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FRONT COVER

Year 5/6 Learning Hub, Endeavour School, Hamilton

The cover art for this issue comes from the Year 5/6 Learning Hub at Hamilton’s newest school, Endeavour Primary School, which opened in the first term of 2015. Endeavour is a school which has modern learning environments where students are encouraged to ‘learn without limits’. Its core principles are having learners as central to all engagement, where learning is collaborative and co-constructed, and at the same time personalised. Diversity and differences are celebrated through challenge, and assessment and learning achievement is developed through context, developing connectedness for the entire Endeavour community.

It has been an exciting year for the foundation students of Endeavour School and this cover art is a celebration of the beginning of that learning journey. We wish them every success in the future.
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Welcome to the second edition of Kairaranga for 2015. Monday October the 5th was World Teachers Day, an opportunity to recognise and celebrate the vital role that teachers play not only in the education of our children and young people, but also in the social, economic, and cultural well-being of our societies. The importance of teachers was also highlighted in a recent United Nations publication ‘Transforming Our World: The 2030 Agenda for Sustainable Development’ (United Nations, 2015). This historic new agenda, signed by all 193 United Nations members, outlines an action plan for sustainable development worldwide and includes 17 goals and 169 targets. One of the goals focuses on education and aims to ensure inclusive and equitable quality education and the promotion of lifelong learning opportunities for all. It is acknowledged that quality teachers who are empowered and valued are critical to the achievement of this goal.

In this edition of Kairaranga, the important work of teachers is highlighted. We begin with an interview with Professor Angus Macfarlane, Professor of Māori Research at the University of Canterbury. In this interview, Professor Macfarlane shares with readers of Kairaranga his journey as an educator, what he sees as the current issues and successes facing education in Aotearoa/New Zealand, and some wise words of encouragement for all involved in the education sector. The second article by Jean Annan and Rose Carpenter describes the Learning and Change Network Strategy (LCN), which involved 53 voluntary, networked communities of practice throughout New Zealand and was designed to raise student achievement. Following this, Miriam Crouch provides an overview of the concept of attachment and explores its importance for healthy, secure children and young people. Implications for teachers and others involved in education are also highlighted. Whatu was the metaphor that emerged as a representation of three Māori women educators’ pedagogy in the next article by Anne Hiha. In this article, Anne reports on a small kaupapa Māori research project that explored the question: What is Māori women educators’ pedagogy? Next, Anne-Marie McIlroy describes the Inclusive Education Capability Building Project and shares the learning journey of some of the members of this project as they engaged in the inquiry process around inclusive practice. The teaching of reading is the focus of the next article, where authors Tamara Senior, Alison Arrow and Keith Greaney report on an investigation into the extent to which teachers of beginning readers in low-decile schools emphasised phonological-based instruction and the relationships between teachers emphasis on phonological instruction and student progress in reading-related skills. Finally, Michael Jacobs reports on an assistive technology tool to support struggling reluctant writers.

We hope that readers enjoy this edition. Thank you to all our contributors.

Ngā mihi nui
Alison Kearney for the Kairaranga Editorial Team

I recently had the privilege of interviewing Professor Angus Macfarlane, Professor of Maori Research at the University of Canterbury. In this interview, Professor Macfarlane shares with readers of Kairaranga his journey as an educator, what he sees as the current issues and successes facing education in Aotearoa/New Zealand, and some wise words of encouragement for all of us involved in the education sector.

Can you tell readers of Kairaranga about your background and your journey as an educator?

Thank you very much Alison. It is good that you are interacting with me now and we are having this conversation. It is not an easy task for me for while I am often in the foreground of hui, educational discussions, and conference presentations, and have been involved in developing theories and actively contributing to the sector, I am actually a very private person. This is just the way that I prefer things to be. I am not overly fond of dates and years, far better for me to talk in terms of junctures and milestones. I look at this conversation as more to do with selected kāupapa rather than me as an individual, but this might be somewhat difficult, so I will try to attend to both if I can. Allow me to state up front that I am proud to be Ngāti Whakaue and Ngāti Rangiwewehi – my iwi. I always like to link back to my iwi and waka whenever possible in educational conversations and writings, so I would like to acknowledge my waka, Te Arawa.

I grew up on the eastern shores of Lake Rotorua, the tenth of fourteen children. My Pākehā father was a businessman and my mother a full-time mother. The children pursued various career pathways: one went into medicine, some into business and others into the health sector. I think that I might have been the only one who journeyed into the education realm. My recollection is that we all seemed to do okay at school. Some of us got a lucky break – some sisters went to St Josephs Boarding School for Māori girls and some of the boys, myself included, were sent off to a Māori boarding school in Auckland. In that environment it was instilled in me that a stronger sense of being Māori was normal, and nourishing. All the time it was listening, speaking, singing, praying, acting and interacting, bonding, and even competing, which could well be the reason that from time-to-time I have a competitive edge, or spirit to take things to the limit. I went through the school system very well I think but I didn’t go straight into tertiary study. After finishing school I went into the family business - my father and older brother ran a transport business. After a while I knew that there was something else that I wanted to do so I went back to study. I don’t think that I was an outstanding undergraduate but I did graduate with a BA. A scholarly experience at Auckland University saw me in the midst of people like Meremere Penfold, Pat Hohepa, Sidney Moko-Mead and Ranginui Walker. They were the icons then as they still are now. Waikato University is where I finished my postgraduate degrees. It was awesome to be in classes taught by Timoti Karetu, John Rangihau and George Marsden, so I had some amazing role models.

It was at postgraduate level that I got more of a feel for things scholastic and then I went into teaching. My last regular teaching job was as a Dean in a reasonably-sized secondary school. It was around that time that I experienced a sea-change. This sea-change was when I was appointed head teacher of a special school for adolescents with profound behaviour difficulties. It was not a Māori school, but ninety percent of the roll at the time was Māori. That sea-change got me interested in asking questions related to what makes young people like this who...
they are? What makes them tick? There are no categorical answers or silver bullets of course, but I got to understand that there are socio-psychological ways of understanding these rangatahi, and their behaviours. That took me through to a secondment to Special Education Services and to more tertiary study in the discipline of psychology, then on to the Ministry of Education as a Māori Advisor in the Waikato. While at the Ministry of Education, I was encouraged to apply for a position at the University of Waikato. I was appointed and this was a wonderful opportunity. I think it is Gagne who theorises about the notion of chance - of being in the right place at the right time, and this seemed to have happened for me. But one cannot leave everything to chance. Over time I became an Associate Professor at the University of Waikato teaching in the areas of human development and teacher education. This role provided the opportunity to intensify my learning in the areas of special education and Māori education and to be a part of the pioneering phases of the Resource Teacher: Learning and Behaviour (RTLB) initiative. I am now Professor of Māori Research at the University of Canterbury.

Who has influenced you and your work in education?

I think that from a young age I may have had a grip on the notion that education was a key instrument and a key door-opener. I think that I may have always had a tendency towards a humanising profession and a qualitative rather than a quantitative direction. The human touch appealed to me then as it does now. The other thing, like many of us, was that I had exemplary teachers. At primary school I have vivid recollections of a teacher, Bill Murray, and at secondary school a Marist Brother, Brother John Paul. They instilled in me a need for motivation, as did my father. He had an influence on me and one of the things he said was “never mind about the transport business, you go and do something else”.

But back to the important question that you have posed, Alison. When I think about influence, I prefer to think in terms of mana, given that mana can move people. Here I would go back to the mana of ancestors and the first of these is Makereti, Guide Maggie Papakura. She was a contemporary of that famous duo from the education archives, Vygotsky and Piaget, and she wrote a book called ‘Makereti - The Old-Time Māori’. She was a humanitarian, she was a guide, she learnt from her older people and she always checked things out with the iwi, even from England where she studied. Obviously, through her literary legacies, she had the qualities of a good teacher and researcher. She took Māori to the world, another sign that she was a person of mana and influence. So, just to name a few more if I may so as to do justice to your question - I admire the messages from Princess Te Puea of Tainui who said to her people “mahia te mahi – do the work”. I often say this to my students, both Māori and non-Māori, to stress the necessity of hard work if they want to succeed. That was a great axiom from a great princess and role-model from the Tainui monarchy. I would also like to mention Rose Pere who reintroduced the concept of ako; Professor Sir Mason Durie - his mana was mana Mātauranga in my view; and Sir Tamati and Lady Tilly Reedy whose mana was mana Māori – the influence of being Māori, of living it and of displaying a disposition that was culturally reasoned. Both were good at that. I also had the privilege of having proximity to Professor Tamati Reedy when he was Pro-Vice Chancellor Māori at the University of Waikato and from time to time I still phone him, seeking guidance. Professor Jim Ritchie was also at Waikato University when I was there and he was a mentor to me when I was studying for my doctorate. His mana was founded on the concept of tangatauru, the ability to walk and work in two worlds. Quite fitting that he would write a textbook entitled ‘Becoming Bicultural’. Also, Bev Anaru: Bev has gone now, but she was a great teacher and I didn’t get to really know her until I was collecting data on quality teaching practice. I got to shadow her, follow her teaching movements and talk to others about the reasons she was so good. Hers was the mana of the teacher; the mana Whakaako. She features highly in my 2004 book ‘Kia hiwa tā! Listen to culture’.

What do you see as the major issue or issues presently facing education in Aotearoa?

One of these issues I believe is ‘capacity’ and this has haunted education systems since time immemorial. However, we are getting better and we are addressing the capacity issue, in particular, the numbers of teachers including specialist teachers. If we look at the specialist-teaching programme, for example, we have lost an icon, through retirement, in Jill Bevan-Brown. She has so much mana and mātauranga – she has left a legacy of thinking and research behind which is fortunate, but who is taking her place and where do we go from here? If we look around, we see scarcity on the ground, so that the need to replenish is very real. This is part of my role and I need to do more work here to try to bridge these gaps.

Another issue, I believe, is the current propensity to measure outcomes which result in comparing schools, ethnicities and abilities, and sometimes this is problematic. Also, a summative approach can be problematic, however, once again I think we are getting better at this. ERO is now looking more
towards a formative approach which allows us to understand issues and come to terms with factors that present as challenges.

I think that prejudice exists still, in some quarters, largely on account of a lack of awareness of, and appreciation toward, things cultural.

And, as the opposite to the previous question; what good things do you see happening in education in Aotearoa?

I see so many good things, it is a tonic! One of these is causing me to contradict myself in a way because there is now more of a Maori presence, the numbers who are coming into the specialist teaching programme, the numbers coming into roles such as RTLB, the numbers coming into higher education which is part of my role as Professor of Maori Education. These are now growth areas, meaning there is more of a presence of things Māori. Maori scholarship is more recognised, locally, nationally and internationally. For example, one of the best educational texts ever written is Decolonising Methodologies so that is uplifting.

The Treaty of Waitangi is better understood, at least in the education sector. Educators now understand that the Treaty is not ‘a Māori thing’; it is a document that signals that educational advancement is a shared responsibility. It is a shared responsibility and it is for people like you and I, Liz Doell, Mandia Mentis, Sonja Macfarlane and others, to get the messages (about culturally-responsive practices) out to the sector.

Another good thing that is happening in education, in my view, is Ka Hikitia. Unfortunately, it seems that it has been poorly marketed and I think the Ministry understands that, but what a moumou, a waste of an asset, but it is not too late. It has potential.

Another is the change from deficit perspectives to potential perspectives.

(Interviewer) Has that been through Ka Hikitia?

Yes, but Ka Hikitia is a noun, ‘we’ is the verb and we can go out there and make sure that culturally-responsive pedagogies are happening and that Māori children and young people and their whānau are starting to believe more about the new story – one of Māori succeeding in the system. Jim Ritchie’s research of fifty years ago was getting the voices of young Māori who were saying then, “I am Māori … Māori is bad … I am bad”. Compare that to the voices of our recent Rotorua study of high-achieving students: these young Māori were saying “I am Maori … Maori is tumeke, I am choice”. This was a refreshing research programme and, in my view, in tandem with the philosophies of Ka Hikitia, that is, realising Māori potential.

I have always valued the Minister in her role and would like to say that I think the sector is fortunate to have a Minister of Education with such energy and enthusiasm for her role. She recognises good work generally, and advocates for priority learners always. I like her sharp wit and her gall, and of course her proximity to Māoritanga. Following her address at the recent Te Akatea Māori Principals’ Conference she joined the kapa haka group on stage for waiata-ā-ringa. Where else in the education world would one see something like that?

What are you working on at the moment?

There are some really exciting things. First, an edited book with Sonja Macfarlane and Melinda Webber is about to be published. It is entitled Sociocultural Realities: New Horizons in Education and will be launched in November or December of this year. International authors cover the sector from early childhood through to tertiary education. Second, I have just finished writing an article for the New Zealand Journal of Educational Studies (NZJES). It is their 50th year as a leading journal and a few weeks ago the editors contacted me and asked if I would write a piece on looking back on 50 years of Maori education – what an honour and what a job! It was an interesting exercise to retrace the steps from the Hunn Report through to Ka Hikitia, and items of note in between. I have named five seminannual programmes over five decades. I can’t talk about them here but this article will be coming out in the NZJES later in the year. A couple of research projects are on the go too. One is a National Science Challenge, ‘E tipu a Rea – A Better Start’. This is a ten-year plan for the Ministry of Business, Innovation and Employment. The other is a Ministry of Education project, ‘Huakina Mai’. This project is an important contributor of the national PB4L initiative, with a focus on ‘Getting it Right for Māori’.

What advice would you give to teachers and others involved in education in Aotearoa?

Keep an open mind; don’t rule anything out too readily. Then I would encourage educators to consider a new set of three R’s: Reflect, Reassure and Reposition. Be good reflective practitioners: for example, ask yourself “If I had that opportunity again, would I do it the same way? If not, how would I do it differently?”. The other R is ‘Reassure’. The system has taken enough of a pounding. We need to give ourselves a pat on the back from time-to-time. We provide a good service within which
are an abundance of exceptional educational practitioners and professionals. We need to reassure ourselves that we are up there with the main players internationally. The final R is ‘Reposition’. Education is a dynamic phenomenon, expressed more aptly in te reo as ‘Ngā mahi māturanga o te ao hurihuri’. In order to keep up with the pace it is necessary to reposition our thinking. This might mean going back to the literature, going back to what other people are offering through research and practice, positioning our thinking alongside our own beliefs and, if necessary, repositioning the perceptions and realities we hold dear. Finally, my advice would be ‘persevere, never give up’, best expressed in the whakatauki: He moana pukepuke e ekengia e te waka: A choppy sea can be navigated.

Is there anything about yourself that you might share with readers of Kairaranga that they might not know about you?

I grew up in The Beatles era and I love their music, particularly the John Lennon tunes. “Imagine’ is a favourite of mine. I used to be a representative tennis player back in the day, and now I kid myself that I can still chase the ball with the same level of energy. There are indoor courts here in Christchurch so I get to play two nights a week and perhaps a Saturday afternoon game - I just love it!

Whānau - my adult children have leadership roles in education and their children, the mokopuna, are the quintessence of life for Sonja and me. Although all brothers and sisters reside in the North Island they are always close to my heart. I go home, on average, once a month, either as part of my work as a researcher, or simply as part of my responsibility toward kin and iwi.

REFERENCES


BIO: PROFESSOR ANGUS HIKAIRO MACFARLANE

Professor Angus Hikairo Macfarlane affiliates to the Te Arawa confederation of tribes in the central North Island. His research and publishing focuses on exploring indigenous and sociocultural realities that influence education and psychology. He has pioneered several theoretical and practical frameworks associated with culturally-responsive and restorative approaches for professionals who are working in these domains. Professor Macfarlane’s prolific publication portfolio has earned him national and international standing in his field of scholarship. He has been the recipient of a number of prestigious awards that acknowledge his accomplishments. In 2010 he was presented with the Tohu Pae Tawhiti Award from the New Zealand Council for Educational Research in recognition of his outstanding contribution to Māori research over an extensive period of time. In 2013 he was awarded the University of Canterbury Research Medal – the first ever Māori recipient and the highest honour that the University Council can extend to its academic staff – acknowledging sustained research excellence. In 2015 he received the national Ako Aotearoa Tertiary Teaching Excellence Award. Professor Macfarlane is the Kaihautū (Senior Māori Advisor) of the New Zealand Psychological Society, and Professor of Māori Research at the University of Canterbury, New Zealand.
INTERVIEWER PROFILE

**Alison Kearney** is an Associate Professor at the Institute of Education at Massey University. Prior to working at Massey, Alison was a primary school teacher, a Resource Teacher of Special Needs, and a Guidance and Learning Teacher. Presently, Alison is the joint national coordinator of the Resource Teacher Learning and Behaviour Training Programme. Her research interests include inclusion and exclusion, learner autonomy and children’s rights.

**Email:**

a.c.kearney@massey.ac.nz
ABSTRACT
The Learning and Change Network Strategy (LCN) was developed to raise students’ achievement by appreciating, extending and enriching their learning environments. Throughout New Zealand there are 53 voluntary, networked communities of practice. They involve the active participation of students, teachers, parents, school leaders and community members from early childhood centres and primary, intermediate, secondary, and special education schools. Together the participants explore learning environments in relation to mutually-understood achievement challenges and make changes based on unique, contextually-specific analyses. Networks are observing impacts of this change on student outcomes and the practice of all participants. They have noticed that many children have made academic gains, collaboration within and between schools and communities has increased, and teachers, parents and students themselves have gained new insights into the students’ learning. Schools have benefited from the broadening of leadership and evaluative capability of staff and the transfer of in-depth methods of inquiry into school initiatives.

Practice Paper

Keywords: change, collaboration, learning environments, school networks

LEARNING AND CHANGE NETWORKS
When I reflect on previous interventions, they were ‘done to’ students with minimal lines of communication between leader, teacher, student, and home. The sharing of this information with other schools in our community has changed our focus from ‘our kids’ to ‘our communities’ kids’. Parents are now far more comfortable engaging in conversation about their kids’ learning. It has developed a stronger rapport with parents, school and child, and is having other positive spin-offs around how the parents want to participate in school programmes. There is greater collegial support amongst local schools than previously (Network Leader).

The Learning and Change Strategy
The Learning and Change Strategy (LCN) is an organic, contextually-responsive approach to educational change in New Zealand. This cutting-edge initiative, recognised internationally through its contribution to the OECD’s Innovative Learning Environments project (ILE), has been designed to raise student achievement by extending learning connections and aligning student, family, whānau and school perspectives on current and future education. It has focused particularly on the learning supports of those students who have yet to reach literacy and numeracy expectations. The LCN strategy has grown collaboration within and between schools and communities. Schools throughout the country have committed time to learning what will make a difference for their students’ achievement and have channelled new energy into addressing the long-standing challenge of successfully supporting the learning of those students whose academic scores regularly occupy the bottom levels.

LCN is a three-way partnership developed in 2011 among the New Zealand Ministry of Education, UniServices-Faculty of Education, the University of Auckland and the Networks (see Annan & Talbot, 2013). Specifically, the establishment of the networks for learning was expected to promote the following goals:

- Equitable outcomes for students who are Māori or Pasifika or who have special educational needs
- Educational environments that are responsive to students’ learning paths
- Active participation of students, teachers, family/whānau and community in learning activity
- New knowledge built upon the expertise existing within networks and communities
- The creation of mechanisms for knowledge transfer across and beyond networks
• Enhancement of leadership and evaluative capability at network level and within networks’ schools
• System-wide improvement through the collaborative growth of learning systems.

New Roles in a New World

LCN corresponds with global interest in developing learning environments for the rapidly changing, diverse and increasingly connected world. This development calls for new perspectives on learning and teaching, new tools and new practices. Many students can now, through the internet and other means, readily establish multiple and diverse learning relationships and quickly access a vast amount of information. They have the means and capability to assume an active role in interpreting and elaborating their curricula. These students are learning how to learn and where to access the information they require for their current and future learning journeys. Learning is viewed as an exciting, on-going process in which the students are actively engaged.

If relevant educational experience is to be available for all students, modes of teaching and learning must be designed to support culturally-responsive and future-focused learning (Fullan, 2013; Hampson, Patton & Shanks, 2012; Hannon, 2009). Contemporary pedagogies encourage teachers, parents and students to embrace the uncertainty, pace and inevitability of current and future learning environments. LCN attempts to open up such opportunities to greater numbers of students. The networks create opportunities for interactive participation to build on participant knowledge, expertise and resources to change systems and practices that impact on the educational outcomes of students. In-depth exploration of students’ broad learning environments within networks of practice ensures that strategies for change are carefully considered, not haphazard, imposed or restricted by unquestioning adherence to familiar tools. Decisions are based on practice-based evidence, next steps emerging from contextually-specific and globally-informed analyses conducted within the LCN networks. These actions are built into the LCN process.

New roles necessarily involve changes in practice for everyone involved with students’ learning and the revision of personal and professional identities. For teachers, this involves carefully constructing unique and contextually-relevant plans for professional development, derived from the change priorities of the network rather than prescribed menus with which many have become accustomed. Clearly, this process cannot take place over-night. Accordingly, Learning and Change Networks have not rushed the change but have engaged in deep, collaborative explorations and analyses of students’ learning contexts and activity over several months. They have taken time to ensure that students, teachers, whānau and families make direct contributions to understandings reached, plans for change and indicators of progress. The LCN activities and processes that have supported this collaborative work are discussed later in this article.

