterbury; Dr Kathleen Quinlivan; and Dr Jane Abbiss, with UC Education Plus

Brief description

Initial and ongoing teacher education will be a key factor in the success of *The New Zealand Curriculum*. This project examines shifts in the conceptualisation of knowledge and learning in learning outcomes and course design in initial and inservice teacher education.

73. Exploring e-learning practices across the disciplines in a university environment

Funding: 2 years

Research team

Dr Marcia Johnson, Wilf Malcolm Institute of Educational Research (WMIER), University of Waikato with a multidisciplinary team from across the University of Waikato, including educational researchers, lecturers, and the team leader for eEducation university staff development.

Brief description

This is a two-year project exploring ICT/e-learning across several disciplines and with students from diverse backgrounds at the University of Waikato. It will address issues of tertiary-level pedagogy, e-pedagogy, and research. In the first year the project will explore ICT practices within four case-study environments. Data collected will be analysed and the findings used to discern and distil pedagogical practices. E-learning capacity will be built through the recruitment of additional case-study participants during the second year. Findings from both years will be used to leverage pedagogical change and to close participatory gaps for students and lecturers.

74. An exploration of field-based early childhood teacher education in Aotearoa New Zealand.

Funding: 2 years

Research team

Liz Everiss, **Dr Margaret Brennan** and **Diane Mara**, The Open Polytechnic of New Zealand, and Waikato Institute of Technology (WINTEC)

Brief description

This is a small-scale, multisite exploratory study that uses an ethnographic research approach. It seeks to capture the reality of field-based initial teacher education (ITE) using interactions in the classroom between all participants in the teaching and learning process as a tool to begin to document, describe, and understand the nature and form of field-based ITE. By taking this approach the study will contribute to the limited research base which explores the inner workings of teacher-education programmes internationally.

Projects funded 1st January 2010 (selected from the 2009 funding round)

76. Learning to become 'assessment capable' teachers

Funding: 3 years

Research team

Dr Mary Hill, University of Auckland **Associate Professor Bronwen Cowie**, University of Waikato, **Associate Professor Alison Gilmore**, University of Canterbury and **Professor Lisa Smith**, University of Otago.

Brief description

This project aims to enhance understanding about how pre-service teachers learn to use assessment in the service of students' learning. It will identify pre-service teachers' understanding of using assessment for learning as they begin and when they exit their pre-service programme.

76. Mathematics Undergraduate Teaching: Perspectives and Interactions

Funding: 2 years

Research team

Associate Professor Mike Thomas, **Dr H. Bartholomew**, **Prof B. Barton**, **Dr B. Kensington-Miller**, Mathematics Department, The University of Auckland, Faculty of Education, The University of Auckland, Centre for Academic Development, The University of Auckland.

Brief description

This project aims to address simultaneously multiple aspects of undergraduate mathematics lecturing by examining lecturers and their development, interactions in the lecturing environment, and student approaches to lectures. A framework will be developed for describing the knowledge, orientations and goals used by lecturers in tertiary mathematics lectures and used consciously as a lecturer professional development strategy.



TLRI interview: Jeff Smith on NEMP (National Education Monitoring Project)

Jeff Smith says NEMP is a treasure trove of research data and pointers to research questions. And it is open to anyone interested in probing.

For 15 years, NEMP, based at Otago University's Educational Assessment Research Unit, has assessed New Zealand children on almost all aspects of the curriculum. Each curriculum area goes under the spotlight on a rotating four-year cycle. In each case the monitoring project assesses the work of a random sample of 1,440 Year 4 students and 1,440 Year 8 students from 260 schools.

“One of the big advantages for researchers is that if you see something in NEMP, you can say it's the case for all New Zealand, because of the nature of the sample. It is not like being a researcher and persuading a principal to let you look at one group of kids in one school,” he says.

NEMP consists of a variety of tasks that students are asked to do, sometimes one to one with a teacher, sometimes working independently and sometimes as a group. The latter enables judgments to be made about how well students work in teams.

The information is collected in different forms: videotapes, observations from teachers working one to one with students, and student written material. University students are used to mark simple written material, whereas a panel of school teachers are called in where judgement calls are needed for more complex material. The resulting data are analysed statistically and reports are then written that try to capture the findings across the particular curriculum area.

Jeff says the reports are thorough but only go so far. “We do look at things like the relationship between gender and performance, but that is kind of where we stop. There are a lot of additional questions that could be asked of the data sets.”

“Anybody could say ‘I'm really interested in science and students in the bottom four deciles’, and we could ship you off the data. You might want to look at gender differences in processing and deeper thinking tasks. So you could go back through the tasks, categorise them, make a scale and analyse them to your heart's content.”

