

Literacy research that matters

A review of the school sector and ECE literacy projects

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1. Introduction

This is the second publication in the Teaching, Learning, and Research Initiative (TLRI) Project Plus series. Project Plus aims to inform questions of policy and practice by synthesising findings of educational interest from projects funded by the TLRI. The first publication in the series (Hipkins, 2014) focused on statistics education. This Project Plus focuses on literacy in the early childhood education (ECE) and school sectors.

The TLRI

The TLRI provides government-funded support for research that builds knowledge about teaching and learning in Aotearoa New Zealand. Partnerships between researchers and practitioners are central to the TLRI. The fund is open to proposals from all education and training agencies, including the early childhood, school, and post-school sectors. The TLRI was established by the government in 2003.

The desired outcome of the initiative is to support research which will lead to significant improvement in outcomes for learners. It aims to:

- build a cumulative body of knowledge linking teaching and learning
- enhance the links between educational research and teaching practices—and researchers and teachers—across early childhood, school, and tertiary sectors
- grow research capability and capacity in the areas of teaching and learning.

The TLRI's research projects and related activities are guided by five principles. These are that the TLRI projects will:

- address themes of strategic importance to education in New Zealand
- build upon New Zealand-based research evidence, draw on related international research, and may be forward looking
- be designed to enable substantive and robust findings
- be undertaken as a partnership between researchers and practitioners
- recognise the central role of teachers and students in learning, and the importance of the work being useful in practice.

This publication focuses particularly on the extent to which the literacy-related projects build a cumulative body of knowledge linking teaching and learning, address themes of strategic importance to education in New Zealand, build upon New Zealand-based research evidence, draw on related international research, and are forward looking.

About this TLRI Project Plus

Literacy is the area in which the TLRI has funded the greatest number of projects. There have been 18 projects with literacy as a focus, and many other TLRI projects address questions pertinent to literacy teaching and learning.

In this publication, looking across the 18 literacy-related project reports published between 2003 and 2014, I consider what we as a community of researchers and teachers see as important in literacy teaching and learning, what we see as the big problems to be tackled, where we anticipate finding solutions to these problems, the approaches

we consider useful for exploring them, and the new knowledge we have built. This is an opportunity to celebrate what we have done well as a community of researchers and teachers working in the field of literacy. It is also an opportunity to identify areas we may have overlooked or underserved, and to consider what we could focus on next.



2. Context of the literacy-related projects

In this section I briefly describe three contextual factors which are likely to have influenced the nature of the TLRI projects between 2003 and 2014: the New Zealand curriculum statements, findings from national and international literacy assessments, and policy initiatives.

The New Zealand curriculum statements

Nearly all of the literacy-related TLRI projects involve the school sector and the curriculum statements provide the context for literacy teaching and learning in New Zealand schools. They are one factor which may influence the way we think about literacy and the research projects we design. I look first at how literacy is mentioned in the vision statements of these documents, and then what our curriculum statements say about literacy in different social, cultural, and disciplinary contexts and in different forms or modalities.

There are two curriculum statements that together make up New Zealand's national curriculum. These are *The New Zealand Curriculum* (Ministry of Education, 2007a) and *Te Marautanga o Aotearoa* (Ministry of Education, 2007b). Each of these statements provides information about the purpose and nature of literacy learning and teaching.

The vision in *The New Zealand Curriculum* (Ministry of Education, 2007a), is for young people "who will be confident, connected, actively involved, lifelong learners". This is a vision for young people becoming "literate ... active seekers, users, and creators of knowledge", "effective users of communication tools", "informed decision makers", "participants in a range of life contexts", and "contributors to the well-being of New Zealand – social, cultural, economic, and environmental" (p. 8).

The vision, as expressed in *Te Marautanga o Aotearoa* (Ministry of Education, 2007b), is for young people

who will grow as competent and confident learners, effective communicators in the Māori world, healthy in mind, body, and soul and secure in their identity and sense of belonging. (p. 3)

This includes being "able to reach their full potential and to participate effectively and positively in the Māori community and the global world" (Ministry of Education, 2007b, p. 3).