Situated Learning in Communities of Practice

Networks have been established to make a positive difference. As networks are not effective per se, and can be counter-productive and insular if not set up to succeed (Wenger, 2010a), they have been facilitated in ways that foster strong communities, shared understandings and common practices. This included activity that promoted collective valuing of the purpose of the network. This was achieved through shared identification of the achievement challenge and visual representation of students’ learning environments. It also involved systematic analysis, conducted through collaborative, iterative content analysis that reduced large amounts of data to manageable emerging themes. Common practices were developed through shared but personalised planning that was guided by the shared analysis. Facilitation of network-to-network interaction fostered the establishment and maintenance of connections inside and outside of the network, allowing for the formation of contextually-relevant knowledge.

LCN networks have been configured on the concept of Community of Practice, a structure that holds knowledge and learning at its core (Wenger, 2010b). With it roots planted firmly in ecological and situated learning theory, LCN assumes a broad, connected and dynamic notion of learning (Lave & Wenger, 1991; Wenger, McDermott & Snyder, 2002). From this perspective, understandings of the current and future learning environments necessarily take into account the unique experiences of learners and the social nature of learning. Creating new learning environments involves those who are significant in students’ learning and does not rely solely on replicating practices from high-performing schools or from other projects. Home-school partnerships and the exchange of cultural knowledge are vital if learning environments are to support the learning of all students (Bull, Brooking & Campbell, 2008; Dumont, Istance & Beavides, 2010; Fullan, 2013; Hannon, 2009; The NZ Ministry of Education, 2010).

Communities of Practice have been formed by networked schools and serve as vehicles for knowledge exchange and creation. They strive to ensure that students, and adults, have the range of tools, access to knowledge, flexibility and
agency they need in their current and future lives. Communities of Practice are characterised by their shared concern for a particular, dynamic body of knowledge, voluntary participation, balance of commonality and diversity within the membership, equivalent value of the contributions of all participants, shared power and connected learning activity. Accordingly, in LCN activity, the balance between knowledge provision and facilitation of co-directed learning is constantly shifting as LCN networks develop cohesion.

Learning and Change Networks

There are currently 53 LCN networks of school communities ranging in size from 3 to 14 schools. The total number of networks comprise seven early childhood centres, 19 kura, 285 primary schools, 25 intermediate schools, 30 secondary schools and 14 special education schools. Participation by schools, individuals and networks is entirely voluntary.

Student-learning is paramount in the Learning and Change Strategy. Networks comprise students, parents and whānau, teachers and school leaders, iwi and other key community groups. These participant groups come together to appreciate students’ broad learning environments and identify platforms on which to build student achievement. Together, participants learn about the conditions that support engagement in learning activity and shape the nature and direction of next steps. Each participant takes an active role in designing, implementing and reviewing change activities and developments. They periodically assess the extent to which their own practice changes in network-determined priority areas have impacted on students’ connection with learning and academic achievement.

Within LCN networks there are three key leadership roles; principals, teacher-enthusiasts, and evaluators, who in most, but not all cases, are teachers in networking schools. The principals link the strategy to their schools’ governance, strategic resources and provide support as required while, in most cases, the teacher-enthusiast drives the initiative in the school. Generally, there are two or three evaluators in the network depending on the size of the group. Some networks have chosen to have an evaluator in each school. Evaluators take a lead role in ensuring that systems are in place to measure students’ learning and the changes in participant practice.

A feature of the LCN Strategy has been the new opportunities LCN networks have taken to exchange and create knowledge with other networks (Figure 1). Change in teaching and learning practice has been informed by the shared and valued knowledge within the network, information purposely sought from outside the network, and new knowledge created through the synthesis of knowledge from various sources.

![Figure 1. Networks of Learning and Change networks.](image)

Learning and Change networks are facilitated to encourage the following:

- The establishment and development of lateral learning connections for all participants
- Appreciation of positive supports and achievements in developmental contexts
- Active participation and collaboration of all participants
- The cultural alignment of students’ various learning environments.

Facilitators support networks to negotiate a balance of structured and unstructured change-activity to achieve their goals. In English medium schools, networks are, in the early stages, facilitated directly by the University of Auckland implementation team and the Ministry of Education support and advice team. In Māori-medium kura, the facilitation team works with local iwi and Māori education organisation leaders who make decisions about the way LCN is conducted in their kura. One network, Kura-a-Iwi, has a direct relationship with the Ministry of Education with regard to LCN.

Facilitation has been available for a finite period and for a specific purpose: that is, to support schools to form LCN networks and establish their early tasks. When networks reach the point at which they are self-sustaining, external facilitation - that is, facilitation provided by the University of Auckland - is gradually phased out and network members assume
this role. The nature of LCN network activity changes over time as networks develop. In the facilitated development phase, network schools are most likely to synchronise their activity as they establish new practices. The schedules of subsequent cycles of learning what to change and what is changing are more likely to respond to real-time events in schools and communities with the nature of support among members becoming more diverse, timely and particularised. In strong LCN networks, this is a high-energy phase.

LEARNING AND CHANGE NETWORK ACTIVITY

LCN networks have, over the past 24 months, worked through the Learning and Change Framework (Figure 2). At this point, most networks, other than those that are newly-formed, are implementing changes. The following section provides a brief summary of the broad activity of LCN networks.

The Achievement Challenge

At the outset, participants in each network meet to identify suitable, mutually-understood and valued student-achievement challenges. These become the focus of network activity. Networks have chosen to understand their most challenging achievement areas, the most frequently selected achievement challenges in current learning and change networks involving writing (33 percent), reading (20 percent), or mathematics (12 percent). Several networks have chosen to consider students’ achievement in more general areas such as literacy or academic achievement across multiple subjects (UniServices-Faculty of Education, 2014). Networks also discuss and clarify the roles of participants and plan initial network activities.

Figure 2. The Learning and Change Network Framework.

Learn What to Change

With a clear view of the achievement challenge, LCN networks learn what practices, structures or tools to change in order to improve students’ achievement. Learning what to change involves examining the students’ learning environments and analysing findings to identify the various influences, particularly supports, on achievement. Plans for exploring students’ learning environments are designed within networks and are based on participants’ early hunches about what impacts on the achievement challenge. Some LCN networks have selected or developed their own means to investigate, but most have chosen to begin with Learning Environment Maps. Learning Environment Maps are created by students who illustrate by drawing or arranging items to show their sites of learning, the tools and artefacts associated with learning, the people who help them learn, and the connections among these. Learning Environment Maps are created in many ways including paper and pen, computer programmes, or arrangement of cut-out figures. For students who do not communicate in verbal language or for whom drawing or arranging is not possible, learning maps may be created with those who know the students best. Discussion around the maps provides the context for an Investigation of Practice in which students, parents and teachers consider their own current actions and the ways in which each might contribute to the enhancement of the students’ future-focused learning environments.

The in-depth information analysis is appreciative, systematic and collaborative, and has been facilitated by the Learning and Change team from the University of Auckland. Networks analysed the contents of the information gathered between network meetings and noted the dominant themes emerging from the data. For some networks, explorations and analyses have been iterative processes of interpreting and elaborating practices. For others, multiple data sets have been analysed simultaneously at the end of the ‘learning what to change’, also called the ‘understanding’ stage. For all students, networks have identified the supports and strengths that serve as pillars to support new practices. Once networks view the emerging themes as being distinctly formed and reaching saturation, they are re-labelled as ‘priorities for change’. These priorities for change guide subsequent planning.

Analyses of students’ broad learning environments result in the identification of priority areas of change. The most common change priorities in the current LCN networks are:

- Establishing learning-focused family and community connections
- Facilitating student agency and the active participation of students
• Student engagement
• Lateral learning
• Digital technology in schools and communities.

Planning Change, Changing, and Checking for Impact

Change activities are designed by all participants together and represent the different roles each takes in pursuing achievement challenges. Participants also determine the indicators of progress. Changes in practice are informed by different sets of knowledge. These are:

- Knowledge from inside the network (e.g. collective, existing knowledge within the network of practice, information from students’ learning maps)
- Knowledge from outside the network (e.g. from professional and academic research, other networks).
- New knowledge created by the group (i.e. synthesis of information from inside and outside of the LCN network).

LCN networks purposefully and specifically construct change activities driven by coherent sets of principles derived from their information analysis. These infiltrate the broadening learning environment and influence the nature of everyday interaction between students and others. They may lead to specified activities such as tailored professional development or the use of digital platforms.

Networks monitor progress in terms of:

a. Changes in practices in priority areas
b. Movement toward the achievement challenge.

Some LCN networks have selected to create their own change-in-practice criteria so that their evaluative measures align with their identified change priorities. Others have chosen to conduct standard surveys, established within the LCN Strategy, to measure change in pre-specified areas related to the Ministry of Education’s benefit outcomes. As the strategy has, in this initiative, been focused on raising student achievement, National Standards and Ngā Whanaketanga Rumaki Māori information has been requested for Year 1 to Year 8 students as a way of tracking progress toward the achievement challenge.

CHANGES NOTICED BY PARTICIPANTS

Information about changes in learning and practice has been shared by networks through Milestone Reports 3, 4 and 5 to the Ministry of Education and videos taken in network environments. Changes have been observed in students’ learning, the practices that influence this learning, participant relationships and the on-going reflection on, and refinement of, network activity. LCN networks became more aware of the value of data-driven decision-making and appreciation of the role of qualitative information in understanding that which is quantitative. Listed below are some of the changes noticed by participants.

Academic Learning

Changes in academic achievement were observed for the years 2012/13 and 2013/14. For 1112 students, whose achievement data were analysed to compare end-of-year 2012 and end-of-year 2013 achievement, there was an observed increase in the number achieving at or above National Standards (Milestone 3 Report). All schools that forwarded National Standards information had participated in the project for the entire year. As available data included that from only 53 of the 155 schools, no overall conclusions can be drawn from this initial result. The total number of schools included secondary schools that did not have National Standards data as well as special schools for which this measure was not suitable for tracking progress. However, what is of interest in this observation is that some students made significant progress even though they had been involved only in the Learning What to Change phase of the strategy. It appeared that, for these students, change had occurred concurrently with their involvement in the exploration and understanding of their learning environments. This is not a surprising observation, a basic premise of the appreciative inquiry threading through the LCN strategy being that understanding and change occur at the same time.

Data were collected to examine National Standards’ performance for participants between end-of-year 2013 and end-of-year 2014. A comparison was made between data for this period from 3795 students in 178 English-medium schools – Māori-medium schools’ data being analysed separately because Ngā Whanaketanga Rumaki Māori standards were used. The results of the analysis of National Standards data showed an overall positive 24.43 percent point change, constituting a mean quartile shift for this cohort. Although the majority of students in the LCN strategy had been initially achieving below National Standards, the ratings at the end of 2014 for 927 of these students were at or above National Standards. Shifts were greatest in the areas of writing and mathematics, areas commonly selected by groups of schools as foci for their network activity (UniServices-Faculty of Education 2014 Milestone 5 Report).

Students’ Positive Views of Learning
Students have commented on the way LCN has helped them connect with learning and sharing their work on an ongoing basis. One student commented on the way technology has allowed him to share his work with parents:

“We’ve got heaps more technology. We always used to write in our books and our parents didn’t see what we were doing until we brought our books home, at the end of the year, pretty much. And this year, we can email our work to mums and dads.”

Many students have also demonstrated greater confidence in approaching learning tasks. One student, initially reluctant to talk about learning, discussed her newfound confidence:

“I think I’m quite a confident learner. Like, I would put myself out there if I didn’t know the answer. If I wanted to say something I would put my hand up, not holding back my ideas, cause I could be right or I could be wrong, and sometimes it doesn’t matter about the answer, as long as you’re trying.”

From the outset, students have taken active roles in sharing information, making interpretations of their learning environments and designing changes. Active involvement in learning has been observed at school and students are increasingly working alongside adults at network meetings. One student commented that “If you are an active learner, then you think for yourself, but if you aren’t an active learner, then … someone thinks for you”. Newer networks, with the benefit of knowledge provided by earlier networks, are including students and parents in the full range of network activity much earlier in their formation.

New Insights into Students’ Learning

Several LCN network leaders have commented that they have gained insights into their students’ learning that had not surfaced through routine methods of exploring learning environments. Participants of networks had worked to create strong links between settings to promote coherence across the students’ multiple learning environments. A network leader commented that this had “sparked a desire to work collaboratively with other schools to connect and engage with our families” and to develop culturally-responsive learning environments.

Lateral Learning: New Teaching and Learning Relationships and Insights into Learning Environments

Groups of students, parents, teachers and school leaders have come together, bound by their common interest in the students’ learning. During the network formation period, some LCN networks, particularly those who had worked together previously, quickly developed trusting relationships. Some had, in the early stages, worked to resolve tensions associated with new processes, such as the relative benefits of pursuing a particular achievement challenge for each school, differences in view or even a history of competition among participants. As participants have come to know one another better, the interaction within these networks has become increasingly collaborative and interdependent. In many LCN networks, the largely flat structure has become a mechanism for creating and sharing knowledge across the broad contexts of students’ learning.

Increased trust among network members has led to authentic collaboration. Many networks are working together to develop and implement across-network moderation processes involving all of their teachers, not only a small group of leaders. In one school for example, writing samples were taken from classrooms across each school and then all schools’ samples were considered across the network and in another. Most schools involved in LCN networks have made visits to other schools in their networks, the visiting teams generally involving students, teachers, parents/whānau. During these visits, network members have exchanged ideas about learning and developed new learning relationships.

Parents have indicated they value exchanging ideas between school and home. Here is one example:

“I really want my kids to have their culture instilled in them. That’s why that partnership that we talk about – the teachers and parent – I believe the teacher also needs to understand the cultural background of the child, because children will learn better if those things are being respected as well, at school, so it’s like vice versa. Like I respect what the teacher’s trying to do in her job, and support, and that’s exactly what I would expect from the teacher as well.”

Many LCN networks have commented on the value of working with other schools, linking through site visits and other ‘between meeting’ activity. One network reported that “Participation in the LCN has brought the local schools closer together in discussions on the important things – students learning and improved achievement”. Networks experienced greater trust amongst schools and now appreciated a bigger-picture view of the educational pathways of their students. The value of peer interaction along this path was clear as noted by a school leader:

“The power of children learning from children … has been highlighted through this process.”
At times networks have been challenged by the geographical isolation of their schools. Many have found ways to connect with one another, either through travelling for face-to-face meetings and visits or through digital means. One and two teacher school leaders have commented on the value of forming communities of practice through LCN networking that link them with one another and with larger schools. The LCN has also provided opportunities for networks to connect with other networks through regional networking days. In some areas, participants were welcoming new schools into their networks.

**Customised Change Activities**

Networks have commented on the critical role of allowing them the autonomy to ask open questions and to respond to their unique contexts. One network leader commented:

*We are enjoying the level of autonomy and shared accountability of the network ... it allows the network to be a living, changing and developing learning network of professionals. We are accountable to our learners and community. A positive aspect is shared leadership. We’ve built a shared language. Trust has been built. Great potential of vertical network – early childhood through to secondary school. This way of working is a model for what we want for our students. Breakdown in the competitiveness of schools and building of true collaborations.*

Knowledge of what to change in order to meet achievement-challenges and how to make changes has emerged from the collaborative engagement of all participants who have collected and analysed data. Priority changes, designed to meet the achievement-challenge, have not been prescribed by the Ministry of Education advisors, the facilitation team, or the LCN network leaders. Each network is unique, its structure and activity negotiated within the network to suit the particular context. Networks have not sought a one-size-fits-all approach to learning what to change or planning and implementing change. They have not sought off-the-peg programmes but implemented those that have been purposefully built on knowledge inside and outside of the network.

The LCN approach to understanding students’ learning environments has provided schools the opportunity to identify areas for tailored teacher professional development: for example, to prepare LCN networks for contemporary and future-focused learning, some networks have chosen to learn more about supporting learning through the use of digital technology, perhaps using particular platforms such as Google Classrooms.

**Broadening of Leadership and Evaluative Capability Through Schools and Networks**

Networks have reported improved use of data to understand students’ learning. Most networks providing information for Milestone Report 3 commented on the role of systematic, data-informed inquiry in learning what to change and how to make changes. One network leader commented that: “Data has driven every aspect ... of initial planning”. Networks have observed that greater value is now placed on qualitative data to make sense of broad quantitative data.

In many LCN networks the broadening distribution of leadership has been evident. Practitioner evaluators, some of whom have not held leadership positions in their schools, are now taking a lead role in observing changes, analysing data and communicating findings.

**Transfer of the Learning and Change Approach to Other School and Network Initiatives**

Schools report that some of their core systems, such as school planning and reporting, and the development of students’ individual plans, have been influenced by their participation in the Learning and Change Strategy. Several have embedded processes for in-depth understanding into everyday practice and, in some cases, the involvement of students in decisions about them is now business-as-usual. Several networks commented that the methodology for creating change through open exploration and active participation of all stakeholders has also been explicitly applied in other new projects in their schools. One network leader commented on the impact of LCN on school systems:

*We plan to use the LCN frame as a full system shift that has an impact on our students.*

Some networks were concerned about the time required for participation in LCN in the early stages of the strategy, particularly when they were connecting with other schools and gathering the ecological data that allowed them to articulate change priorities. However, as multi-participant practices have become more integrated into schools’ everyday routines, and active learning and teaching have become an assumed part of classroom activity rather than additional to existing practices, for some, the process has become less demanding.

**FURTHER OBSERVATIONS**

The following links provide pathways to more information about the Learning and Change Strategy process:
NEW QUESTIONS AND NEXT STEPS

While many networks have reported considerable change in the way that learning and teaching occur in their schools and communities, the Learning and Change Strategy has, for some, raised as many questions as it has answered. The questions raised provide networks with information about their next steps. What has been established is a forum for discussions around these questions. For example, networks are working to decide what authentic and constructive community involvement means in their particular context. They ask “How can we support involvement with our community?” The increasingly active role taken by students may not be something anticipated by parents, or for some teachers or students. Similarly, expectations of developing unique locally and globally relevant professional development plans may not have been an expectation for all involved. Collaboration among schools and communities requires time to develop. It involves understanding strongly-held beliefs and perspectives that have been developed through a lifetime of first-hand experience.

LCN networks have also contemplated the nature of measurement for their priority changes as the need to complement traditional metrics has become apparent. They are seeking and constructing indicators of change that involve active learners in interactive environments and are sensitive to changes in critical qualities and experiences that are not easily quantified or objectively observed. Networks are also working to ensure that their practices spread beyond ‘pockets of promise’ to support all students in their schools.

SUMMARY

If all students are to benefit from the educational opportunities available in the current and future worlds and be prepared to negotiate their futures, new learning environments that support engagement and achievement of each student are required. Although opportunities for active connection with new modes of learning may present naturally for some young people, there is no guarantee that such options will be open to every student.

The Learning and Change Network Strategy is a three-way partnership, created specifically to consider and develop new learning environments for those students who are already challenged to achieve at expected levels. Participation is entirely voluntary and characterised by an appreciative, positive approach to thinking and talking about students’ learning pathways. LCN networks of schools have opened up opportunities for 6500 students, their families and schools that have participated in the strategy.

LCN networks have developed context-specific change strategies and new practices as a result of systematically conducting open and collaborative explorations of students’ current and preferred learning environments. The Community of Practice model on which the networks have been established has supported interaction through a balance of commonality and diversity, and a mutual focus on a specified achievement challenge. It has provided a structure that encourages exchange of cultural knowledge between home/community and school. Participants have taken time to understand the multiple perspectives on learning of the various member groups, avoiding knee-jerk reactions to identified challenges to learning. They have worked over a period of several months to ensure that all parties have had authentic opportunities to contribute to the collective understanding and that the underlying influences, rather than surface effects, are understood.

Numerous benefits of participation have been expressed by LCN networks. In many of these deliberately constructed Communities of Practice there are examples of new lateral learning relationships among all participants, distribution of leadership across networks, appreciation of students’ contexts of learning, a balance of structure and informality, and data-supported decision-making.
REFERENCES


AUTHOR PROFILES

Jean Annan
(PhD) works at UniServices-Faculty of Education, University of Auckland where she is the Strategy Development Advisor for the Learning and Change Network project. She is an educational psychologist whose particular interests lie in working with the ecological systems that impact on students’ development, well-being and connections with learning.

Email: jean@positively.co.nz

Rose Carpenter
(M.Couns, B.ED, Dip Tchg)

Ko Takitimu to waka
Ko Ngati Kahungungu rāua ko Ngai Tahu ngā iwi
Ko Ruahine to maunga
Ko Makaretu te awa
Ko Rakautatahi te marae

Rose Carpenter works at the Ministry of Education, Wellington where she is the National Manager for the Learning and Change Networks and Mutukaroa projects. She is passionate about raising student achievement levels with a priority focus on achievement levels of Māori learners, Pasifika learners, learners from low socio-economic backgrounds and learners with special needs by developing student agency and family/whānau agency. Rose is an advocate for listening to the ‘stories of others’ in addressing equity issues as well as working collaboratively to make a genuine difference in and for the lives of others.