He has a particular interest in art and would love to do more work with those data sets, particularly comparing art with other subjects.

“One of the questions we look at is when they talk about their art, did they show self-regulation—monitoring the process and self-evaluating? This is on the video tapes but it is not the stuff that ever gets analysed in the final report. There are an untold number of stories there. Our primary focus is on reporting what children know and can do, so the more academically oriented questions are left until later or for others.”

Maths is another area where he believes the data could yield answers to many research questions.

“If there is someone interested in maths education, but they’re really not sure what the issues are—give us a call! We really want to make NEMP as useful as possible. I love having these data sets looked at.”

Videotapes in the collection include children chasing balls and running round cones as part of assessing the physical education curriculum.

“New Zealand with its Push Play campaign is very interested in the physical fitness of our school kids. You want to know how many kids are overweight? We’ve got it on tape.”

As you’d expect, there are rich NEMP data on all aspects of literacy. One of the areas Jeff would like to see more analysis of is the link between listening skills and reading comprehension.

“At the elementary level, if you knew how often kids get read to at home, you could probably predict their comprehension skills. I think a lot of the problem we see with reading comprehension is kids with listening problems.”

Buried in the NEMP data is much that is relevant to the key competencies in the new school curriculum.

“You could go back and rescore according to key competencies, such as the ability to work with others, managing self and so on.”

How do researchers access NEMP data? The reports themselves are readily available, and Jeff says they are very open to having researchers turn up in Dunedin.

“They can come to Dunedin and review tapes—we’ll stick them in a room. Some people ask for a selection of the tapes and we send them off.”

Material is retained for four years, so each curriculum area can be compared with the previous round, but lack of storage means only a random sample of the raw data—about a quarter of the total—is kept beyond that.

There are many areas he would like to investigate if he had the time, particularly in art and reading. He would like to look in more detail at how children develop the ability to really comprehend and to engage with reading.

Another area that fascinates him is the interaction between students and the teacher administrators of the tests. They are trained teachers who are brought in for the task—they don’t know the children.

“Some of them can get the children to do anything, and with others it’s much more perfunctory. You can just see it when you look at the tape. What is it the good ones are doing that gets the kids to work harder, to engage? It’s not just enthusiasm, it’s something more. Maybe it’s the essence of a good teacher—and it’s all on tape.”

Professor Jeff Smith is co-director of the National Education Monitoring Project at the University of Otago.



TLRI interview: Lynne Whitney

Findings from the various international assessment studies New Zealand takes part in are a rich resource for educational researchers, says the Ministry of Education's senior manager research, Lynne Whitney.

"They are powerful in that they capture lots of information from across New Zealand and other countries in areas important for New Zealand education. They tell us the kinds of skills and knowledge students have attained and, in the studies relating to Years 5 and 9 students, we hear from teachers about some of the specific strategies they use."

She is talking about assessment studies such as the OECD's PISA (Programme for International Student Assessment) and ALL (Adult Literacy and Life skills) and the International Association for the Evaluation of Educational Achievement (IEA) assessments such as TIMSS (Trends in International Mathematics and Science Study) and PIRLS (Progress in International Reading Literacy Study). These assessments and others are run in New Zealand on a regular basis, managed through the Ministry of Education. While the Ministry of Education reports on the main results and does some further analysis from the data, there is real scope for research questions to be generated, in particular through the TLRI lens of the implications for teaching and learning.

She says it's important for researchers to understand the nature and purpose of the assessments and the differences between them. PISA was designed to focus primarily on providing policy makers with information on students as they neared the end of compulsory education. The results often feed into national and international educational, economic and labour market indicators. So PISA looks at students' competencies in reading, maths, science literacy and problem solving once they have been in the school system for about 10 years, and assesses whether they can apply their knowledge and skills to everyday situations. Schools for all studies are selected randomly, usually by an overseas study centre. The PISA assessment involves about 30 students at each randomly selected school, and over 4,000 students in all. And while PISA can look at achievement across schools, it can't look at classroom-level achievement.

The IEA suite of assessment studies can look at achievement at the class level, since they are carried out within whole classes. Like PISA, they measure skills and knowledge, and they also contain questions which probe student attitudes and engagement. Teachers answer a series of questions, such as the reading activities they carry out in the classroom, and what proportion of time they spend on different aspects of teaching and other activities. Parents are sometimes surveyed as well.

ALL assesses skills in the adult population, with households selected at random. People who are eligible are asked literacy, numeracy and problem-solving questions, and the interviewers gather other information on topics such as income levels and reading habits.