Email: R.Carpenter@education.govt.nz
Attachment: What is it and Why is it so Important?
Miriam Crouch

ABSTRACT
This article examines attachment; viewing attachment as a continuum from secure attachment relationships through to attachment disorders. The article outlines theoretical bases in attachment, the implications of healthy secure attachment and that of insecure attachment in educational settings, suitable interventions and the importance of prevention of attachment disorders.

Keywords: attachment, protection, relationships

Research paper

WHAT IS ATTACHMENT?
Attachment is a reciprocal process by which an emotional connection develops between an infant and his/her primary caregiver. It influences the child’s physical, neurological, cognitive and psychological development. It becomes the basis for development of basic trust or mistrust, and shapes how the child will relate to the world, learn, and form relationships throughout life (Association for Treatment and Training in the Attachment of Children (ATTACH), 2015). The time considered crucial for the development of attachment bonds is in the first three years of life, and this bond influences relationships throughout the life span. An attachment disorder occurs due to traumatic disruption or other interferences with the caregiver-child bond during the first years of life (ATTACH, 2015). Attachment issues could be seen as a continuum, with disorders at the extreme end, then a variety of attachment-related difficulties and lesser behavioural and emotional problems, through to secure attachment.

According to Bowlby (1974), those with histories of secure attachment will have positive expectations regarding relationships with others, an inclination to be closely involved with others and the social and emotional capacities that promote social competence (Scroufe, 2005). Infants who receive sensitive and responsive caregiving will come to represent themselves as worthy of care, others as trustworthy and the world as a safe place. In contrast, infants who do not receive sensitive caregiving will come to represent themselves as unworthy of care, others as untrustworthy and the world as unsafe (Fivush, 2006). An attachment disorder can distort future stages of development and impact a person’s cognitive, neurological, social and emotional functioning. It may also increase risk of other serious emotional and behavioural problems (ATTACH, 2015).

Theoretical Bases
Attachment theory has been described as the dominant approach to understanding early social development. Bowlby (1907-1990) is regarded as an important theorist, and is famous for his pioneering work in attachment theory. The most important tenet of attachment theory is that an infant needs to develop a relationship with at least one primary caregiver for their successful social and emotional development. In his 1951 monograph for the World Health Organisation, Maternal Care and Mental Health, Bowlby put forward the hypothesis that infants and children need to experience an intimate and warm relationship with their mother; relationships that are continuous and which bring enjoyment and satisfaction to both. He posited that the lack of such a relationship may have significant and irreversible mental health consequences (Bowlby, 1951). Bowlby’s work on attachment caused a virtual revolution and many changes in policy and procedures for children’s hospitals and residential homes. Another pioneer in this field was Hungarian paediatrician, Emmi Pikler. Emmi ran a home for children and recommended building trust, respecting the infant and the importance of touch to build this trusting relationship. Over time, orphanages were abandoned in favour of foster care or family-style homes in most developed countries (Rutter, 2008).

Bowlby was a mentor for, and later became a colleague of Mary Ainsworth (1913-1999). Ainsworth was the first researcher in attachment to categorise different patterns of attachment. Ainsworth is credited with establishing the ‘Strange Situation’ along with
her colleague, Wittig, in 1965. Ainsworth herself was the first to find difficulties in fitting all infant behaviour into the three classifications used in her Baltimore study. It was Mary Main, a colleague of Ainsworth, along with her colleague Judith Solomon who identified and empiricised a fourth category of attachment patterns, the disorganised form of attachment. It is accepted now that there are four types of attachment: secure, and three types of insecure attachment - avoidant, ambivalent and disorganised.

Attachment theory has had an impact on the procedures followed by the family court and the system is now taking into account the multiple relationships within a family. Societal changes have been influenced by attachment theory; nowadays there are fewer orphanages and more family homes, fewer closed and more open adoptions, and hospitals have open-door policies for primary caregivers. Professionals are aware of the impact maternal depression and stress can have on bonding and the development of attachment with children. Changes in maternity care have shifted from believing best practice was to remove the baby from the mother straight after birth to clean the baby and let the mother rest, towards encouraging skin to skin contact, which is considered to be a precursor to start the bonding process of attachment.

IMPLICATIONS OF SOUND ATTACHMENT FOR CHILDREN’S DEVELOPMENT

Early caregiving has a long-lasting impact on development, the ability to learn, capacity to regulate emotions and form satisfying relationships (Siegel, 2012). The ideal attachment relationship is that of a secure attachment. Children who are securely attached to their caregiver have a relationship based on love, consistency, affection and sensitivity (Obadina, 2013). Bowlby (1974) proposed the idea of the secure base. This is where children are given the ability to explore, yet parents provide the secure base for children to return to if they become scared or hurt. This secure base allows the child to feel comfortable to explore and learn. Children with a secure attachment to their carer generally feel confident that the carer will reliably provide reassurance and comfort when the child needs it; they are free to explore the wider environment because they are assured that they can return to their carer as and when necessary (Wilkens, 2012). The consistency of care, empathy and commitment of a parent allows the child to progress steadily through developmental stages, steadily building vital skills of self-regulation, understanding and competence (Kagan, 2004). Carers who are psychologically available and predictable, sensitive and accepting allow children to develop a good psychological understanding of themselves, others and relationships (Howe, Dooley & Hinings, 2000).

Children who can regulate their own emotions achieve more academically in schools (Gottman, 1997). Secure attachments support mental processes which enable the child to regulate emotions, reduce fear, attune to others, have self-understanding and insight, empathy for others and appropriate moral reasoning (Bath Spa University, 2014). Children with secure attachment are able to trust and rely on teachers to meet their needs. As a result, they feel confident to form meaningful relationships with others, to make the most of learning opportunities, to engage in productive activities, problem-solve and explore the wider world. These children are emotionally resilient and self-aware (Bath Spa University, 2014).

THE NATURE OF DISORDERED ATTACHMENT AND HOW IT AFFECTS LEARNING AND DEVELOPMENT

The quality of care provided by caregivers varies. Attachment figures that are emotionally unavailable and unresponsive are just as likely to cause anxiety and distress as those who are physically absent. Attachment disorders occur among children who have failed to develop a secure selective attachment to their primary caregiver or caregivers, and who have experienced inconsistent, insensitive, inadequate and or abusive and frightening care (Pearce, 2009). There is no one factor that creates an attachment disorder, nor do any factors cause an attachment disorder in all children (Swanson Cain, 2006). Attachment styles can overlap; while some children fall solely into one category, others may fall into a mixture of categories (Levendosky, Huth-Bocks & Bogat, 2011). This can have implications in the assessment and diagnosis of an attachment disorder.

A child’s initial dependence on others for protection provides the experiences and skills to help a child cope with frustrations, develop self-confidence and pro-social relationships – all qualities necessary to promote positive engagement with learning (Bath Spa University, 2014). Research has inextricably linked attachment to school readiness and school success (Geddes, 2006). Insecure attachment has a significant impact on a child’s emotional regulation. Children with attachment disorders have difficulty connecting to others and managing their own emotions. This results in a lack of trust and self-worth, a fear of getting close to anyone, anger, and a need to be in control. A child with an attachment disorder feels unsafe and alone, and this can cause them to display an array of difficult behaviours as they try to gain control of their environment and the people in it. To be able to engage in learning, a pupil needs to be
able to take risks, to learn new things and face new challenges. A good learner needs to be able to manage frustration and anxiety, have good self-esteem, be willing to take risks and be able to ask for help when needed (Bath Spa University, 2014) - characteristics fostered in the context of secure attachment.

**ASSESSMENT/DIAGNOSIS**

The most common and empirically-supported method for assessing attachment in infants and toddlers (12 months-20 months) is the Strange Situation Protocol, developed by Ainsworth as a result of her careful, in-depth observations of infants with their mothers in Uganda. The Strange Situation is not a diagnostic tool but a way of researching the type of attachment disorder, and the resulting attachment classifications are not clinical diagnoses'.

Currently, there is no specific, validated tool for diagnosing attachment disorders after infancy. An evaluation could be made on the basis of a diagnostic interview, direct observation of interaction with parents or caregivers, caregiver/teacher checklists, details about the patterns of behaviour over time, examples of the behaviour in a variety of situations, known history and questions about the home and living situation since birth, behavioural observations and an evaluation of parenting and caregiving styles and abilities. Medical and psychiatric examinations of symptomatic children are appropriate so as to rule out physical causes or differential mental illness diagnoses which might account for the child's symptoms and behaviours.

**INTERVENTION FOR THE FAMILY**

Attachment theory is a well-established theory, supported by extensive research in which there is general agreement that attachment problems can be difficult to mend. Similar to many other disorders, early intervention is paramount and the earlier an attachment issue is picked up, the more likelihood of interventions being successful. It seems clear from the work on attachment stability that attachment and resilience can and does change. Exciting findings from recent research show that resilience can be learned. Problems of attachment are hard, although not impossible to treat. The earlier children get help, the greater their chances of successful treatment. A child will not grow out of an attachment problem, therefore treatment is critical. Without treatment, attachment disorders do not get better. As well as support to develop positive relationships, students would benefit from being taught how to regulate emotions, and develop resilience through a positive attitude and optimism.

Families need to be provided with emotional, financial and practical support in order for them to access appropriate intervention for themselves and their children (Dawson, Ashman & Carver, 2000). Interventions must focus on the needs of the entire family and must include therapeutic activities that can focus on behaviour change and help families resolve difficult issues, and promote the health and well-being of the whole family (Obadina, 2013). Attempts must be made by professionals to meet the parent’s own emotional needs and improve their caring skills, as research into infant mental health by Weatherston highlighted that parents cannot adequately meet their infants’ basic needs until their own basic needs are met (Howe, 2005). Identifying issues with attachment early is paramount as interventions aimed at improving the quality of care in children’s early years may be more productive.

Often, but not always, conditions of social disadvantage cluster together making it difficult to discern which ones might influence the formation of attachments. The factors that can contribute to problems with the parent forming a secure attachment relationship with their child, such as maternal depression, mental health issues, addictions, relationship problems, and financial issues, need to be recognised by all of the agencies who come in contact with these parents and either have counsellors or advocates who help parents by providing support and guidance or refer the parent to agencies that specialise in these societal problems.

Dysfunctional parenting is a major contributing factor in attachment disorders, and support organisations need to focus on teaching parenting skills which in turn will help to prevent attachment disorders. Currently in New Zealand there are some quality evidence-based parenting programmes such as Incredible Years that promote attuned attentive caregiving. The Incredible Years Parenting Programme is a programme that is known to be successful with a variety of cultures and socio-economic groups.

Drugs and alcohol are particularly devastating in their power to overwhelm parents’ maternal drive to care for their children (Kagan, 2004). Parents who are dependent on drugs and alcohol can be prone to erratic mood-swings, delusions, paranoia, loss of memory and sometimes loss of consciousness; leaving them unable to meet their children’s needs or keep them safe (Barnard, 2007). Domestic violence can have a direct impact on parents’ self-esteem, so while victims concentrate on appeasing the perpetrator, they are unable to protect their children from getting caught up in the abuse; such behaviour
affects the child’s ability to form attachments (Levendosky et al., 2011). Domestic violence often co-exists with other risk factors like economic resources and lack of education, which puts further strain on the mother-child relationship (Dawson et al., 2000). Also, if parents are able to comprehend and overcome their own childhood experiences of abuse or neglect, realise the impact of their behaviour on their children and are willing to work with professionals, this will greatly improve their child’s future prospects (Obadina, 2013). As mentioned previously, families need to be provided with emotional, financial and practical support in order for them to access appropriate interventions.

INTerventions AT SChool/eArly CHildHood SERVICES

Interventions need to start with whole centre/school practices of safety, reliability and predictability. Only when children are safe enough and calm enough can we begin to address their insecurities through consistent caring relationships which understand their profound uncertainties (Geddes, 2006). In early childhood education there is a foundational emphasis on attachment and strong responsive, reciprocal caregiving for children when in out-of-home care. This is established in the early childhood curriculum ‘Te Whariki’. Teachers can provide important attachments for children (Bergin & Bergin, 2009; Riley, 2010). Close and supportive relationships with teachers have demonstrated the potential to mitigate the risk of negative outcomes for children who may otherwise have difficulty succeeding in school (Driscoll & Pianta, 2010). Effective treatment of attachment disordered children necessarily involves education of caregivers and professionals who work with the child regarding the care and support requirements of these children (Pearce, 2009). The relationship between the teacher and student is pivotal. Successful intervention starts with the teacher building a positive relationship with the student and then providing a predictable environment with clear boundaries. From this secure foundation other areas such as developing social skills, building self-esteem, emotional literacy, autonomy and self-identity can be developed (Bath Spa University, 2014). Recent research has highlighted the importance of the quality of the relationship between the teacher and student, and then between the home and school environments. By strengthening relationships and creating more positive home and school environments we remove barriers to engagement and improve students’ chances to achieve at school and beyond (Ministry of Education, 2015).

Research on attachment suggests that a relational rather than behavioural framework for supporting children’s behaviour is more effective (Bergin & Bergin, 2009). A behavioural model relies heavily on rewards to modify behaviour and this does not always work with students who have attachment difficulties. A relational framework promotes universal well-being, learning and behaviour, and can be especially helpful with children who have attachment difficulties or other vulnerabilities (Bath Spa University, 2014), as it relies heavily on the development and maintenance of positive relationships.

Positive Behaviour for Learning School-Wide takes the approach that opportunities for learning and achievement increase if the school environment is positive and supportive, and a structured environment and classroom schedule helps a child to feel safe. The classroom teacher should provide a stable, predictable routine and children should be prepared for changes in the schedule in advance if possible. There should be expectations that are consistently clear. Students should be consistently taught desired behaviours. Teachers should ensure good behaviours are acknowledged every time, and undesirable behaviours are responded to in a fair and equitable way (Ministry of Education, 2015).

Children with attachment disorders may feel the need to control and manipulate adults around them, which can make teaching such a child difficult at times. The teacher needs to maintain control of their own emotions, to deliver consequences consistently but to try not to show frustration or anger. An important factor when supporting children with difficult behaviours can be self-care. An informed staff who understand attachment difficulties can be a great source of support and encouragement to the classroom teacher; therefore whole-staff professional development, as well as external support agencies and services, is essential to providing understanding of attachment disorders. Ideally there also needs to be an effective form of communication developed between home and school to benefit the child. It is well-evidenced that partnership between home and school is central to effective intervention (Hornby, 2011).

Prevention

There is still some debate as to whether attachment disorders can be cured but very few would argue that prevention is better than looking for a cure, and attachment disorders can be prevented. Despite the information available, attachment disorders remain difficult to diagnose and treat, although recent brain development and resiliency research have furthered our understanding of this critical area. Research affirms that emphasis needs to be placed on good quality parenting, education and direct prevention.
of attachment disorders through supporting early attachment relationships, understanding the role of attachment in early childhood and school, and providing wrap-around social support services (Dawson, Ashman & Carver, 2000).

Promotion of healthy prenatal development must focus on generating public awareness, outreach and intervention programmes, minimising maternal stress during pregnancy and reducing foetal exposure to alcohol and drugs (Dawson, Ashman & Carver, 2000). New mothers should be routinely screened for postpartum depression, and parents and young children exposed to trauma should be able to access dyadic therapy (Cohen, Oser & Quigley, 2012). Dyadic therapy is an evidence-based, effective and empirically-validated treatment for attachment disorders and early trauma. Mothers with mental health problems should be given appropriate psychological and medical intervention at prenatal screening stage and this should become part of regular baby checkups, and education materials relating to behavioural development should be made readily available (Dawson et al., 2000). Home visits should be compulsory for at-risk families, as it is crucial to the assessment of parent-child interactions (Obadina, 2013). The importance of home visits has been acknowledged in New Zealand with the introduction of the ‘Well Child Tamariki Ora’ programme, which offers education, support and guidance to parents from birth to just before school entry.

Support agencies could possibly help reduce attachment disorders in future generations; attachment patterns are passed from parent to child and attachment disorders are transmitted intergenerationally. Attachment theory states that caregiving patterns, and the degree to which parents are able to respond and be sensitive to their children, are related to their mental representations of attachment experiences with their own parents (George & Solomon, 2008). By teaching parenting skills and the importance of developing secure attachment, this could prevent attachment disorders from being passed down through generations. By identifying and supporting parents in the high-risk category and providing them with parenting programmes, education and support, these agencies are not only preventing possible attachment disorders but could also be preventing cases of child abuse.

**SUMMARY**

Attachment theory has become one of the dominant theories used today in the study of infant and toddler behaviour and in the fields of infant mental health, treatment of children, and related fields. It is clear from research that early experiences are most significant in shaping later outcomes for children. However, there are still many parents who are unaware that their parenting behaviours can affect their children in such drastic ways. An area for society to focus on is the promotion of ongoing education and training to raise this public awareness.

Although attachment theory has been around for many years, it appears to now be utilised more in policies and decision-making and many more professionals are aware of the implications of insecure attachment. In summary, it appears that focus needs to continue to be placed towards further research in preventing insecure attachment and early interventions to encourage healthy, secure attachments.

**REFERENCES**


**AUTHOR PROFILE**

Miriam Crouch

Miriam Crouch is currently employed by the Ministry of Education, working in the Severe Behaviour Team. Miriam completed a Masters in Education, a Diploma in Child Protection Studies, a Postgraduate Certificate in Educational Psychology and a Postgraduate Diploma in Specialist Teaching (RTLB). Miriam Crouch’s professional background includes experience working as a primary school teacher, working in a CYFs supervised group home, and work as a specialist teacher.

Email:
zerotolerance@clear.net.nz
Whatu: Weaving Māori Women Educators’ Pedagogy

Anne A. Hiha

ABSTRACT

Whatu was the starting point for a metaphor that emerged as a representation of three Māori women educators’ pedagogy. The Whatu metaphor was developed as a way of understanding the complexities of the Māori women’s pedagogy and to show that the strength of that pedagogy is in the interweaving of the strands. Concepts of Māori pedagogy are becoming more accessible in Aotearoa/New Zealand: for example, the notion of ako as a means of explaining the connectedness of learning and teaching; and tuakana-teina as a form of peer support and learning. However, the pedagogy that umbrellas those two concepts is less accessible and was the subject of a small kaupapa Māori research project involving three Māori women educators. In response to a research question: ‘What is Māori women educators’ pedagogy?’ this article describes the Whatu metaphor; a metaphor that represents the research participants’ pedagogical ways of being, knowing and doing, and advances a new way of viewing Māori women educators’ pedagogy.

RESEARCH PAPER

Keywords: kaupapa Māori research, Māori education, Māori pedagogy, Whatu metaphor

INTRODUCTION

E kore e taea e te whenu kotahi ki te raranga i te whāriki kia mōhio tātou ki a tātou

A strand of flax is nothing in itself but woven together is strong and enduring

(Manu Ao Academy, 2009)

The Māori women educators in my research live their pedagogy with their whānau and hapū, their students and colleagues, their friends and associates, and indeed with the world they inhabit. The various strands of their pedagogy weave together making it strong and enduring, made evident in their early years and continuing on today. This article draws on research involving three Māori women educators, who shared their rich stories (Hiha, 2013). The Whatu metaphor was used to make sense of the weaving experienced in their pedagogy. The article presents this metaphor for Māori women educators’ pedagogy with an explanation of how understanding and wisdom coincide within.

PEDAGOGY AND EDUCATION

This research stands on the premise that culture is integral to pedagogy. Alexander (2001) concludes that no one pedagogy could fit all cultural contexts because pedagogy “manifests the values and demands of nation, community and school as well as classroom” (p. 563). This research asked: ‘What is Māori women educators’ pedagogy?’ - a question deemed necessary because throughout the colonisation process, Māori pedagogy was almost lost along with many other aspects of Māori culture and society.

My understanding of pedagogy was informed by an amalgamation of Alexander’s (2001) use of the term as the act of teaching and discourse about teaching, and broader understandings gleaned from discourses about Māori pedagogy (Hemara, 2000; Williams, Broadley & Lawson Te-Aho, 2012). Williams et al. (2012) state: “[P]edagogy concerns the way educators teach and all that underpins and impacts on their teaching practices, including their own cultural assumptions, beliefs, values, and world views” (p. 25). When I asked Rose Pere, a participant in the research, what pedagogy was, she responded differently: “… pedagogy is everything, taku toiora, my entire life, my whole being. That’s what I would see as my pedagogy... much broader than ako”. Her expression expanded my understanding and provided the all-encompassing view of the pedagogy underpinning my research.

Although it is difficult to argue with Irwin’s (2004) statement that “[E]ducation is used increasingly as a synonym for schooling” (p. 6), the themes addressed in the following section, ‘Kaupapa Māori Research Methodology’, enabled the research conversations to take a much wider view of pedagogy, and to bring in such aspects as whānau, hapū and marae. Before
colonisation Māori had an education system that ensured the successive generations were successful (Best, 1929b; Buck, 1949; Makareti, 1938; Mitira, 1972; S. P. Smith, 1998a; 1998b). Education began within the womb and continued throughout life. With colonisation, Māori education systems were undermined and relegated to the ‘back waters’ of Aotearoa (Bishop, 2003).

The 1980s hailed the emergence of Māori-led educational initiatives (‘by Māori, for Māori’) that advanced Māori aspirations and were founded on tikanga Māori. The first of these was in the early childhood sector, where language nests (te kōhanga reo) focused on the revitalisation of Māori language within a Māori cultural framework (Te Kōhanga Reo National Trust, 2013; Waitangi Tribunal, 2013). Later initiatives in the primary, secondary and tertiary education sectors enabled students to continue their education within tikanga and te reo Māori through to adulthood. Significantly, these initiatives were only possible because some Māori retained their tikanga. That tikanga was instrumental in ensuring any whānau and hapū can live ‘as Māori’ and take advantage of tikanga-based educational opportunities. Each initiative developed its own pedagogy drawn from tikanga of Māori entrusted with their ancestors’ treasures. A desire to explore deeper the pedagogies within whānau and hapū provided the impetus for this research study.

KAUPAPA MĀORI RESEARCH METHODOLOGY

Kaupapa Māori research methodology informed all aspects of the research. This methodology was informed by Māori scholars’ engagement with kaupapa Māori theory and research methodologies. Like the pedagogies of ‘by Māori, for Māori’ educational initiatives, kaupapa Māori research methodology drew on ancestral wisdom interpreted for contemporary understandings (Bishop & Glynn, 1999; Smith, 1999; Smith, 1992; Smith, 1999). Because Māori were regularly researched aggressively, with detrimental effects on their perceptions of research, several Māori researchers of the late 20th century were eager to find their own ways of researching. Drawing on the experiences of social movements around the world and in Aotearoa, they viewed research through the lenses of critical theory, social justice and self-determination resulting in the emergence of kaupapa Māori frameworks, described in the work of academics such as Cram (2001); Lee (2009); Smith (2003); Smith (2008). During the period of uptake of kaupapa Māori research, the reason for doing Māori research changed, rather than the lenses of the early years; researchers were using kaupapa Māori as a convenient model (Smith, 2012). Writing in recent years re-established the original premise of kaupapa Māori and brought their analysis into the 21st century (Cooper, 2012; Durie, 2012; Smith, 2012; Smith, 2012). As a Tiriti o Waitangi educator I felt a strong affinity with the social justice and self-determination foundations of kaupapa Māori research methodology. However, I did wonder whether I was drawn to the methodology as a convenient model. As a second language speaker, kaupapa Māori research methodology was not easy, but it affirmed my identity as Māori and within it I felt at home.

The kaupapa Māori methodology used in this study was based on four principles of Māori ideology (Bishop & Glynn, 1999; Mead, 2003; Smith, 1992; Smith, 1999): Whanaungatanga: recognising and respecting the connections between whānau, hapū and iwi through whakapapa; Manaakitanga: nurturing the connections and relationships through action; Tino Rangatiratanga: relative autonomy; Taonga Tuku Iho: cultural continuance. Emanating from my experiences of kaupapa Māori methodology (Hiha, 2013), this methodology guided and informed the research process, was an analytical tool, and a thesis constructor.

Participants

The three Māori women participants are all educators, whose first language is Māori. Their grandparents and others of that generation influenced them all. They were willing to be named and have their words attributed. Miriama Hammond, Liz Hunkin and Rose Pere were born in the Wairoa district, Aotearoa; Miriama from Te Reinga, Liz from Nuhaka and Rose from Waikaremoana. All three left their whānau and hapū to attend boarding school, and following careers, marriage and family life outside their rohe, returning to Wairoa for a new phase of their lives. They remain active as educators, deeply aware of how they think about and practise their pedagogy. The research was in recognition that all three participants were Māori women, rather than because women’s voices were not present in the Māori pedagogical discourses. There is a case for adding more and possibly different perspectives, however the purpose of this research was to introduce further insights into the discourse around Māori pedagogy.

Data Collection and Analysis

There were two data collection phases: the first comprised individual research conversations over three or four sessions, and the second constituted a research conversation involving all three participants. An initial meeting with each participant was held prior to the data collection process, what Salmond...
(1975) called “the ritual of first encounter” (p. 115). As my cultural mentors, my parents accompanied me to each ritual of first encounter. We all knew Liz and Rose but not Miriama, however, as is often the case with Māori, we established a connection through marriage.

At each session we focused on one of the following themes: the values, beliefs, attitudes and philosophies that underpinned their pedagogy; their ways of being, knowing and doing in the education context; the tensions and benefits of living by their pedagogies in the 21st century. The participants guided me as to how they addressed each theme, and had such rich stories to share; I spoke very little during each session. In the second phase of data collection I met with all three participants to review the initial data analysis and further explore their pedagogy.

The kaupapa Māori research methodology informed the data analysis and from that foundation three overarching themes surfaced: ‘Sustenance and Continuance’, which focused on whānau and hapū tikanga and its influence on the participants; ‘Every Place, a Learning and Teaching Place’, which focused on the contexts within which learning and teaching occur, recognising that sites of learning and teaching are diverse and numerous; and ‘Whakawhanaungatanga: Knowing Each Other’, which focused on the nature and quality of relationships. Within those overarching themes the pedagogical strands emerged. Early on in the data analysis process the weaving metaphor made its presence felt, the research conversations (along with my insights and understandings) were woven and evolved into the Whatu metaphor.

WEAVING METAPHORS AND WHATU

Whatu is a traditional Māori finger-weaving technique used in the making of such garments as cloaks and the tops of piupiu (Puketapu-Hetet, 1989). Tāniko, a later innovation of whatu which used colourful yarn to create the designs, influenced my vision of the Whatu metaphor. I chose not to use the cloak to visualise the Whatu metaphor because for me the cloak symbolises my identity as iwi, hapū and whānau. Rose illustrates a similar notion later in this article when she described her cultural cloak.

As a style of Māori weaving, whatu brings together aspects that exemplify whānau, place, relationships, learning and teaching. Two forms of Māori weaving, whatu and rāranga, have been utilised as metaphors to depict various aspects of education. A form of rāranga that creates a whāriki is the basis of a metaphor used in Te Whāriki (Ministry of Education, 1996), the New Zealand early childhood education bicultural curriculum. A korowai, woven using the whatu method, was used as a model to depict leadership in Māori education, Tē Rangatira (Ministry of Education, 2010). The strands woven together in whatu and rāranga illustrate the importance of interconnectedness within Māori culture and society. The whatu style of weaving has two different groups of strand, the whenu and the aho, each having different functions. The whenu are the strands that ultimately lie straight and parallel to each other from the beginning to the end of the weaving as in Figure 1 below.

Figure 1: Whenu.

The aho form rows as they twist across the whenu as in Figures 2 and 3, below. The foundational row is the aho tuatahi. This first row ties in each whenu giving the weaving its strength and integrity and establishing the structure of the weaving. The following row, the aho matua, establishes the pattern of the particular weaving, which is built upon with the subsequent aho.

Figure 2: Aho

Figure 3: The strands of whatu.
WHATU AS A METAPHOR FOR MĀORI WOMEN EDUCATORS’ PEDAGOGY

In the Whatu metaphor the whenu represent the tikanga instilled by each whānau and hapū. The aho tuatahi represents the lessons or practical manifestations of tikanga received and experienced as part of a whānau and hapū. The aho matua represents the passion, calling or interests that are specific to each child/person and may be seen by others as strengths, special skills and abilities. In the Whatu metaphor, particularly in relation to the Māori women educators’ pedagogy, the aho following the aho matua represent the pedagogical strands manifested by the participants. The pedagogical strands encase each whenu and have echoes of the aho matua as the pattern is created with each twist of the aho. In this section the various strands of whenu and aho are discussed within the context of the research.

Whenu and Māori Women Educators’ Pedagogy

Mead (2003) describes tikanga as beliefs that guide customs and practices, informed by the knowledge and experiences of many previous generations. He contends that each whānau, hapū and iwi interprets tikanga differently and adapts their cultural practice in response to their environment and circumstances, and that context-based cultural practices left intact the underlying tikanga (Mead, 2003).

The whenu is therefore an integral part of the weaving from beginning to end, and was an integral part the participants’ lives. By applying the metaphor of whatu therefore, the whenu becomes the tikanga - the immutable aspect of whānau and hapū society. As the data below shows, all three participants felt that the tikanga associated with identity was deeply woven into who they were. They knew their whakapapa although their breadth of knowledge varied dependent on the customs and practices of each whānau and hapū. They all shared their knowledge with the next generations.

Miriama: We maintain, out at Te Reinga that we did not come out on the waka. We were already here. We were Nga Uri Taniwha. We came from that whakapapa. That’s the whakapapa of Te Reinga. We’re proud of our whakapapa that goes back to the taniwha. The one that’s mentioned the most now is Hinekōrako. She’s the last of that line of taniwha.

Miriama: My Grandfather was very good at writing. He’s written books of our family whakapapa. On my father’s side our house got burnt down and in that whare was where all the books that he had with that [whakapapa].

Miriama: I’ve learnt to share as much as I can give ki āku mokopuna. Share what I can, take them wherever I can, when they’re around. To the marae to mix with the whānau, to know who they...
are, who they belong to, to give them as much as I can, while I’m here.

Liz: “Where did Ngāti Rangi come from? Where did our name come from?” I remember asking my aunty. She says to me, “Why do you want to know? I didn’t ask, so you shouldn’t need to ask.” You see, I as a woman didn’t ask my old people, “why were we called Ngāti Rangi?” They accepted it. “That’s it, you are Ngāti Rangi”. Ok

Liz: See my aunty if I asked her something, she would go as far as my grandparents and that was it. In our whānau, it came from male to male to male. So many things have broken down because of this long tradition, I suppose. But that was how she was brought up. I must admit that the time that I came to ask him [Liz’s uncle] for some kōrero, he actually did bring out his little table, which was just for his whakapapa book.

Liz: I’ve got a really loving family. We’re all very close and caring and they care about things Māori. When they come home to Nuhaka, and I dare say it had to come from us, instilling in them that this is their tūrangawaewae. All of our children have got that feeling that Nuhaka is very special. Even my grandchildren are now getting that same feeling – especially the grandchildren who are living in NZ. Nuhaka’s very important to them.

Rose: We’re descended from the ancient people, as well as those tipuna who came from the islands. A beautiful people, peace loving people, vegetarian, our ancient people were not cannibals. They had the same language [as the people who arrived in waka], but they had sacred meaning to their words. Tū-mata-uenga, to them, is the keeper of the violet flame – Kahukura. Physically our whakapapa goes back to Papa-tū-nuku and we have exactly the same minerals that she has.

Rose: The [cultural] cloak that I wear has Tuhoe, has Kahungunu, Ruapani strands – beautiful designs, but it also has Greek. It also has English patterns, colours and designs. That is my cultural cloak and I wear it with great pride. I am very much aware of the depths of those strands. I know my Tuhoe side inside out, I know Kahungunu inside out, also Ruapani I also know my English inside out and I have also gone to a great deal of trouble to know my Greek heritage. In fact, I have been to those countries to ensure that I’ve got it as well as I possibly get it. That is my cultural cloak.

Whakapapa begins in the outer places of the cosmos and flows through the rocks and waters to iwi, hapū and whānau. Everything is whakapapa. Māori believe that all things are interdependently connected and whakapapa explains the links, beginning with the moment before the universe began and marking off the generations to the present. Whakapapa is not only genealogy, although genealogy is a vital and the most readily accessible part of whakapapa. Best (1929a) maintained that whakapapa was an aspect of a tohunga’s “system of teaching” (p. 35). So while whakapapa can be described as one of the strands of the whenu it also influences every other whenu through close contact and transference through the twisting aho.

Whakapapa is only one of the tikanga strands mentioned by the participants. The customs and practices learned in their whānau and hapū, in particular on the marae, confirmed that they were well taught in the ways of their whānau and hapū. Miriama learned on the marae when and where a child could be present, and when it was best to be out of sight. Liz clearly remembered when she first met her husband that she saw the beach as a food basket, whereas to him it was a recreation space. Rose learned about mutual respect across a number of generations in the quest of deeper learning and sacred practices. These and the many other lessons shared in their whānau and hapū provided them with a rich fabric upon which to grow and develop.

They all adapted to their environment, following the pattern of previous generations despite colonisation. Alongside their adaptive ways they have all held fast to the strands that were gifted to them from their whānau and hapū, in to tikanga. The whenu representing tikanga support and edify the strands of aho as they weave and twist in and out.

Aho and Māori Women Educators’ Pedagogy

Each whenu cannot add structure without the aho twisting around it. Within the aho, subgroups of functionality exist lending themselves to cope with the complexities of Māori women educators’ pedagogy. The first row, aho tuatahi, represents the practical expression tikanga, an important principle that guides whānau and hapū so that each member is the best they can be for the benefit of the whole. This principle leads to the concept of mana, where the honour of the whole whānau and hapū is enhanced by the successes of one or more of their number.

Those aspects were learned through listening, watching, doing: experiencing the whole of whānau and hapū life. This aspect of the Whatu metaphor was informed by, and gave life to, the tikanga represented by the whenu. That first row tied in all the whenu so tikanga is forever present in each whatu and establishes
a strong foundation from which each person can grow, develop and follow their path with confidence.

The aho matua row brings the individual to the weaving as she or he makes clear their interests, passions and particular skills by their actions. For the three participants, the interests, passions and callings that they pursued at a young age followed them throughout their lives.

Miriama was on hand when her mother was calculating supplies in preparation for an event at their marae. She also remembers her father bringing home the accounts from the sawmill.

Miriama: He actually instilled into me, the love of Maths. Tallies and the books that was his job and he’d bring them home to me, and he said, “right you do that”. And I’d do all the running tallies and things like that. Which taught me how to multiply and add and divide and subtract.

As we grew up, the responsibilities became more defined, and probably, the expectation was that you did this, you did that: the night before, sitting down with my mother and watching her doing the shopping list; what was required for the next day and things like that. Not that I went to get it, but I knew just by watching her, how to order things, because there was a sequence in it.

Such interests gave Miriama grounding in planning and structure and stood her in good stead in her position as chairperson of Liz’s kura, Te Kura Motuhake o Te Ūaaarangi, where Miriama takes responsibility for overseeing the organisation.

Liz remains passionate about Māori language and teaching. Her grandmother instilled a passion for her first language. Liz went to Teachers’ College from school but did not teach until she had raised her family.

Liz: When I wrote the programme for Level 5, I thought what am I doing, and then 6 and then 7 and I kept thinking to myself – beggar for punishment. But it’s that passion, the way that Sam (pseudonym) said, ‘she’s quite passionate,’ he noticed when I came down on Friday, he said ‘As soon as you start talking about te reo Māori your eyes light up your face goes...’ and I go ‘Well I can’t help it, that’s how I feel about it and I think that if anybody wants to get their message across, they’d better have passion because otherwise we’ll all go to sleep’.

Liz: I’d sit my mates down, in the paddock at Nuhaka, and we’d each have a little scrap piece and we’d break our pencil up – and I would sit them down – ‘cause even then I wanted to be a teacher.

Liz and her husband returned to Nuhaka and in the 1990s set up a school to teach Māori language to adults. At the time of data collection the kura was exploring opportunities to offer a degree in Māori language. When I revisited seven years later, in 2014, Liz was envisioning a te reo Māori space for the community where everyone who wanted to hear, learn and/or speak te reo Māori was welcome.

Rose was called to the Kura Huna, a secret society, as a tohuna. She was trained as a seer and knowledge holder by her elders with 12,000 years of continuous knowledge, which she was able to share with the world on 14 January 1990.

Rose: My tipuna was still taking us down to the river, to feel for Ruamano, the taniwha that came out with the waka, Tākitimu. Upfront, they projected a strict Roman Catholic image, and in our privacy, we were practicing ancient rituals such as, linking into the sunrise, and performing certain rituals there. I was the only child, there was another young boy, but he’s gone, passed over. We were the only two that attended all the rituals.

Rose: They told me I would get a sign as to when I could start sharing. What happened was the alignment of Turuki – which is the North Star, and Rehua – which is the smallest star in the Southern Cross. So that’s when, but not with just anyone. With other medicine people or healers, tohunga and kahuna.

Rose: My mentors were around me all the time. And they were also learning from me too. They would ask me questions and I could get the answers for them. So, it wasn’t a matter of having mentors that look down, no, it was across and there were times that they were just amazed at what I could tell them, because I was linking in, you see and I would tell them straight. Kei te he ki tēnā kōrero, ko tenei ke te huarahi, you know and that’s as a child. I had people even old people coming to me for advice. When I was 17 years old, I gave advice to a lot of old people, right throughout, from Ruatoki, to whānau down at te Wairoa.

Since 1990 Rose has shared her knowledge and abilities with individuals, groups and organisations around the world in person, on the internet and through her publication; Te Wheke: A celebration of infinite wisdom (Pere, 1991).
Each participant spoke of people who supported them along the way to develop their knowledge and understanding. The lifelong commitment to their interest, passion and calling was but one example in the participants’ lifelong commitment to learning and teaching. The whenu, aho tuatahi and aho matua constitute the strands that allowed the Māori women educators’ pedagogy to develop with the strength and support of their whānau, hapū and tikanga. The next section explores the Whātū metaphor by focusing on the pedagogical strands.

PEDAGOGICAL STRANDS OF THE AHO

To understand the pedagogical strands I have taken the relational nature of the Māori women educators’ pedagogy and focused on the philosophies and practices of learning and teaching that emerged. They viewed learning and teaching as inextricably linked. To Liz ‘ako’ to learn and ‘whakaako’ to teach were separate.

Ki ahau, they should not be two the same. One is ‘ako,’ to learn, the other one is ‘whakaako,’ to teach. Koira, ki te whakaako to teach, you’re a kaiwhakaako. My old people used those two words quite separately, but today, I’m hearing them bundled together. That might be, in some instances and in some areas pea. I actually do see a difference in the two kupu. I know that it’s in the dictionaries, it’s everywhere as ‘ako’ and ‘to learn or to teach. I don’t know where the ‘whakaako’ has gone to … Ok, they’re inseparable, to a certain extent. That’s the learning and the teaching process.

Today, Rose’s (Pere, 1982) explanation of the Māori term ako – to learn and to teach – is the most commonly used definition (Ministry of Education, 2009; Moorfield, 2011; Williams et al., 2012). Rose explained her reasoning:

All I know is ‘i ako ahau, ki te raranga’. ‘I ako ahau, ki te tuhitihii’. ‘I ako ahau’. Kaore i ahau mai te tangata ki te whakaako i āhau. Ko ahau tonu ki te ako ia. So, what I’m saying is, that no one came to teach me. Ok? I was learning and teaching myself. There wasn’t some one that came, like an initiator or whatever, you did have people who could support you, but, at the end of the day, number one is the one that has to do the teaching and the learning.

Bishop and Glynn (1999) defined ‘ako’ as ‘reciprocal learning’ (p. 170), which again implies the relational representations of the pedagogical strands are that: a strong whānau and hapū identity was paramount; contribution to the whānau was valued; relative autonomy was expected; learning and teaching is an embodied experience and can occur in any situation; one should embrace the possibilities of learning, teaching and life; wisdom comes in many guises; deep knowing of others was vital; sharing your being, knowing and doing was normal; sensitivity to those we know attuned us to those we had never met; to be authentic at all times; an aura of assuredness and openness engendered calmness, confidence and respect in others.

These pedagogical strands called upon the participants’ previous learning and teaching and were put into practice through their choices and support provided by others. An example of the pedagogical strands, ‘deep knowing of others is normal’ is discussed next. I show the process from the twisting in of each whenu in that first row to the realisation of a pedagogical strand that the participants demonstrated by their philosophy and practice in education.

Deep Knowing of Others was Normal

Knowing each other has nuances of meaning when building and maintaining relationships. Te Whāriki (Ministry of Education, 1996) addressed the elements in their curriculum in the strand “Relationships – Ngā Hononga” (p. 43). Two aspects of this strand state that “adults know the children well, providing the basis for the ‘give and take’ of communication and learning and “there are opportunities for social interaction with adults and other children” (Ministry of Education, 1996, p. 43). The adult may know the child but those aspects of relationship do not imply reciprocity let alone the depth of relationship possible and that I encountered in conversations that Miriama, Liz and Rose shared.

For the participants, deep knowing of each other included taking the time to listen to, observe, and to interact with, others. The key to the process of deep knowing was deep knowing of oneself. So, knowing ones identity was a precursor to knowing others. They all demonstrated who they were by being authentic at all times. No matter what role they were in, be it whānau member, teacher or guide for example, their authentic selves were deeply woven into the fabric of their being and knowing.

Miriama, Liz and Rose were fully present and respectful of their roles and of whomever they were engaged. Because they were assured of their own identity, they were not defensive or uncertain. They knew people in deep ways because they were impelled to do so. The tikanga principles of whanaungatanga and manaakitanga, which informed the kaupapa Māori research methodology, intertwined with this deep knowing through the
knowledge and nurturing of whakapapa and the
desire to build and nurture new relationships.

With the desire to build and nurture relationships
came a respect for others. The tikanga principle
entwined with respect is tino rangatiratanga. In her
whānau role, Miriama recognised that she had to
let her children and other whānau make their own
choices and live their own lives. However, she
was always there to mentor, support and share the
knowledge and skills that she was accumulating on
behalf of her whānau when the time was right. The
ability to know what to do at the right time implied
a deep awareness of self and of others and sharp
observation skills using all of the senses.