New Zealand has taken part in PISA since 2000, and the others for longer, throwing light on national performance in reading, mathematics, problem solving, civics and science.

“Our participation in these studies has resulted in a great deal of information,” Lynne says. The reports mostly describe achievement data and its links to other factors measured by the studies. To explore more complex relationships between different factors and achievement, hypotheses need to be developed and tested, particularly if the implications for teaching and learning are to be teased out.

For example, in PISA students are asked about their self-concept—their sense that they can achieve. By looking at this information in relation to their scores on PISA, it is clear that in general, the greater their belief in themselves, the better their achievement.

“If self-concept or self-belief is critical, then we need to ask what that means and what it might look like in the classroom and what can be done to shift perceptions. What we can do is use the data to generate questions that can be followed up at school, in the classroom or elsewhere.”

In other cases, researchers’ interest might be stimulated by something where the New Zealand experience is quite different from other countries.

For example, PIRLS shows that New Zealand teachers appear to be keen on silent reading relative to many other countries. “You look through the information the teachers supply, and you think: ‘What is it about our assumptions about how children learn that leads us to focus on silent reading? When does silent reading support student progress? Is it good for some students and not for others, and what is it about silent reading that may best support progress in reading?’ There is a lot to unpack.”

Lynne says the studies should provide ideas and provoke a response in researchers. One approach is to test PISA data to see what it actually means in a particular New Zealand context. A Norwegian study is currently looking more deeply at disruptive behaviour through classroom observations. Negative perceptions about the level of disruptive behaviour have been regularly reported for Norway through PISA. But what does disruptive behaviour look like, how do teachers deal with it and what impact does it have on other students?

There is also scope to look across the studies. A Ministry of Education researcher is doing some work using data from ALL and PIRLS exploring the link between adult literacy and being read to as a child. ALL asks parents if they read to their children, and, in a PIRLS’ survey, parents are asked about reading to their child, what they read and whether there are books in the home. It’s rich data that hasn’t been brought together before.

There is information about science in a number of the studies, including the suggestion our students are doing a lot of note-taking. “Is this true in all New Zealand classrooms? If it is, what is likely to be the longer term impact on learning science?”

Lynne acknowledges the data sets themselves can be daunting, requiring knowledge of sophisticated measurement models. But she says the reports from the studies contain a great deal of material that is accessible to a range of readers.

She says some people don’t put much store on these large-scale studies, because they think they don’t reliably represent the full picture of what New Zealand students can do.

“But first, we get such consistent results within surveys over time and across surveys. The degree of correspondence between us and Australia is also often quite amazing. And secondly, nobody would argue that these studies provide a full picture of what our students can achieve, but they are very powerful in showing us how our students can apply the skills and knowledge they are acquiring and some of the things that performance can be related to.”

“I would like to see more people reflecting on this information and thinking about what it actually means for the teacher and the learner in classrooms in New Zealand.”

The studies are easily accessible through the Education Counts website. The links are provided below.

www.educationcounts.govt.nz/goto/PISA

www.educationcounts.govt.nz/goto/PIRLS

www.educationcounts.govt.nz/goto/ALL

www.educationcounts.govt.nz/goto/TIMSS

Lynne Whitney is senior manager, research, at the Ministry of Education, Wellington.

This paper was downloaded from www.tlri.org.nz

Criteria for selection

In assessing an Expression of Interest the selection panel will consider the extent to which it clearly sets out the intent of the proposed research project and how it might contribute to the TLRI.

The selection panel will assess the proposed project in terms of its relevance to the aims, principles, and priorities of the TLRI using the following criteria:

1. Strategic relevance

The strategic relevance of the proposed project will be assessed in terms of how it addresses Principle One and Two and the TLRI strategic priorities of *consolidating and building knowledge* and *identifying and addressing gaps in our knowledge*.

2. Research relevance

Type I projects: research relevance will be assessed in terms of Principle Three and Four and, in the context of the nature and scope of the proposed project, how the (1) research design and methodology; (2) capability of the project team; and (3) partnership model address the research priorities outlined in the overview document.

Type II projects: research relevance in terms of Principle Four and, in the context of the nature and scope of the proposed project, how the (1) research design and methodology; (2) capability of the project team; and (3) partnership model address the research priorities outlined in the overview document.

3. Practice relevance

Practice relevance will be assessed in terms of consistency of the proposed project with Principle Five and the extent to which it addresses the practice priorities (*likely impact on practice* and *impact on learning*) that are appropriate to the nature and scope of the proposed project.