Deeply knowing others also implied letting people
into your world, as well as being respectful of other
people’s worlds. As tumuaki of Te Kura Motuhake o
Te Aaarahi, Liz was sometimes the first to encounter
a new or potential student. She made no judgements
about a person’s life on the basis of what they looked
like or what they wore. She accepted unconditionally
that if someone had come to learn te reo Māori, who
was she to turn them away, despite the misgivings of
others in the kura. By being self-assured, respecting
others and having clear guidelines for behaviour
within the Kura, devised in conjunction with the
students, Liz was able to ensure people felt at ease
and receptive. From that space, she built relationships
with the students of the kura such that they would do
anything for her.

Rose developed international networks. Her linkages
into the many layers of consciousness enabled her to
know people on many different levels and to accept
them for who they were. She was confident of her
place in the world. When she saw someone in need
she did not hesitate to go to their aid and instinctively
knew what they required. Her ability to work with
the most difficult of groups, including Māori gangs,
was made possible because of the depth of her
knowledge of the universe we live in and its many
layers including the universe past, present and future.
She had an enduring belief that everything that has
ever or will ever exist is available to us all now, and
knows what we desire without asking. Rose’s ways of
being, knowing and doing and also present is taonga
tuku iho for she is committed to ensuring that we are
ready and receptive for the universal and “infinite
wisdom” (Pere, 1991, p. 3).

To know others deeply is to be open to being deeply
known oneself; a way of being that could be difficult
for many people. But to deeply know each other as
a normal way of being, knowing and doing takes a
level of authenticity, respect and receptivity that is
clearly achievable but requires a powerful code such
as tikanga to be woven into every aspect of life.

The tikanga that supported the normalisation of deep
knowing can be represented by concepts such as
whakapapa and its public use on the marae: to make
connections between manuhiri and tangata whenua;
and to make connections between the tūpāpaku and
those gathered to pay their respects and share in
the ritual of tangi. The pedagogical strands featured
in Figure 4 are a synthesis of the aspects of Māori
women educators’ pedagogy the participants shared.
They are a beginning that can be added to and
expanded and the metaphor is flexible enough to be
adapted to suit different audiences and contexts. As
Rose pointed out, learning and teaching is continuous
and further to that understanding so is pedagogical
development continuous.

CONCLUSION

There is something about the rhythm of the women’s
stories and the rhythm of whatu and the Whatu
metaphor that is ephemeral. Yet the page with its
regular lines of text does reflect that meditative
rhythm. The piece begins with the establishment of
the tikanga, tied together with the foundations of
relevant knowledge, the setting of the pattern follows
with the various elements vital to the piece woven in
next and the story flows on until its conclusion. If I
were making a tāniko purse I would now be sewing
in the zip.

The Whatu metaphor presents a way of
understanding the pedagogy of Miriama, Liz and
Rose. The expansion of pedagogy to view the whole
of life was critical to the metaphor’s development.
Each strand of the metaphor articulated a strand of
the participants as lifelong learners and teachers.
The vital components that edify the metaphor are
that: each aspect of a person’s life is intertwined
with the tikanga instilled in childhood and their own
supported interests, passions and calling; and that
the patterns established during the early years never
disappear, but it is important to recognise that change
can occur and new knowledge and understandings
can develop, to be woven into the whole. Concepts
of learning and teaching such as ako and tuakana-
taia do have a role in educating the present and
future generations and they must be seen in the
wider context of pedagogy, an example of which is
presented here as the Whatu metaphor.
GLOSSARY

ahov.........the weft of weaving
ahomatua......the row that sets the pattern for the weaving
ahotuatahi.....the foundational row of whatu that weaves in the whenu
akoto learn and to teach
Aotearoa......the original Māori name for New Zealand
hapū...........groups of related whānau
iwi............groups of related hapū
Hinekōrako...the taniwha who lives under the waterfall at Te Reinga
kahukura......the violet flame, a rainbow
kahuna.......Hawaiian equivalent of ‘tohunga’

Kahungunu.....a Māori iwi
kaiwhakaaoko...teacher
kaupapa Māori...Māori approach, philosophy, ideology
kia mokopuna...to my grandchildren
kārero.........conversations; talk(ing)
korowai......flax or feather cloak
kupu...........word(s)
kura..........school
kura huna......secret society
mana...........power, dignity, influence
manaakitanga...nurturing through action and care
manuhiri.......visitors
Māori...........indigenous person/people of Aotearoa
marae..........a traditional meeting place for Māori
mokopuna......grandchild(ren)
Ngā Uri Taniwha...a Māori hapū from Te Reinga
Ngāti Rangi.....a Māori hapū from Nuhaka
Nuhaka.......an area east of Te Wairoa
Papa-tū-ā-nuku....Earth mother
piupiu.........skirt(s) made with lengths of flax leaves
rāranga......a style of weaving used to make mats, kits, fishing nets and snares
reolanguage
rohe.........home area
Ruamano......Taniwha who guided the Tākitimu waka to Aotearoa
Ruapani.......a Māori iwi

Ruatoki............a community in the Bay of Plenty
Tākitimu.........a sacred canoe Tākitimu that arrived Aotearoa around 1350
taku toiora......my entire life, my whole being
tangawhenua...people of the land, the hosts
tangi............period of rituals when someone dies
tāniko...........closely woven fabric of intricate and colourful patterns
taniwha.........a spiritual water creature; a guardian of the people in its territory
taonga tuku iho...cultural continuance
Te Kāhanga Reo...language nests; early childhood centres that pass on te reo and tikanga Māori

Te Kura Motuhake o te Atarangi....a school established to teach adults Māori language
Te Reinga........an area north of Te Wairoa
tere Māori.......the Māori language
Te Wairoa.........a community on the east coast of the North Island
teina............younger sister of a sister; younger brother of a brother
tikanga...........beliefs, values, protocols, practices
tino rangatiratanga...relative autonomy; self determination
tipuna...........ancestor
tohuna..........keeper of secrets
tohunga.........skilled expert / priest
tuakana..........older sister of a sister; older brother of a brother
tuakana-teina...relationship where older / more skilled are responsible for and support younger / less skilled
tuhituhi...........to write
Tuhoe............a Māori iwi
Tū-mata-uenga.....the keeper of the violet flame; more commonly known as the Māori God of war
tumuaki.........school principal
tūpāpaku........person lying in state
tūranga......place where one has a right of belonging through whakapapa
Turuki.........North Star
waka............canoe
whakaako........to teach
whakapapa........genealogy and the related stories of people and places significant to whānau and hapū
whānau...........family; extended family
whanaungatanga....kinship, reciprocal relationship(s); recognising and respecting connections between whānau, hapū and iwi
whare...............house
whāriki............woven mat
whatu................style of weaving
whenu...............the warp of weaving

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AUTHOR PROFILES

Anne Aroha Hiha

Anne A. Hiha is a freelance researcher, and casual lecturer at EIT Hawke’s Bay. Her iwi include Ngāti Rangitihi, Ngāti Whakaue, Ngāti Pikiao, Ngāti Kahungunu, Ngāi Tahu and Kāti Mamoe. Anne’s research interests are in Māori education, with special interests in Māori pedagogy and Māori research methodology. Anne lives in Napier with her partner, Raymond.

Email: ahiha@research.deakin.edu.au
All Students Belong in ‘The New Zealand Curriculum’: A vision supported by the Inclusive Education Capability Building Project

Anne-Marie McIlroy

ABSTRACT
This article describes the Ministry of Education’s Inclusive Education Capability Building Project (2013-2014). Project members were tasked with creating resources for professional development that would be used to grow inclusive practice in New Zealand schools. This article also shares the learning journey of some members of the project team as they engaged in the inquiry process around inclusive practice. A key understanding for this project was that all students can be successful learners and belong in The New Zealand Curriculum (Ministry of Education, 2007), also referred to in this article as NZC.

Keywords: Inclusive education capability building, inclusive practice, inquiry, professional development

BACKGROUND
The Government’s vision for a fully-inclusive education system is supported by Success for All – Every School, Every Child (Ministry of Education, 2010). An Education Review Office report (2010) claimed 80% of schools will be mostly inclusive by 2014, a 30% improvement from 2012. The Inclusive Education Capability Building Project (Ministry of Education, 2013b) was one of a number of responses to this vision, and the project was designed to build confidence in schools, enabling all students to access authentic learning, meaningful teaching, and positive relationships. Inclusive cultures are strengthened when teachers feel confident they have the skills, resources and knowledge to teach all students (Ainscow, Booth & Dyson, 2006).


UNDERSTANDING INCLUSION
Inclusion is about the full participation and achievement of all learners at school (Ainscow, 2005; Morton, Rietveld, Guerin, McIlroy & Duke, 2012; Slee, 2011). In inclusive schools, children and young people with special education needs are engaged and achieving through presence, participation and learning (Ministry of Education, 2012). Historically, the concept of inclusion grew out of the mainstreaming movement which was essentially about placement of a disabled child in a regular setting with a resourcing package. For some schools, inclusion is still thought about as “a technical problem, in which schools must calculate the correct mix of resources, expertise and personnel to facilitate the placement of the child” (Ware, 2002, p. 154). A technical response is more likely to happen when inclusion is largely understood as being about special education, and not as what schools do to support all their students (Ainscow, 1999; Slee, 2001b). Inclusion is about quality teaching and learning for all students rather than special education for some students (Ballard, 2011; Morton et al., 2012; Slee, 2001b; Slee, 2011) and is central to discussions about curriculum and improvements in schooling (Ainscow, 2008; Curcic, Gabela, Zeitlina, Cribaro-DiFattaa & Glarnera, 2011). Slee (2000) states that “inclusive schooling is not a synonym for assimilation” (p.5) and that an attempt to normalise difference is misguided and results in “stabilising the newcomer in an environment that provides a buffer to enable schools to remain the same” (Slee, 2001a, p. 173). Inclusive schools, therefore, are schools that value diversity and make fundamental changes to provide educational equity and meaningful learning opportunities for all students. An inclusive school
is one based on democratic principles focused on collaboration, the celebration of diversity, community engagement, and flexible delivery of the national curriculum (Curcic et al., 2011).

STARTING OFF – LOCATING THE VISION

The Inclusive Education Capability Building Project could be described as a creative and innovative response to the Ministry of Education’s commitment to inclusive practice through quality teaching and learning throughout the sector (Ministry of Education, 2014a). It was a response to feedback from some teachers who said they didn’t feel confident to teach students who require the highest levels of support to participate meaningfully in the curriculum (Education Review Office, 2010). This was reported as being particularly challenging in senior secondary school classes. Project resources and materials created by the Inclusive Education Capability Building Project team were intended to support school communities so teachers felt more confident to teach all students. It was intended that through meaningful teaching and learning, students would have equitable access to the knowledge and resources that allow them to develop capabilities and values to live full, satisfying and connected lives (Ministry of Education, 2007).

Responsibility for this project was shared between the Curriculum Teaching and Learning team and the Disability Strategy team of the Ministry of Education. This shared responsibility sent a clear message about how the resource might add value to all students with special education needs belonging within the NZC (2007). Alternative curricula are not required to teach students labelled as disabled.

This project was framed by an inclusive inquiry-based approach that affirmed the classroom teacher as the leader of learning for all students in their class. The team recognised there was strong evidence for using ‘regular’ teaching strategies with the majority of students with special education needs (Alton-Lee, 2003; Ministry of Education, 2013b). Project members were practitioners from the professional learning and development environment, and from primary, secondary and special schools who had experience around inclusive practice.

The values and goals of Ka Hikitia (Ministry of Education, 2009b; 2013c) and of the Pasifika Education Plan (Ministry of Education, 2013a) were embedded in the thinking and intended outcomes of this work. This was particularly important as Māori and Pasifika learners disproportionately under-access special education services and support, yet are over represented in statistics reporting numbers of students who are described as having special education needs (Ministry of Education, 2013b). This means actively valuing relationships, family and community is essential to creating inclusive schools (Macfarlane, Macfarlane, Savage & Glynn, 2012).

Project Structure

The project team operated as three work streams over the course of a year. One work stream developed a framework for inclusive practice for use by all professional learning and development providers, leaders and teachers. The focus for this work was largely around school systems and processes, and included topics such as working with teacher’s aides, individual education plans, and roles of boards of trustees. The second work stream developed a suite of tools to support the NZC for use by teachers of learners with special education needs. Curriculum examples included teacher action, student voice, practical ideas in relation to support staff, and ideas for creating social connections between peers. For example, a teacher could engage with material that suggested how a Year 13 NCEA achievement standard in English may be adapted and differentiated to enable meaningful teaching and learning for a student working in that class within Level 1 of the NZC. The third work stream created a progress and achievement framework intended to support leaders and teachers of learners who are described as having special education needs. Particular attention was given to assessment approaches that validated teaching and learning for students who are often invisible or failing within standardised assessment processes. The assessment approaches discussed are strengths-based and support meaningful teaching and learning with clear examples. The Ministry of Education’s project ‘Through Different Eyes’ (Ministry of Education, 2009a), the Ministry’s position paper on assessment (Ministry of Education, 2011a) and Collaboration for Success (Ministry of Education, 2011) provided strong support for this work.

THEORETICAL PARADIGM

The project work was located within sociocultural theory. Rather than understanding knowledge as existing in the heads of individuals or in the external world, sociocultural theory positions knowledge as negotiated at the intersection of culture, individuals and activity (Cowie & Carr, 2009; Ministry of Education, 1996). Project members worked together in communities of practice to collaboratively grow a knowledge base from which to springboard practical support for growing inclusive school communities (Wenger, 2000).

When considering the diversity of the professional learning and development landscape, the project team chose to focus on how the resource might add
value for the student who is actively positioned at the centre of learning. Attention was given to the role of the teacher and accessibility of the resource. Making spaces to hear student, family and peer voice was made visible. Connections between theory and practice were made by embedding many examples of teacher, student and family thinking and action throughout the project materials. For example, hearing from family that a holiday involving plane travel is a goal, means the teacher can incorporate skills and knowledge required to travel successfully in a plane into the class programme. A student may have a goal of learning to watch a movie using headphones, and this could be supported at school in the class literacy programme. While the meaning and reality of learning and achievement are considered across curriculum levels, focus was on the participation, progress and achievement of students for whom much of their learning is within Level One of the NZC (2007). Thinking, strategies and resources that support the students with the highest levels of need can support the learning of all students. The idea that “when we get school working for students with the highest level of need then we’ll have it right for everyone” was a comment frequently used to ground the project teams in their work. When students are visibly present in the NZC, belonging is supported. Conversely, if disabled students are working with alternative curricula, the message is the NZC is for all students except those who are disabled. This does not support the vision of the NZC, nor does it support inclusive practice.

Key thinking guiding the development of these resources was focused on student reality. Would I feel welcomed in this school culture? Does my teacher need to know more about how I learn? Does the leadership team in my school give my teacher enough support? What does my teacher need to learn how to do to help me learn and achieve as much as I can within the NZC alongside the other students in my class? How are my learning and achievement measured? How do my family find out about how I am doing at school? By positioning the student at the centre of this work, the relationships that support collaborative learning are prioritised, and the reality of teaching and learning in the classroom is the practical focus necessary to support authentic learning.

RECORDING THE JOURNEY AND LEARNING FOR TEAM MEMBERS

The author of this article was a member of the Inclusive Education Capability Building project team. Midway through 2013, at the beginning of the project, a conversation between the author and Joanna Curzon of the Ministry of Education led to an agreement where the author would in some way record the journey of the project. At a full group project meeting, the author outlined the plans to write a narrative of the work and offered all members the opportunity to participate. Key headings were suggested under which team members’ thoughts could be grouped. The five members who chose to become involved shared their thoughts or recorded them under those headings. The author guaranteed that no names would be used, and that material recorded in the article would not be harmful if the authors were identified. At all stages of the writing, drafts were sent to participants for checking and approval. Drafts were also sent to the Ministry of Education staff who have been aware of this work.

THE JOURNEY AND EARLY LEARNING FOR TEAM MEMBERS

Throughout the year of the project, team members co-constructed materials in Wellington and gathered regular feedback in their home areas throughout New Zealand. They received support from a wealth of expertise both within the Ministry of Education and from those with specialist knowledge brought in to help guide the thinking and learning in the early stages of the project. Members made comments which suggested a sense of joy in being able to work in an area where many feel passionate. Comments included:

I feel incredibly lucky to be part of this group; it’s a dream come true.

It takes time to collaborate. it is really untidy this working together, but it’s so worth it.

Work streams took time to plan, to research, and to develop trusting relationships with each other which enabled challenging conversations to occur safely. Over time, project members experienced new learning in different ways. Enthusiasm was tempered with the seriousness and challenge of the tasks in hand. Project members were active learners alongside their colleagues and within the schools where they were working. This project was not about application of a model, but about all participants co-constructing and imagining ways forward which would support teachers in the reality of their classroom practice. The goal of creating change required schools not only to reach a tipping point, but to have the ongoing support to embed new practices. Comments heard included:

Sometimes I am just not sure what we really mean by inclusion; schools have so many different views.

This is messy work but I really believe transformation comes from dissonance.
Unless we all keep a close eye on our students with the most complex needs then we’re not talking about inclusion. Inclusion has to be everybody.

This has to be about teachers and students. We have to be practical and be able to support ideas with practice.

I’m afraid that we might not make a difference. What if there isn’t the roll-out to support this work? What if we just end up with a resource that sits on a shelf? How’s that going to help schools?

Project members talked at length about the busy reality in schools, what could work, and what was and was not negotiable in pursuit of inclusive practice. Teachers on the team constantly brought this work back to classroom realities. There was a developed understanding of the need to be practical.

Some project members were at times challenged when each piece of work produced was examined as to its value for students with high and complex support needs. One project member said:

These students with high and complex needs, where are they? They’re not in my area.

Project members had to keep reminding themselves of the importance of teachers being able to think about the applicability of this work for any student. The thinking behind making the NZC meaningful for students on the margins is relevant for all students. Team members recognised different schooling options for some students depending on where they live. The focus of this work was on all school communities feeling confident to teach all students living in that community.

WRITING AND GATHERING RESPONSES TO RESOURCES

The project work moved from a predominantly researching phase to a writing phase. An environmental scan of both national and international material designed to support students with special education needs confirmed how lucky we are in New Zealand to have a curriculum that enables creativity and flexibility, and can work for all students (Hipkins, Bolstad, Boyd & McDowall, 2014). It demands reflexivity from teachers and high expectations of all. Project members found the curriculum document was a great place to begin discussions about inclusion when working back in their local schools.

Even when schools understand that inclusion is about everyone, it is helpful for them to see what the curriculum looks like in action. It takes a bit of imagination to meaningfully include a student who may not read or write in a Year 12 history class and then assess that student’s learning. Narrative assessment seems a great way to make learning visible for those students.

We need real examples of everyday practice where all kids are supported. I think we need to hear about teachers’ struggles, school struggles, family and student struggles.

Regardless of what approach they use, it seems schools can’t be inclusive unless they really own the student with the disability, know that student and know who they can go to to support them and the student.

It’s important that teachers and students get the right support at the right time with the right people. We have to make sure schools – and teachers really – get the message that they are not alone.

Team members commented on regularly seeing teachers who were very skilled at adapting and differentiating the curriculum, but who said that they felt isolated. Project members understood the need for schools to recognise that they often had great reservoirs of skill, and that creating networks of knowledge and support in their communities would allow those skills to be shared for the benefit of all. Creating successful inclusive practice begins with a culture of care and respect for staff, students and families (Ainscow, Booth & Dyson, 2004; Monchinski, 2010; Wink, 2011).

Feedback from early iterations of the work reinforced the importance of relationships with and within schools, and opportunities for ongoing dialogue when talking about creating change. It follows then that talking about inclusive practice in schools involves open, challenging and respectful conversations about children’s rights, about an ethic of care, about quality teaching for all, about supportive leadership and about knowing the learner.

Responses from the sector confirmed the desire to see what successful inclusion looked like. Some teachers said they would really value having someone come into their classroom and having practical conversations with them so they could learn more about being inclusive in their practice. Many teachers wanted practical ongoing support around differentiating the curriculum. One secondary teacher said:

I get the theory, and I really want to do this, but no one seems to really know how I can make Year 13 English useful in my class for a student working in Level 1 of the curriculum. It’s the practical stuff we need.
A number of teachers expressed an interest in finding out more about learning stories, citing assessment for some students as a particular challenge. The project team recognised value in embedding practical examples of different approaches to assessment in the resources. These include teacher actions and their reflections on learning outcomes. When teachers read the stories of others, they are more likely to try something new and to then reconstruct their own stories (Clandinin & Connelly, 2000).

When thinking about potential to change, the project members recognise that telling a story is more effective than writing a rationale or guidelines. An example of this is the story of a family who had experienced some challenge around their daughter’s enrolment in a couple of local schools. The family had arranged an appointment with the principal of a different school they were considering for their family. The principal greeted the family and immediately addressed the child “Welcome [name of child]. I see you love wearing pink. I think you’ll have to meet [name of teacher] in Room 2 because pink is her favourite colour too. I think you two will get on famously”. The family reported feeling welcome and valued. “He saw our daughter, a kid - he took no notice of her chair”. The principal recognised the child’s sense of belonging as central to being in that school. A number of Ministry of Education resources similarly use stories to demonstrate authentic learning (Aitken & Sinnema, 2008; Alton-Lee, 2003; Ministry of Education, 2009a; Robinson, Hohepa, & Lloyd, 2009; Timperley, Wilson, Barrar & Fung, 2007).

THE IMPORTANCE OF LEADERSHIP

A consistent theme that emerged from the research and from sector feedback of draft project materials was that of inclusive values, beginning with school leadership. Leadership appears to be essential in supporting a culture where all students are valued and every student’s learning is important. Conversely, teachers and professional development providers commented that their attempts to be more inclusive were challenged by a lack of understanding within some leadership teams.

Timperley et al., (2007) identify two significant types of leadership. Transformational leadership focuses on vision and inspiration based on relationships. Pedagogical leadership places emphasis on establishing key educational goals, planning using the curriculum, and evaluating teaching and learning programmes. Research suggests pedagogical leadership is four times more effective in achieving intended outcomes than transformational leadership. Teachers were noted to value clear goals and expectations (Timperley et al., 2007). This is not denying the importance of relationships as schools recognised as high-performing value communication within school and with their communities. Meaningful school-wide reflexive practice that actively involves the school leadership team not only helps create a culture of respect but supports teachers to take risks and make changes in their practice (Lovett, 2007; Wenger, 2000).

One of the useful things I saw when taking this material to school for feedback was that it created a focus for meaningful conversations. I heard a couple of teachers in the staffroom talking about how they were going to introduce some sign language in school assembly and that learning a bit of sign so more people could communicate with [name of student] would be useful for everyone really. Talking together about stuff they could do quite easily.

WHAT WAS LEARNED, AND ONGOING CHALLENGES

This project team was supported by a skilled and knowledgeable sector advisory group, including a number of members from the disability community. One work stream sought external mentoring from critical friends, and the shared wisdom of these participants greatly strengthened the work of the project. As one team member said:

Our critical friends have been very important to me, as touchstones or markers along the way. They helped us know what was on track and off track. What a gift to have a group of people to share the learning journey with.

Macfarlane (2013) of the University of Canterbury talked about the purpose of assessment and the reality for many students. She suggested a concept to guide this work could be that assessment shall do no harm. This has real implication for pedagogical frameworks and for classroom practice. It impacts on how teachers assess, and what principals do with assessment data. Hipkins (2013) of the New Zealand Council for Educational Research talked about the creativity enabled by the NZC, and encouraged team members to imagine how teaching and learning could be different. Thinking creatively about teaching and learning could help teachers to grow student potential and to support student capabilities. Morton (2013) of the University of Canterbury talked about inclusive practice as a process of moving away from and moving towards. An example of this could be moving away from a one-off meeting and moving towards developing relationships and knowledge over time. It could be moving away from relying on
one source of information to make decisions about student capability, and moving towards drawing on the knowledge of the student, their parents, family/whanau and those supporting them. This way of thinking framed much of the work in the project. It provided a space for all to position and reflect on their practice, and to plan their own next steps in creating inclusive classroom and school communities.

The journey for some members of the project team involved personal and professional challenge. A number of iterations were drafted and rejected in attempts to create practical resources with transformative potential. Project members developed their own understandings of inclusive practice, enabling them to better support the sector in the variety of roles in which they continue to work:

I’ve learnt lots about inclusion. All kids have to have the opportunity to achieve in the NZC. That’s not negotiable. End of story.

Inclusion’s about an ethic of care; about thinking about teaching all kids better. I think it’s about a value of kindness being obvious right through the school.

Inclusion is not so much about theory or head knowledge – it comes from the heart!

Inclusive practice is all about the quality of relationships and how we treat other people. It is not just about the vision; it is about modelling it, persistence, working together.

As project members learned together, they became more cognisant and open to discuss the challenges they believed lay ahead:

I get so cross about that oh so damning statement that says something like - these learners are expected to spend a long time working within Level One of the NZC. What rubbish! Is so limiting and provides a weasel-out clause. Like they’re not expected to make progress.

A challenge for me is thinking about and talking about support staff. I often find when I ask the schools about their students with special education needs they immediately focus on the number of teacher-aide hours the students get, as if that’s the answer to being inclusive. I understand this - it’s so hard when schools are stretched to breaking point around resourcing the kids who need support.

I’m having discussions with a school about what they believe being inclusive is. It seems to me it starts with knowing the student well, then we can focus on the goals for that student and how we can achieve them. In my experience it’s not about teacher-aide hours. It’s - well it is about that a bit - of course teachers need support - but it’s really about the teacher feeling confident and feeling supported. It’s about knowing who to ask and having someone knowledgeable at your fingertips who you can throw ideas around with. Sometimes these people are in the school; sometimes they are specialists from outside the school who have amazing knowledge. It’s not about these knowledgeable people having set hours with the student; it’s about the teachers being able to have meaningful learning conversations with these people when the support is needed.

Some project members confronted their own thinking as they had conversations in schools about resourcing. Lack of resources was often cited as a reason schools felt they struggled to be inclusive. In some cases, limited teacher-aide support was a real barrier to meaningful participation in the classroom. In some cases, the barriers were not about resourcing but about attitudes.

You know some teachers still seem to think that the students with special education needs aren’t really their responsibility. I’m learning to be brave and say ‘Actually you’re the teacher; you’re responsible for all your students. What support do you need?’ Not easy for me.

In a culture where everyone is valued, the staff support each other and there are high expectations around learning for all students. Discussion about resourcing became more about supporting the teacher to teach all students rather than supporting a student by giving them teacher-aide hours (Ainscow, Booth & Dyson, 2006; Ministry of Education, 2014; Rutherford, 2008; Slee, 2011). Many students require additional support to participate at school and to meaningfully access the curriculum. This support is undeniably critical to successful inclusion for some students. Project members were challenged in some schools, when teacher-aides appeared to have responsibility for student learning. Some team members engaged in conversations where they questioned why expectations for students with special education needs were lower than those of their peers.

Some teachers recognised that students with complex needs have strengths that do not pigeonhole them within a curriculum level and that high expectations of all students begin with knowing the learner (Marshall, Ralph & Palmer, 2002; Rutherford, 2008; 2012). Students often demonstrate strengths in learning outside the school context, and meaningful relationships between school and family enable such
authentic learning to be recognised and transferred across settings. MacArthur (2009) notes that when New Zealand students with special education needs were asked what they wanted from school and how teachers could support their learning, they most wanted to be “part of the whole peer group” and to be “fully involved at school” (p. 42). Expectations for social and academic inclusion are equally valid for all students. A challenge in a busy school environment is valuing the process of inclusion sufficiently to take the time to connect with families, and to develop respectful and equal relationships in school. Without this connection, collaboration is not possible.

Teachers benefit from opportunities to share experiences and ideas with their colleagues to help create collaborative learning communities. Many of the teachers involved in trialling resources for this project said that having opportunities to work collaboratively and share experiences and ideas around inclusive practice helped them to develop confidence, to be more creative, and take risks to better include all students in classroom learning.

CHANGES TO PRACTICE NOW AND IN THE FUTURE

Project members completed their tasks and left the project in two stages. Those who left after three terms were able to provide valuable feedback on how participation in the project had changed their practice:

This work has completely reframed how I’m running my school. I thought we were inclusive but since I’ve come back, the school has been recultured. Everyone is taking this work on board - they don’t have a choice. It’s been about active management and active leadership. All kids need the opportunities to be their best they can be. We’ve focused on presence and engagement for everyone. We will see a lift in achievement for all kids. I’m quite determined about that.

I just know how much more I have to learn.

I’m a lot more confident when I talk to people about inclusion. I also think I have become a more understanding teacher and a more determined advocate for social justice.

We have to remember when we talk to schools that we’ve been on a big journey. It’s like the Kingston Flyer. We might have already got to Lumsden, but many people are still somewhere further back on the track. We have to pick them up and take them with us.

The reality is schools will get on this inclusion train at different stations. The process of becoming more inclusive is about recognising that station, and making changes to travel further up the line (moving from and moving towards). Project members talked about their personal learning and changes they intended to make as they moved back to their work as practitioners. Comments included:

I need to continue to grow my knowledge of ways to support teachers who have students with high and complex needs, then support my colleagues to also grow their knowledge. One key focus area is the approaches schools are using to capture evidence to share the powerful stories of a student’s progress over time. I feel assessment knowledge is something we need to develop more and ensure all our facilitators have the skills to support their teachers and leaders.

I really thought I was inclusive but I’ve learnt a lot about listening to student voice. I really see how important this is and I’ve learnt some really useful strategies to achieve this.

NEXT LEARNING STEPS

Creating change in education is a many-pronged approach, from policy to practice across a range of contexts. The process of embedding change is seen as incredibly fragile, and one that needs ongoing practical and focused support. School leaders most successfully lead change when the decisions they make are informed by deep knowledge of effective pedagogy (Timperley et al., 2007). This is supported when they are able to engage in meaningful learning conversations, create a culture of trust and analyse and solve complex problems (Bendikson, Robinson & Hattie, 2012; Timperley et al., 2007).

For teachers, building capability requires understanding why new ways of doing things may be better than what they have done before. Useful professional development supports changes of deep understanding, not change that occurs at a systems or practice level only. Without embedded understanding there is no incentive to maintain any change to practice that emerges from professional development (Timperley et al., 2007). Ballard (2011) reminds us that meaningful change happens within big picture thinking. Efficacy of change at the front-line in classrooms is largely determined by teachers. This project work aims to help teachers to think critically and teach in a way that supports just and democratic classrooms, schools and communities. Wink (2011) suggests that change is most effective when it comes from the heart. Belief and passion are great motivators for progressing change. Recognition of existing
knowledge and skill within new learning is seen as pivotal to creating change. Teachers as change agents can transform classrooms to create authentic learning communities where everyone is welcome and everyone collaborates to support learning. As Ayers, Quinn and Stovall note, “we don’t really know how to change the world, of course; we don’t know when our efforts are in vain; but we do know that change in small places can gesture towards larger transformations, and that changing a single mind can unleash a universe of possibilities” (Ayers et al., 2009, p. 726. In Morton et al., 2012).

The art of walking upright here
Is the art of using both feet.
One is for holding on.
One is for letting go.
Glen Colquhoun (2010)

Inclusive Education Capability Building resources have been drafted, and the first stage of the project completed. Team members await the Ministry of Education’s progression, completion and implementation of this work in 2015. As the poet Colquhoun writes, team members have let this work go and trusted that the key messages they valued will be prioritised in the final product. They also recognised that, regardless of the nature of the final product, without an ongoing commitment to practical professional development, the tipping point may remain elusive. The project team have returned to their home towns and will endeavour to be agents of change in their own workplaces, striving towards a culture where all students can participate as valued members of their school communities to become “actively engaged lifelong learners” (Ministry of Education, 2007, p. 7).

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This writing is dedicated to Joanna Curzon. Joanna was a visionary and key driver of this work within the Ministry of Education. Her sudden death on October 3rd 2013 left an incredible void in this project. Her passion for inclusive practice and the rights of all students remained a focus in this work.

REFERENCES


**AUTHOR PROFILES**

**Anne-Marie McIlroy**

Anne-Marie McIlroy is a specialist teacher working in an outreach service in Dunedin. She is completing a PhD at the University of Canterbury looking at narrative assessment as an approach that may support the development of inclusive school communities. She has been involved in the Narrative Assessment Project at the University of Canterbury (2007-2008) and the Inclusive Education Capability Building Project at the Ministry of Education (2013-2014). She is particularly interested in enabling student voice and supporting classroom teachers within school communities so they feel confident to teach all students.

Email: amm.dnnz@gmail.com
Whole Language and Phonics: Which Instructional Practices are Most Effective in Teaching At-Risk Students to Read?
Tamara Senior, Alison Arrow, Keith Greaney

ABSTRACT
A disproportionate number of New Zealand students fail to learn to read. Children from low socioeconomic backgrounds are over-represented among New Zealand’s under-achieving readers. This study investigated the extent to which teachers of beginning readers in low-decile schools emphasised explicit phonological-based instruction, as well as the relationship between teacher emphasis on phonological instruction and student progress in reading-related skills. Results demonstrated that children from different literacy instruction programmes progressed similarly in all reading-related skills except word reading. Students receiving explicit phonological-based literacy instruction made superior progress in word reading skills over children receiving implicit phonological-based instruction. A strong emphasis on explicit phonological instruction was also associated with a reduction in variation of class word reading scores over time. The study findings support previous research demonstrating that phonological awareness and decoding skills play a crucial role in the development of word reading ability and that explicit phonological-based instruction can attenuate differences in word reading development. Implications for teachers and policy makers are described.

Keywords: literacy, phonological instruction, reading

Research Paper

INTRODUCTION

Theories of Reading: Searchlights and the Simple View of Reading

The two most widely-used models of reading development are the Searchlights or ‘multiple cues’ theory and the Simple View of Reading (SVR). The multiple cues model claims that readers use information from four sources in order to read: meaning, sentence structure, visual cues, and phonological cues (Clay & Cazden, 1990). According to multiple cues theory, readers should focus primarily on meaning while ‘cross-checking’ the multiple sources of information against each other. Only when this “higher-order” strategy falters should the reader look more closely at individual sources of information such as letter-sound cues (Clay & Cazden, 1990). The multiple cues approach tends to emphasise the development of unconstrained skills such as vocabulary and comprehension in order to support reading (Tunmer, Chapman, Greaney, Prochnow & Arrow, 2013).

In contrast to the multiple cues theory, the SVR emphasises the importance of underlying constrained skills such as phonological and decoding ability (skill in converting letters and letter strings into phonological representations) (Allan & Harwood, 2014) alongside comprehension skills (Stuart, Stainthorp & Snowling, 2008; Tunmer et al., 2013). The SVR states that reading is a product of decoding and listening comprehension (Gough & Tunmer, 1986). According to the SVR, reading cannot be achieved without adequate decoding and listening comprehension; having just one or the other is not sufficient to access text independently (Gough & Tunmer, 1986).

Reading Development
Key instructional components necessary for the development of reading have been well-documented. In their 2001 report on current reading research instruction, the National Reading Panel identified five ‘pillars’ required for comprehensive reading instruction: phonological awareness, instruction in graphophonemic relationships, vocabulary knowledge, fluency, and comprehension (Anderson, 2009).

Phonological Awareness
Prior to learning to decode text, a child needs to acquire sensitivity to the sounds of spoken language (McNamara, Scissors & Gutknecht, 2011). Phonological awareness is the ability to consciously identify and manipulate sounds in speech (Stanovich, 1986), and phonemic awareness is the ability to
identify and manipulate the smallest sounds within speech (National Reading Panel, 2000). Because spoken language is oriented around meaning, children do not usually become aware of the individual sound units that make up words without some form of explicit instruction (Lundberg, Larsman & Strid, 2012). Thus, instruction plays a key role in developing specific phonological abilities for most children (Shankweiler & Fowler, 2004). Moreover, it is essential that children grasp the relationships between sounds and letters early in their reading development. If not, they may be forced to use other, unhelpful cues such as syntax or semantics in their reading (Tunmer & Prochnow, 2009).

**Graphophonemic Decoding and Orthographic Knowledge**

Once phoneme awareness has begun to develop, children can begin to understand the way sounds and letters are linked by learning which individual sounds are visually represented by which letters (Shankweiler & Fowler, 2004). Most children need explicit teaching in letter-sound correspondences, with knowledge of initial letter-sound correspondences being consolidated and extended through the introduction of basic words that use the same letter-sound patterns (Rayner, Foorman, Perfetti, Pesetsky & Seidenberg, 2001).

Understanding of letter-sound correspondences enables children to begin unlocking the alphabetic code — a vital step towards independence in learning to read (Stanovich, 1986). The idea that progress in reading can become self-perpetuating is known as the self-teaching hypothesis (Allan & Harwood, 2014). The self-teaching hypothesis is supported by research which demonstrates that children, once in possession of enough knowledge about graphophonemic correspondences, can independently go on to deduce further graphophonic knowledge through successful experiences in sounding out new words (Conners, Loveall, Moore, Hume & Maddox, 2011).

When a child first begins to use their knowledge of letter-sound correspondence to decode words, their attempts are conscious and sometimes laborious (Ehri, 2005). Through practice in accurately decoding frequently-encountered letter strings and making successful attempts to pronounce new words using decoding ability, graphophonological knowledge becomes cemented in orthographic memory and is thereby available for future encounters with unknown words containing familiar letter strings (Arrow & Tunmer, 2012). The connections formed between phonemes and graphemes become triggers to enable rapid retrieval of word pronunciations as well as meanings (Ehri, 2005). Having access to a mental store of partial word representations enables children to read with less reliance on laborious phoneme-grapheme decoding; they are able to recode larger units of print rapidly into phonological representations that match words stored in their vocabulary (Arrow & Tunmer, 2012).

An ability to use the alphabetic code is crucial in developing automaticity in word reading (Simos et al., 2007). Phonological decoding is more useful than a reliance on orthographic decoding when learning new words because learning new words via phonological recoding is likely to result in fewer identification errors and more rapid orthographic recognition than learning words via visual representation only (Kyte & Johnson, 2006). Indeed, it is the very process of phonological decoding that causes the orthographic representation of words to become entrenched in memory (Juel & Minden-Cupp, 2000; Kyte & Johnson, 2006; Simos et al., 2007).

**Children at Risk of Reading Failure**

Research indicates that children from low socio-economic backgrounds are more at risk of reading failure than children from high socio-economic backgrounds (D’Angiulli, Siegel & Hertzman, 2004; Kieffer, 2010). There is evidence indicating that children from low-income backgrounds in New Zealand face a disproportionately high risk of reading failure (Greaney, 2004; Tunmer et al., 2013).

**Impact of Schooling**

The methods needed to teach a new-entrant child to read depend on what skills the child brings to school (HM Treasury Department for Education and Skills, 2007). However, the first priority for at-risk beginning readers is the development of phonological awareness and understanding of the alphabetic principle (Rayner et al., 2001; Tunmer et al., 2008). Research demonstrates that children lacking reading-related skills such as phonological awareness and knowledge of the alphabetic code at school entry, benefit most from instruction that is explicit, systematic, intensive, and rich in opportunities to practise skills that have been learned in isolation from connected text (Jimerson, Oakland & Farrell, 2006). Research also indicates that while children from low socio-economic backgrounds tend to be at higher risk of reading failure (Noble, Farah & McCandliss, 2006), schooling can attenuate these risks substantially.

**Explicit and Systematic Instruction**

Children who come to school with limited reading-related skills need explicit instruction in phonological awareness and graphophonological relationships, including letter-sound matching (Connor, Morrison & Katch,
Teachers cannot assume that children are able to hear individual sounds in words or make connections between sounds and print (Torgesen, 2004). As Torgesen (2004) explains, explicit instruction involves the teacher deliberately focusing the child’s attention on letter-sound connections.

Teaching, for children at risk of reading failure, also needs to be systematic – that is, to follow a planned structure geared to address the needs of the students. Following a review of reading research, Ehri (2004) reflected that any phonological-based programme (either in prevention or remediation of reading difficulties) is more effective if it is systematic. However, in order to plan a systematic phonology-based programme to address the specific needs of students, assessment of phonological awareness needs to be comprehensive (Anthony & Francis, 2005). Teacher knowledge about the exact phonological needs of students allows for the planning of instruction to cater for specific skill gaps which could, if ignored, lead to reading failure in the future (Anthony & Francis, 2005).

**Intensity of Instruction**

Explicit, systematic instruction that provides opportunities for skills practice in isolation and in connected text will be of limited benefit unless it is provided with sufficient intensity. Research on reading programmes for prevention and intervention supports the idea that increasing the intensity of phonics programmes by reducing group size and tailoring instruction time is most beneficial for children at risk for (or experiencing) reading failure (Hansen, Litzelman, Marsh & Milspaw, 2004).

**Skills in Isolation and Practice in Context**

Beginning readers benefit from skills instruction that takes place in isolation from connected text, followed by opportunities to practise their skills within connected text (Tunmer & Chapman, 2003). Researchers suggest that the usefulness of first teaching skills in isolation can be attributed to four factors: children are able to focus their attention on letter-sound patterns; employment of letter-sound skills is useful for all texts, whereas the helpfulness of context cues depends on the specific text being read; being forced to rely on letter-sound cues when skills are taught in isolation discourages the reader from relying on context cues; and isolated instruction in letter-sound skills encourages the struggling reader to see that these skills are actually more reliable than context cues (Ryder, Tunmer & Greaney, 2008).

Researchers caution that the teaching of new words in connected text may only be useful to children once they have learned at least some decoding skills. For younger children who have not yet developed the ability to use graphophonic correspondence, solely learning new words in the context of text could be detrimental because they are likely to begin to rely on cues that exclude the use of graphophonic relationships (Harwood, 2006). Where the use of graphophonic relationships is limited, children are more likely to make incorrect orthographic-phonological correspondence (Share, 1999). Children who have adequate decoding skills, however, are able to use context to aid them in developing their orthographic knowledge further (Allan & Harwood, 2014).

The recommendation to teach decoding strategies in isolation does not imply that beginning readers should not be reading connected text. On the contrary, children at risk of reading failure need mileage in reading connected text if they are to learn how to apply their skills in practice (Tunmer et al., 2007). However, research demonstrates that graphophonic cues are more useful for beginning readers than contextual cues, and therefore children need to be supported to use the letter-sound cues primarily when reading connected text (Rayner et al., 2001; Tunmer & Chapman, 2003).

**READING INSTRUCTION IN NEW ZEALAND**

**Whole Language Heritage**

In the past, New Zealand held a predominantly whole-language theory of reading instruction. The whole language approach to literacy instruction marked a departure from explicit teaching of the rules and regularities involved in decoding of text to a study of language-meaning within the context of texts (Smith & Goodman, 1971). A whole-language reading programme is non-prescriptive because whole-language theory emphasises using child-motivation and experience as a basis from which to teach reading – often within the context of a relevant and interesting theme (Tracey & Morrow, 2006). Historically, the whole-language view of reading development promoted the idea that reading, like language, is a naturally-acquired skill that develops when children are surrounded by captivating literature (Rayner et al., 2001; Smith & Goodman, 1971; Tracey & Morrow, 2006). More recently, whole-language enthusiasts have begun to acknowledge that instruction in phonological skills should occur, but within the context of meaningful texts (Pressley, 2006).
Certain aspects of the whole-language approach are not necessarily incompatible with a phonological-based approach, and are certainly beneficial for developing readers when employed alongside phonological-based methods to produce a balanced instructional programme (Rayner et al., 2001; Xue & Meisels, 2004). However, the issue with a predominantly whole-language approach is the emphasis placed on meaning and context, which occurs at the expense of thorough and isolated instruction in essential phonological skills (Tunmer & Chapman, 2003).

Assessment of New Entrant Children

An area of concern noted in an Education Review Office evaluation Reading and Writing in Years 1 and 2 (Education Review Office, 2009) is the lack of attention paid to the progress of children in their first year at school. Research demonstrates that there are very few, if any, remediation programmes that can remEDIATE most children successfully (Torgesen et al., 2001). It follows that in order for most children to succeed in reading, they need to progress adequately from the moment they begin school. Research also indicates that phonological awareness is a significant predictor of reading development (National Early Literacy Panel, 2008). In order to avoid the ‘wait to fail’ approach where children are not identified for support such as Reading Recovery until the formal Observation Survey conducted after one year at school (Greaney & Arrow, 2012), teachers need to know exactly what level of phonological awareness and other reading-related skills each of their students possess as soon as they begin school. Apart from letter-sound knowledge and hearing and recording sounds, the Observation Survey tool (Clay, 2005) provides little specific information on phonological awareness. A poor result may indicate that a child is at risk for reading difficulties. However, unless an assessment produces detailed information about the specific phonological skills a child is lacking, an educator will have limited knowledge about how to prevent reading failure (Anthony et al., 2003).

Multiple Cues Theory and Ready-to-Read Texts

Despite the importance of phonological-based instruction for beginning readers, a constructivist view of reading development is encouraged in many New Zealand classes (Greaney, 2011; Tracey & Morrow, 2006), where beginning readers are encouraged to use syntactic and semantic cues as well as graphophonic patterns in order to predict unfamiliar words (Ministry of Education, 2003). An over-emphasis of context-based teaching recommendations (which comes at the expense of phonological-based recommendations) is particularly unhelpful for at-risk beginning readers, as these children need explicit instruction in word-level skills and strategies in order to make the connections necessary to become independent readers (Tunmer et al., 2013).

The Ministry of Education has also shown a preference for the multiple cues theory in the text series recommended for use with beginning readers (Eber, 2001). In their curriculum support tool entitled Literacy Learning Progressions: Meeting the Reading and Writing Demands of the Curriculum (2010), the Ministry of Education states that the Ready-to-Read book series should be the main resource used by teachers of beginning readers. The Ministry of Education also supplies these books free-of-charge to all state and integrated schools in New Zealand (Van Acker, 2007). While the Ready-to-Read series is levelled, sentences are simply constructed and vocabulary is supposedly familiar, the texts are chosen because they provide opportunity for students to “draw on their oral language”, “make meaning”, and “think critically” (Eber, 2001, p. 9). These texts have repetitive vocabulary and sentence structure, which make reading predictable rather than necessarily decodable. Beginning readers are provided with opportunities to practice repeated words but limited opportunities to practice repeated graphophonic patterns in different words (Juel & Minden-Cupp, 2000).

Research also indicates that Ready to Read books contain significantly less words than the other popular instructional series in New Zealand, the Price Milburn (PM) series (Van Acker, 2007). As Greaney states, there is a danger that struggling readers in classrooms which rely heavily on Ready-to-Read books may not be getting the mileage required to attain reading fluency (Van Acker, 2007). While many classrooms in New Zealand are likely to use a range of instructional reading materials, an over-reliance on the Ready-to-Read series is not likely to be helpful for struggling readers (Van Acker, 2007).

AIMS OF THE STUDY

The following research questions were investigated in the current study:

1. To what extent is there evidence of phonological-based literacy teaching and assessment practices in new-entrant classes of low-decile schools?
2. What is the relationship between methods of literacy instruction and literacy progress in the first year of school?
METHOD
An embedded mixed-method approach (Creswell, 2008) was used to examine relationships between instructional methods and aspects of literacy progress in new entrant children during their first year of school. Quantitative data was gathered via repeated measures of student skills as well as single systematic observational recordings of teacher methods. The qualitative data were gathered concurrent with the quantitative data through narrative recordings of teacher observations and individual teacher interviews.

Naturally-occurring independent class groups were allocated to either an ‘explicit phonics’ group or an ‘implicit phonics’ group based on the emphasis their teachers placed on explicit phonics instruction. A measure of control was gained for the existence of non-equivalent groups by tracking group progress between two assessment times. The student data was gathered via reading-related assessments once at the beginning of the study (Time 1) and once towards the end of the study (Time 2).

Participants and Setting
Nine new-entrant teachers and the children from their classrooms took part in the study. These participants were drawn from four schools located in lower socio-economic areas of a small urban city in New Zealand. Three of these schools were Decile 2 and one school was Decile 3.

Forty-three children took part in the study, with ages ranging from 5.0 - 5.8 years. The majority (n = 37) of children in the sample were from families who identified themselves as Maori. Each child was individually assessed on five measures designed to assess letter and sound knowledge, phonological awareness, and vocabulary skills. Testing took place on two occasions, the first towards the end of Term Two (June/July) and the second at the end of Term Three (August/September).

An observation of at least one literacy lesson in each participating classroom was conducted. Most lessons included guided reading sessions and guided, shared, or independent writing. A time sampling recording system was used in which the teacher’s behaviour and the context in which it occurred (connected text or isolation) was recorded at 30-second intervals.

As occurred in Connor et al.’s (2004) study, teacher methods were categorised as Explicit/In context, Explicit/Out of context, Implicit/In context, or Implicit/Out of context. The term explicit was used to describe direct teaching or practice of phonological awareness and/or alphabetic code. Examples included teacher prompts to use letter-/cluster-sound correspondence (e.g. “sound it out” or “what sound do those letters make?”). The term implicit was used to describe vocabulary instruction or practice, teacher reading out loud, child reading out loud or silently, listening to others read out loud (e.g. buddy reading, round-robin reading), teacher prompts directing attention to meaning or syntax, instruction about meaning or syntax, dictation (e.g. teacher-child or child-teacher), discussions about texts, conventions of print, listening comprehension, or isolated word reading.

The context in which reading skills were being taught was also included within the coding method. Therefore, Explicit/In context indicated direct instruction within the context of connected text (book or piece of writing), while Explicit/Out of context described direct instruction or practice in the alphabetic code in isolation from connected text. Finally, a written narrative recording was made of each lesson in order to capture finer details such as examples of prompts used, sequences of events, and descriptions of activities.

Immediately prior to conducting the Time 2 child assessments, individual interviews were undertaken with each participating teacher. The interviews were designed to supplement classroom observations by providing information about each teacher’s practice such as planning, assessment, methods for catering for struggling readers, and views on instructional methods and materials.

RESULTS

Instructional Emphasis
The explicit phonological emphasis scores (context and isolation combined) across teachers suggested two naturally-occurring groups divided by differences in mean percentages of time spent teaching explicit phonological strategies. The three Explicit Phonics teachers spent more time teaching explicit phonological strategies in isolation (e.g. identification of initial phonemes in spoken words) and in connected text (e.g. directing students to attend to letter-sound correspondences during reading). In contrast, the six Implicit Phonics teachers spent proportionately more time using implicit phonological-based methods such as emphasising reading and writing goals focused on meaning or concepts about print. Teachers in both groups were observed using explicit and implicit phonological-based strategies, but groupings were based on the proportion of time spent using these methods.

Overall, the teacher observations and interviews demonstrated that there was minimal evidence of explicit phonological-based teaching. Six out of
nine teachers spent less than thirty percent of their literacy lessons explicitly emphasising phonological-based strategies. Observation findings indicated that the teachers in the Implicit Phonics group spent significantly less time on average emphasising explicit phonological-based teaching strategies than the three teachers in the Explicit Phonics group. Interview findings supported the observation findings to some extent, but there were discrepancies between the way some teachers described their literacy focus and the emphasis they were observed making in teaching practice. Implicit Phonics teachers were more likely to describe their literacy programmes as a mixture of whole-language and phonics, but all of these teachers demonstrated minimal evidence of explicit phonological emphasis. The interviews also indicated that the Implicit Phonics group of teachers were less likely to consider phonological skills development in their planning, use of prompts in guided reading, or in student assessment.

**Student Progress in Reading-Related Measures**

In order to examine the relationship between teacher emphasis on phonological teaching methods and student progress, students were assessed in reading-related measures at Time 1 and Time 2. Student groups corresponded to their teacher groups, i.e. students whose teachers were in the Explicit Phonics group were also placed in the Explicit Phonics group, and students whose teachers were in the Implicit Phonics group were also in the Implicit Phonics group.

Statistical analyses revealed that both the Implicit Phonics group of students and the Explicit Phonics group made significant progress in letter-name identification skills. The differences between group scores and between the two groups’ rate of progress were not significant for any of the measures except word reading. Although Burt word reading scores did not differ significantly between the two groups overall, the Explicit Phonics group showed significantly greater progress in word reading scores over time.

Research shows that an emphasis on explicit phonological-based instruction can significantly increase the achievement of at-risk readers (Greaney & Arrow, 2012). Before forming the two large groups of teachers (Explicit and Implicit Phonics), it was clear that there were two outlier teachers at either end of the Explicit-Implicit Phonics spectrum. Analysis of score variance within the classroom receiving the most-explicit instruction (Class A) and the least-explicit instruction (Class I) revealed that the variance in word reading scores was wide at Time 1 for both classes. However, the variance in scores decreased over time in Class A (Explicit Phonics) but increased over time in Class I (Implicit Phonics). Thus, as the Class A mean scores increased over time, the range in scores decreased. However, as the Class I mean scores increased over time, so did their range in scores; the gap between the lowest and highest readers was widening.

Observations during administration of the Burt measure indicated that just over half the children from each group made at least some attempt to decode at least one unknown word, or made errors that showed they were attending to at least the initial letter of words. However, none of the children from the Implicit Phonics group were successful in any of their attempts to decode unknown words. In contrast, four of the 14 students from the Explicit Phonics group were successful in at least some of their decoding attempts. These children made more frequent and more extended efforts to decode whole words (rather than just initial letters). Several children showed they were able to decode whole words but not yet able to blend the sounds together every time. All of the children who were successfully able to decode some words came from the class whose teacher demonstrated the most emphasis on explicit phonological instruction (Class A). Two of these children showed a particularly dramatic improvement from Time 1, when they knew one and two words respectively, to Time 2 when they scored 18 and 21 respectively.

**DISCUSSION**

The current study’s observation and interview findings indicated that the majority of teachers placed little emphasis on explicit phonological instruction and high emphasis on implicit phonological-based instruction and use of multiple cues in reading. Given the large static gap between low- and high-achieving readers in New Zealand, and latest Progress in International Reading Literacy Study (PIRLS) results demonstrating that children from low socio-economic backgrounds make up the majority of the country’s lowest-achieving readers (Chamberlain, 2013), the current study’s findings regarding teacher instruction of at-risk beginning readers are concerning. It appears that teachers of children likely to be at risk of reading failure continue to practise implicit phonological-based reading instruction regardless of student learning needs at school entry. Given research showing that explicit phonological-based instruction can attenuate the gap between poor and good readers, it is imperative that teachers of at-risk
beginning readers recognise the need to give students explicit and isolated instruction in phonological skills.

Current assessment practices of beginning readers are also of concern. Research demonstrates that phonological awareness is a direct contributor to reading progress (Anthony & Francis, 2005), yet the current study indicated that most teachers neglected to assess children’s phonological awareness at school entry. Comprehensive assessment is essential in informing instructional practice (Greaney & Arrow, 2012). In order to tailor reading instruction to students’ individual learning needs, teachers need to know what phonological skills their students possess as soon as they begin school. Given research demonstrating that remediation programmes are rarely successful (Torgesen et al., 2001) but that early identification of potential difficulties and immediate explicit phonological instruction can prevent reading failure (D’Angiulli et al., 2004), waiting until a child demonstrates significant reading delay before attempting intervention is both unnecessary and unethical. It is essential that teachers are not only made aware of the importance of comprehensive phonological skills assessment at school-entry but also provided with the direction necessary to carry out such assessment.

CONCLUSION

The current study’s findings showed faster rates of progress in word reading scores and superior skill in word decoding in classes receiving the highest emphasis on explicit phonological instruction. These results are similar to previous findings suggesting that explicit phonological instruction is more helpful in teaching at-risk students to read than implicit phonological instruction. Moreover, the finding that a relatively strong emphasis on explicit phonological instruction was associated with substantially reduced variation in class word reading scores over time, and that a relatively weak emphasis on explicit phonological instruction was associated with increased variation in class word reading scores over time, adds to research demonstrating the superiority of explicit phonological instruction over implicit phonological instruction.

It seems likely that the large achievement gap evident between low- and high-achieving readers in New Zealand remains wide because of the predominantly whole-language methods persisting in this country fail to provide the kind of intensive phonics instruction that at-risk children need in the first year of school. In order to address this problem, systemic changes need to be made whereby at-risk children are provided with explicit, isolated instruction in phonological awareness and decoding skills. Instruction needs to be systematic, unique to individual children’s needs, and sufficiently intensive to eliminate the gaps that exist at school-entry.

If change is to be systemic, however, it needs to be advocated by education leadership (Tunmer et al., 2013). Ministry of Education initiatives need to emphasise that some children come to school with greater literacy-related needs than others, that children with phonological weaknesses need to be identified at school entry (if not before), and that these children must have their learning needs addressed immediately. Teachers of new-entrant children at risk of reading failure may also require further professional development to assist them to better address the literacy learning needs of all children.

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AUTHOR PROFILES

Tamara Senior

Tamara Senior has a Masters in Educational Psychology from Massey University. She has approximately 10 Years teaching experience, mostly teaching in years 0-2. Tamara recently completed her Educational Psychologist internship through Massey University and is now working as a psychologist in Rotorua.

Email:
tamsenior77@yahoo.com.au

Alison Arrow

Alison Arrow, PhD, is a senior lecturer in literacy at Massey University. Alison’s research interests include the development of emergent literacy, particularly alphabet knowledge and phonological awareness, and what knowledge primary school children use to read and spell. Alison is currently involved in research that examines how children use digital technology for their literacy learning, and in longitudinal research following children learning to read and write.

Email:
A.W.Arrow@massey.ac.nz

Keith Greaney

Dr Keith Greaney recently retired from his position as a senior lecturer in the Institute of Education at Massey University. Here he taught both undergraduate and post graduate papers in literacy education and researched and supervised in this area. Keith was a primary school teacher for 28 years including 12 years as an RT:Lit.
The Effectiveness of Word Prediction Software WORDQ: “…Predict it, Hear it, Choose it, Review it, Correct it, Write it now…”
Michael Jacobs

ABSTRACT
Our cluster receives a number of referrals from schools requesting support with the implementation of assistive technology tools (particularly word prediction software) to support struggling reluctant writers. It is widely acknowledged that writing is pivotal for academic success, and when a learner has difficulty expressing their ideas they often can become alienated and frustrated. Fledging research suggests that the appropriate use of assistive technology like word prediction software can remove such barriers for struggling writers. A popular word prediction software tool used in New Zealand schools is WordQ. This article discusses the background to WordQ, summarises the research supporting its effectiveness as a tool to support struggling writers, and highlights ways to overcome barriers to enable the successful implementation of WordQ in schools.

Practice Paper

Keywords: WordQ; word prediction software, writing

TE KOERO TAHUHU: HISTORICAL BACKGROUND
WordQ is a writing tool that uses word prediction and speech output. The software has been around since the early 1980s. The original purpose of word prediction software was to increase and improve writing speed and accuracy as well as to reduce fatigue for people with physical disabilities (Love, 2003; Smith; Tam, 2009 2010). Word prediction software has evolved over the last 30 years through the work done by software pioneers like Schwejda and McDonald (the creators of Co:Writer) and Dr Shein (one of the creators of WordQ). Today, word prediction software aimed at supporting struggling writers (for example WordQ, Co:Writer, Write Outloud, Dragon Naturally Speaking, etc.) is commonly used in New Zealand schools. Since the release of WordQ in 2001, over 2,000 schools in Ontario (Canada) alone have installed WordQ software, and in recent years it has become popular in New Zealand, USA, UK, Germany and Australia (GoQ software, 2010).

Te Putaketanga: The Purpose/Intent
Word prediction software was originally developed for learners whose keyboarding skills were severely limited by their physical disabilities. Previously, learners who could not use the standard keyboard used slow and clunky alternative ways for choosing letters, for example, switches, trackballs, head and mouth. Word prediction software was therefore developed to reduce the gap by simply reducing the number of selections necessary for encoding words (Schock, 2011). Today, word prediction software has advanced, and research shows that it has some benefit in supporting the writing process for students with learning disabilities (MacArthur, 2009; Mezei, 2012; Smith, 2010). It can be of benefit to all learners who experience difficulties with writing because it helps with word choice, word creation, spelling, and overall typing. It can also be tailored to specific needs of learners, and teachers are able to add specific words into the programme to ensure learners use these words in their work.

The current WordQ software was designed to be used along with standard word processing software to provide spelling, English grammar, and reading assistance. Learners who experience difficulties with writing and editing can benefit, including those who have learning disabilities (LD) such as dyslexia, or who are learning a second language. Although WordQ is advertised as a beneficial writing aid for individuals of all ages (GoQ Software, 2010), younger learners (from Year Three down) might need the support of an adult, a parent or a teacher, because of the computer skills and keyboard skills needed to use the technology. In addition, a level of phonological awareness is required - students who are unable to identify the beginning sound of words will not benefit from using WordQ software because the user has to provide the first letters of the word (MacArthur, 2009).

WordQ has user-friendly functions that work seamlessly with any text-based programme such as graphic organisers (e.g. Inspiration), internet/email, and word processing programmes. The programme suggests words, reads sentences back to students
as they write, and recognises incorrect homonyms and creative word spelling and word flow. It also remembers how each user writes, and can therefore predict what words the learner will use. The basic concept behind the WordQ software is word cueing (Quilisoft, 2010). The cues provided by the software are designed to take advantage of the skills of the user while allowing them to compensate for the problems they might have. As the user/learner writes, on going speech feedback provides cues to help the student self-detect errors (GoQ Software, 2010). These cues are first of all visual; the user/learner is now able to see suggested words that they might use. If they experience problems reading the visual cues, they are able to hear the words by scrolling down through a suggested list of words displayed on the computer monitor screen. Learners are therefore able to see and hear the suggested word (GoQ Software, 2010).

WordQ is primarily used to support struggling writers. It therefore features a number of components that are aligned with effective practices of writing. Research conducted by Graham and Perin (2007, cited in Smith & Okolo, 2010) supports this – they highlight three research-based practices that teachers would find to be effective with students with learning difficulties and which WordQ can support. These are that teachers should explicitly teach students how to plan, revise, and edit their text; set students specific and achievable goals for each assignment, and teach students word processing skills (Smith & Okolo, 2010). The researchers assert that effective writing practice takes advantage of technological writing tools. They also endorse WordQ as an ‘excellent’ teaching tool for students with learning disabilities. The word prediction feature provides a list of words on the computer screen as the learner writes: this helps them if they have trouble spelling or choosing the right word. The text reading option makes WordQ a useful proof-reading tool: it allows for auditory proof-reading; a user can hear what they have written in a sentence or passage; – a proven way to develop grammar, spelling, pronunciation, and comprehension skills, plus it motivates learners to edit, correct and improve their personal writing (DTSL, 2012).

WordQ is a technology that has the ability to help non-readers and non-writers to read and write, which for learners with learning disabilities can lead to a sense of achievement and independence (Poplin, 1995, as cited in Schock, 2011). The programme allows for teachers to focus on the learners’ strengths and abilities; for example, when the programme starts, the user is prompted to choose a writing vocabulary that they want to use: starter, intermediate or advanced. Teachers and learners also have the option of adding and creating word lists and words banks. All learners can therefore benefit from using WordQ as the programme can be used in different ways, namely whilst typing, proofreading, or to assist with reading. Some users/learners might use it for all three and therefore gain greater independence in the writing process.

Self-Efficacy

Independence leads to a greater sense of self-efficacy (a belief in their own capability), and self-confidence: learners are therefore more likely to try harder on their work. Sometimes, computers are used to address deficits in learning through reductionist means such as completing spelling lists or worksheets. WordQ, however, focuses on the learners’ strengths and abilities because it allows learners to compensate for the problems they might have. Teachers are therefore able to create a holistic learning environment (needs and strengths of learners are considered) through strengths-based learning (builds on learners strengths and abilities and reduces the cognitive load for learners).

Cognitive Load Theory/Theory of Chunking

The cognitive load theory suggests that if teachers allow for the learner to lower the level of mental energy used in order to process information, greater energy then can be directed towards crucial learning activities rather than those which are adjunct to learning (Cooper, 1990, cited in Schock, 2011). This is particularly important in writing as most writing tasks demand considerable cognitive resources: even experienced writers need sustained and continuous effort to produce good writing (Torrance & Jeffery, 1999, cited in Schock, 2011). WordQ has
the potential to ease the cognitive load for learners because it has the ability to simultaneously sound out words, comprehend the word choice, spell the word and then determine if the word makes sense. Many users are able to write better and more accurately – WordQ makes it easier for them to get their ideas on the page, spelling is made easier, which translates into saving time and energy. By focusing on their strengths, users have the stamina to write longer, and the quality of the writing improves because users can use the words and sentences they want, instead of only focusing on the words they can spell and the simple sentence structures they are confident with.

According to Schock (2011), Miller’s (1956) theory of ‘chunking’ has relevance to users of WordQ. Miller suggests that learners at an early stage of skill acquisition normally have to monitor several external stimuli at a time and coordinate a number of discrete responses (cited in Schock, 2011). However, learning the responses becomes integrated into one unit and the skill is then simplified and requires less attention for execution. This allows for ‘automaticity’, in other words, like with any new skill, the more it is practised, the more the task becomes automatic. Automaticity reduces the cognitive load placed on the working memory. Keyboarding is an example of such a skill requiring mastery to increase automaticity (Schock, 2011). A foundation skill necessary for the effective use of WordQ is keyboarding skills; the more students use the WordQ, the more they develop their keyboarding skills.

Scaffolding

WordQ aligns with Vygotsky’s (1980) theory of scaffolding. According to Vykotsky, optimal learning occurs when the learner is working in the Zone of Proximal Development (ZPD), the area of development between what the learner can achieve by themselves and what they can achieve with assistance. This means that the task must be slightly too difficult to perform independently (instructional level) and the learner should be supported or assisted by a knowledgeable other (teacher or peer) to scaffold (support or guide) in order to complete the task. Learners are able to write with the support of WordQ without stilling their creativity. The programme offers just enough support and prompts to enable all learners to write confidently. This programme also allows them to learn by being active participants in their writing. This software offers a comprehensive writing environment as it includes both a word prediction (which can be a fixed word prediction window or a floating prediction box) and ‘word banks’ to assist and scaffold writing.

Universal Design for Learning

In a universally-designed classroom, teachers provide students with the tools necessary to adapt methods and materials to their individual needs, flexible goals for learning, and continuous assessment (Hitchcock, 2001, cited in Schock, 2011). WordQ meets the needs of many learners, not only a few - it helps teachers differentiate their teaching and therefore embraces the principles of Universal Design for Learning. The software offers multiple options for students to access information, demonstrate what they know, and get excited about learning. When integrated with mind-mapping software - for example, Kidspiration or Inspiration - this allows the teacher to plan, organise and structure almost any learning task (Grant, 2006). In addition, Inspiration/Kidspiration provides a variety of ways of representing, engaging and expressing: working in tandem with mind-mapping software, WordQ is able to support learners as they brainstorm ideas, organise their inquiry, develop written responses and present their findings – definitely a universal design tool (Grant, 2006). WordQ is also endorsed by the Centre for Assistive Technology Team’s top 10 universal design for learning tools (Education, 2012; New Zealand Ministry of Education, 2011).

Social-Cognitive and Socio-Cultural Models of Writing

WordQ is closely aligned to the social-cognitive and socio-cultural models of writing. With the development of social-cognitive and socio-cultural models of writing (e.g. Englert & Mariage, 2003; Flower & Hayes, 1981; both cited in Schock, 2011), the teaching of writing shifted from teaching grammar and mechanical aspects to teaching about the processes of writing, text features and organisation, and the meaningfulness of content. There are six key components in the development of writing based on the social-cultural model. First: creating a supportive environment comprising more-knowledgeable writers as models. Second: recognising writing approximations as success. Third: using supportive dialogue which shapes the students’ thinking as they write. Fourth: developing planning strategies for creating text. Fifth: using editing and revising strategies. Sixth: publishing and sharing writing with real audiences (Bereiter & Scardemalia, 1987; Dyson, 1995; Englert & Mariage, 2003; Flower & Hayes, 1981; MacArthur, 2009, cited in Schock, 2011). Using the Cognitive Process Theory of Writing, developed Flower and Hayes (1981, cited in Cunningham, 2013), learners who have difficulty with writing may experience difficulty in three areas associated with writing, namely planning, translating
and reviewing (Cunningham, 2013). Planning involves organising and developing ideas for writing; translating involves converting ideas into visible language, and reviewing involves examining what has been written and making changes where identified (Flower & Hayes, 1981, cited in Cunningham, 2013). WordQ satisfied all of the above.

**Family/Whanau Centred**

WordQ’s unlimited school-wide licence provides for school and home access. This benefits the family – children then have access to the software at home, which means they can complete homework tasks more independently, more time to use the programme and develop their skills; parents are less stressed because their children will have more support to complete homework.

**TE WHAKATINANATANGA: IMPLEMENTATION/USE IN PRACTICE**

There are various ways in which the software programme could be implemented in schools, depending on the type of software purchased, the school’s IT infrastructure and the willingness of the school to implement assistive technology to support all learners. Schools have the option of purchasing a single-user licence or an unlimited school-wide licencing that includes student-at-home privilege.

Below is an outline of the implementation and decision-making processes I employed to support the school-wide implementation of WordQ at a primary school, in my role as an RTLB. Research has shown that intermittent or one-off training sessions would not bring about change in the classroom (Zhang, 2010). Therefore the classroom teachers in Years 1 - 6 were provided with on going professional development and in-class support that focused on integrating the WordQ software technology into the curriculum and teaching. Below is a graphic (Figure1) I designed using mind mapping software describing the implementation process - how it works in action, the people involved and roles, training or additional educational support needed, the goals that are to be achieved, and how these are measured.
Figure 1: The Implementation Process

Figure 1 graphic highlights that successful implementation is reliant on a structured approach: identifying the need, then setting goals and how they will be measured; the support needed, and making links to key documents i.e. New Zealand Curriculum. In addition, the success also depends on the following key elements to be considered before, during and after its implementation (Zhang, 2010). The graphic below – Figure 2 (I designed using mind-mapping software) - outlines the key elements, namely hardware, software, facilities, resources, support, people, budget/finance, and organisational change.
Figure 2: Key Elements of Implementation (adapted from Zhang, 2010).
Table One highlights some strengths and limitations of the programme

**Table 1: Strengths and Limitations of the Programme**

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• User-friendly – interfaces with other Windows-based word processing programmes or graphic organisers</td>
<td>• WordQ and SpeakQ must be installed on individual computers, not on a network</td>
</tr>
<tr>
<td>• Can be used online to read internet pages</td>
<td>• Classroom teachers need to know the basic functions of WordQ</td>
</tr>
<tr>
<td>• Read feature – great for proof-reading</td>
<td>• Limited teacher-training</td>
</tr>
<tr>
<td>• Teachers can tailor software to meet individual needs</td>
<td>• School culture that does not support technology adoption</td>
</tr>
<tr>
<td>• Scaffolding of learning helps learners to become independent writers</td>
<td>• Lack of funding</td>
</tr>
<tr>
<td>• Improves their skills in spelling, grammar and punctuation</td>
<td>• Identification and consideration of how technology can support learners</td>
</tr>
<tr>
<td>• Boosts their self-confidence</td>
<td>• Limited knowledge of teachers/school of what technological tools can be used to support all learners</td>
</tr>
<tr>
<td>• Allows for home use</td>
<td>• Limited research on the effectiveness of technological tools to support learning</td>
</tr>
<tr>
<td>• Promotes inclusion</td>
<td></td>
</tr>
<tr>
<td>• Least-expensive in comparison to similar word prediction software</td>
<td></td>
</tr>
<tr>
<td>• Promotes digital learning</td>
<td></td>
</tr>
</tbody>
</table>

Source: Prupas, 2010: Smith & Okolo, 20

**NGĀ HURIHANGA: ADAPTATIONS AND IMPLICATIONS FOR PRACTICE**

Writing is a complex skill and therefore many learners may experience difficulty with many aspects of writing. This includes problems with the mechanics (spelling, punctuation, etc.) and written content expression. However, word prediction software like WordQ can enable learners to bypass their deficits and support them through all stages of the writing process (Evmenova et al., 2010; Zhang, 2010). Smith and Okolo (2010) suggest that one way to understand the effectiveness of technology use is to examine what we know about effective evidence-based instructional practices, that is, the strategic and procedural support for writing, and link the critical features of this evidence practice with technology-based solutions, for example, WordQ.

WordQ can be adapted to meet the learning needs of all writers including English as second language (ESL) learners, learners with specific learning difficulties, and learners who experience difficulties with writing. The programme is especially powerful when used in tandem with Inspiration and Kidspiration (Grant & Shein, 2006). These two programmes working together can support writers throughout the entire writing process; not just at the drafting stage but from brainstorming to research to organisation and final copy.

The joint use of the two programmes enables teachers to create flexible digital writing frameworks in which the structure and organisation of writing is both supported and enhanced (Grant & Shein, 2006). Using WordQ in the writing process ensures that writers are not limited by spelling, memory, lack of ideas for writing or language production issues. WordQ provides immediate auditory feedback, in-context word prediction and a read-back feature that complements the graphic organiser programmes like Inspiration and Kidspiration. Used jointly, these two programmes provide a seamless, flexible supportive learning environment to meet the needs of a range of struggling writers.

Figure 3 is a mind-map graphic of how WordQ can be adapted to work in tandem with graphic organiser software like Inspiration and Kidspiration to support the writing process - from brainstorming, research and reading, organising information, writing frameworks, and editing and proofreading.
Figure 3: How WordQ can be Used with Graphic Organisers (adapted from Grant & Shein, 2006).
CONCLUSION

Overall, the research evidence suggests that when used as support for evidenced-based interventions i.e. strategic and procedural support for writing, word prediction software can be very effective with all learners but particularly beneficial for learners with learning difficulties (i.e. dyslexia) and ESL learners (Smith & Okolo, 2010). WordQ can be used specifically for ESL learners: ESL learners can be considered as learners who have spelling difficulties. They are likely to feel frustrated in writing due to the failure to find proper words or the failure to spell the words correctly. WordQ, therefore, can work well in supporting ESL learners in the writing process. The programme learns new words automatically, and can also filter the misspelt ones, further supporting ESL learners. In addition, the word prediction list can be bilingual; it can therefore also be used to help learners with spelling in Māori or any language.

For learners with dyslexia, writing and proofreading can be very challenging. Identifying mistakes can be extremely difficult. WordQ’s word prediction, text-to-speech, and voice recognition features allow for dyslexic writers to hear misspelled words. They are able to hear what they have written in order to check for spelling, grammar, and punctuation (Marshall & Raskind, 2010).

IMPLICATIONS FOR RTLB PRACTICE

As a Resource Teacher of Learning and Behaviour, I would strongly recommend WordQ to be implemented school-wide in schools. However, schools need to adopt a step-by-step implementation process (as outlined in Figure 1 and Figure 2). Patience is called upon when adopting new technologies like WordQ. It takes time adjusting to new ways of doing things. For teachers and learners’ alike, accepting new technologies can be difficult. Following a structured implementation process will lead to the successful adoption of the new technology. (Prupas, 2010) cautions that WordQ does not work for everyone and the success of WordQ depends on the nature of the learners’ disability, but also on their personality, maturity and comfort level with technology.

As demonstrated in Figure 3, the software does not replace the writing process. Learners need to be taught how to use the programme in tandem with graphic organisers to plan out their ideas, write a rough draft, and then revise and edit their work.

In summary, assistive technology (AT) is recognised in the literature as a means of addressing problems learners might have with writing. The AT tools (for writing) consists primarily of software and these include graphic organisers, word prediction and speech recognition software. When used together (as demonstrated in Figure 3) it can support writers who are struggling.

REFERENCES


**AUTHOR PROFILES**

**Michael Jacobs**

Michael Jacobs is an education professional with over 25 years of teaching and leadership experience in South Africa, New Zealand and in the UAE. Michael holds a Master Degree of Education (MEd), Postgraduate Certificate in Special Education and has recently completed the Postgraduate Diploma in Specialist Teaching (Learning and Behaviour). He is currently working with Papatoetoe/Otara Resource Teachers of Learning and Behaviour.

**Email:**
michaeljacobs@xtra.co.nz
EXCELLENCE AND EQUITY IN LITERACY EDUCATION: THE CASE OF NEW ZEALAND

WILLIAM E CHAPMAN AND JAMES W TUNMER

Reviewed by: Catherine McCulloch

Don’t be put off by the rather austere cover of Excellence and Equity in Literacy Education: The case of New Zealand. The latest volume of the Equity and Excellence series is anything but dull. It is a fascinating, revealing and at times unsettling read which boldly challenges many of the current assumptions held about the success of New Zealand’s national literacy strategy and its reputation as having a world class early years’ curriculum.

The two editors (Chapman and Tunmer) and four additional contributing authors (Arrow, Greaney, McLachlan and Prochnow) set out to investigate why, after 20 years of a national literacy strategy and enormous investment in its internationally acclaimed reading intervention programme ‘Reading Recovery’, New Zealand still has one of the largest differences of any country in the world between its highest and lowest performing readers, and why approximately 20 percent of its students (predominantly Maori and Pasifika and/or from low socio-economic communities) are still not achieving basic literacy skills by the age of 10 (PIRLS 2011).

The book is organised into three main parts. The first part (Chapters 2 to 4) presents findings to show that New Zealand’s national literacy strategy and use of Reading Recovery has failed. The second part (Chapters 5 to 7) identifies the factors which the authors’ believe are responsible for the continued inequality (wide gap) in literacy achievement. The third part (Chapters 8 and 9) reviews research which shows that ‘differentiated instruction from the outset of formal schooling’ is the most ‘effective strategy for reducing the literacy achievement gap’ (p.13).

A fundamental principle of Ministry of Education practice is to use interventions that are ‘evidence-based’. Yet a central criticism made by the authors of this book is that the government has ignored its own advice by adopting a ‘strong anti-science attitude’ towards any reading research. They believe that the government has largely disregarded evidence that shows a causal link between phonological awareness and reading success, preferring instead to follow the dominant view of reading as a social constructivist model. In this model the ability to read is seen more as something children develop themselves through being in a ‘print rich’ environment and has little to do with direct instruction in letter-sound relationships. Although New Zealand teachers will claim that they use a variety of eclectic approaches when teaching reading in the classroom, the predominant approach and underlying assumptions about reading acquisition are strongly constructivist and whole language’ (p.173). The authors believe that it is the government’s refusal to hold a national inquiry into its literacy policy which has allowed it to continue so long with ineffective policy and practices.

In Chapter 3, as part of their investigation into the literacy strategy, the authors ask ‘Is Reading Recovery an effective early literacy intervention programme for children who most need support?’ Their detailed critique of available research evidence, including data from the most recent Progress in International Reading Literacy Study (PIRLS 2011) concludes that Reading Recovery has not been effective in raising the achievement of the lowest performing 20% of readers. After three decades of funding Reading Recovery “there is little empirical evidence to indicate that successful completion in Reading Recovery results in sustained literacy achievement gains” (p.55). Often they found that children, who most needed early literacy support, were not placed in the programme.

In Chapter 7 the authors discuss the impact of ‘literate cultural capital’ on reading achievement. Literate cultural capital is described as ‘literacy related knowledge and abilities at school entry that are the ‘outgrowth’ of activities in the home environment that support early literacy development’ (p.146). Children who start school with ‘limited literate cultural
capital’ make up the majority of the lowest achieving readers appearing in the national and international reading surveys. Having less phonological awareness (sensitivity to sub components of words) means that children with limited literate cultural capital will benefit more from explicit teaching of word level decoding skills than those children who enter school with greater literate cultural capital. The authors conclude that Reading Recovery’s reliance on the search light model of cues “fails to respond adequately to differences in literate cultural capital at school entry” (p.146).

After so much ‘doom and gloom’ the third part of the book feels welcome and necessary. This is where the authors move to suggesting some ‘strategies for reducing the literacy achievement gap’.

These include:

- Introducing an earlier assessment of children’s literacy knowledge at the start of school. This would allow for ‘differentiated instruction from the outset’ rather than the current ‘wait to fail’ assessment at age six.
- Starting a systematic programme of phonics earlier. More explicit instruction in letter/sound mapping in the early years’ phase is seen as crucial in not disadvantaging children who come into early years’ education with limited literate cultural capital.
- Developing teachers’ subject knowledge around the areas of phonological awareness and phonic knowledge. This should include all teachers including those working in early years settings.

The final chapter sets out to debunk ‘Eleven myths about literacy education’. If you are short on time read this chapter as it provides an excellent overview of what has gone before and makes a good starting point for discussion around the topics introduced in the book.

This is a scholarly book with a simple message. If the 20 percent of children who are currently identified as underachieving in reading are to develop as successful readers, the government needs to change its current literacy policy. Educators and policy makers need to adopt a more scientific approach to research, take notice of results from international studies and move away from some of the entrenched ideologies they have held in relation to reading and early years’ education.

I hope that many people will read this book and that all children in New Zealand will get the successful start to literacy they deserve.

REVIEWER PROFILE

Catherine McCulloch works as a senior tutor in the College of Education, Health and Human Development at the University of Canterbury. She contributes to the Learning and Behaviour endorsement of the joint Massey/Canterbury Specialist Teaching Programme. Previously, Catherine taught and worked in the UK where she had 15 years’ experience as a senior lecturer at the University of Chester as well as experience as a primary school teacher and curriculum leader for literacy. Catherine also has extensive experience running in-service programmes for teachers and teacher-aides.

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• An abstract of not more than 150 words should be submitted with each article.

• Articles sent in hard copy should be on numbered, separate and single sided sheets, with double line spacing. Articles can also be emailed to kairaranga@massey.ac.nz. Figures or graphs, illustrations and diagrams should be sent separately as tiffs, eps or jpeg files, as well as embedded in the text of a word processing document. A disk or email version should be saved in Microsoft Word with the filename extension .doc.

• Authenticity of articles will be the responsibility of the submitting author.

• Minor abridgement of articles will be at the discretion of the editing team. If time allows, authors will be contacted before the publication of edited articles.

• Kairaranga will retain copyright of all articles published.

• Articles submitted to Kairaranga should not have been published with exactly the same format or content elsewhere.

• Authors are asked to submit a 50 word personal profile of themselves, their organisation, and/or other affiliations for reader interest.

PEER REVIEW PROCESSES AND GUIDELINES

• Kairaranga is a journal evolving through work submitted across the education sector. Peer review involves constructive feedback on your written contribution. The suggestions made will help you in editing your final piece of work.

• The peer review process for Kairaranga is “blind”. This means that neither the name of the author nor the name of the reviewer will be known to each other.

• Written contributions will be matched to peer reviewers who have topic, professional or cultural strengths in the area of the written work submitted.

• The peer review process is as follows:
  – Papers are submitted to the Editorial Board.
  – A decision is made by the Editorial Board to forward the article through to peer review, with a view to future publication.
  – Papers are returned to the Editorial Board.
  – Feedback is given to the author.
  – This feedback may include an offer of peer support by the Editorial Board for amendments made to the article submitted.
  – The Editorial Board retains the right to decline papers for publication. This will be reflected in the feedback you receive from the peer reviewer.

• Writers will receive feedback which may be:
  a) Accept as is.
  b) Minor editorial revision by the author.
  c) Revision of content by the author and modifications based on this review.
  d) Not accepted for publication.

• When papers are declined reasons will be given and resubmission may be possible.

GUIDELINES FOR REVIEWS OF TEXTS, RESOURCES AND PROGRAMMES

• Reviewers are asked to submit a 50 word profile of themselves, providing their professional details and affiliations at the end of the review. This information may also be submitted as part of the review.

• Reviewers will take responsibility for the appropriate and correct use of details pertaining to people, places, companies, publishers, etc.

• Reviews will become the property of Kairaranga.

• Reviews will reach the Kairaranga address by the date published on the letter of invitation.

• Abridgement of the review will be at the discretion of the Editorial Board.

• We are looking to explore many varied and potentially contradictory views on issues relating to educational practice which may be included within the texts, resources or programmes. This could result in views being expressed that do not necessarily reflect the opinions of the Editorial Board.
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