The New Zealand Curriculum describes the importance of students being able to use language "in a range of contexts" and being able to recognise how choices of language "affect people's understanding and the ways in which they respond to communications" (Ministry of Education, 2007a, p. 12). Some of these different contexts are associated with different cultures or social groups.

Te Marautanga o Aotearoa reminds us that "language is the essence of culture" (Ministry of Education, 2007b, p. 10) and *The New Zealand Curriculum* (Ministry of Education, 2007a, p. 12) describes language, symbols, and texts as "cultural tools". It is through these tools that we construct our identities.

The vision in The New Zealand Curriculum (Ministry of Education, 2007a), is for young people "who will be confident, connected, actively involved, lifelong learners". This is a vision for young people becoming "literate ... active seekers, users, and creators of knowledge", "effective users of communication tools," "informed decision makers", "participants in a range of life contexts", and "contributors to the well-being of New Zealand – social, cultural, economic, and environmental" (p. 8).

Opportunities to develop the competencies [such as *using language, symbols, and texts*] occur in social contexts. People adopt and adapt practices that they see used and valued by those closest to them, and they make these practices part of their own identity and expertise. (Ministry of Education, 2007a, p. 12)

Through the learner knowing Māori language, they can access the Māori world and understand their role in it. (Ministry of Education, 2007b, p. 10)

Different forms of language are also associated with different disciplines, such as science, art, or mathematics. According to the New Zealand curriculum documents, being able to understand and use the literacies of different disciplines is important. Aspirations for high educational levels through Māori language include learners who acquire “the academic language of each learning area to understand the depth of a subject” (Ministry of Education, 2007b, p. 10). The key competency *using language, symbols, and texts* is about “working with and making meaning of the codes in which knowledge is expressed” (Ministry of Education, 2007a, p. 12). The section in *The New Zealand Curriculum* (Ministry of Education, 2007a, p. 12) on learning areas reminds us that

Each learning area has its own language or languages. As students discover how to use them, they find they are able to think in different ways, access new areas of knowledge, and see their world from new perspectives. (Ministry of Education, 2007a, p. 16)

The disciplinary-specific nature of literacy is also captured in descriptions of particular learning areas.

Our curriculum documents also represent literacy as multimodal and embodied. The description of the key competency *using language, symbols, and texts* tells us we can expect students to interpret and use language in *all* its forms “including words (spoken and written), images, and movement” (Ministry of Education, 2007a, p. 12, emphasis added). And *Te Marautanga o Aotearoa* describes the

critical link between oral language, body language and written language, to enable thought, the human spirit and emotions to be captured and expressed appropriately through Māori language. (Ministry of Education, 2007b, p. 19)

The representation of literacy in *The New Zealand Curriculum* (Ministry of Education (2007a) and *Te Marautanga o Aotearoa* (Ministry of Education, 2007b) is consistent with *Te Whāriki* (Ministry of Education, 1996), and in particular the communication strand of this document. The goals of this strand are that children develop non-verbal and verbal communication skills for a range of purposes, experience the texts of their own and other cultures, and develop different ways to be creative and expressive. The communication strand is “grounded particularly in the principle of Empowerment” but also helps to build relationships, involvement with the wider cultural and social world, and a concept of self (p.72).

Findings from national and international assessments

Another potential influence on what is considered important in literacy teaching and learning is findings from international assessments (such as PIRLS and PISA) and national assessments (such as the National Monitoring Study of Student Achievement). Findings from these assessments have contributed to concerns about the standards of literacy in New Zealand, about a perceived drop in reading and writing standards over time, and about inequities in reading and writing achievement for particular groups of students (Openshaw & Walshaw, 2010; Wylie, 2012).



International and national assessment results consistently show that Māori and Pasifika students, and those from low decile schools, are over-represented at the lower end of the score distribution in reading and in writing (for example Chamberlain, 2012; Crooks, Smith, & Flockton, 2009; Educational Assessment Research Unit and New Zealand Council for Educational Research, 2013; Telford, 2012). International assessment results show that the range of the distribution and the gap between high and low scores in reading in New Zealand continues to be one of the greatest of all participating countries (for example Chamberlain, 2012; Telford, 2012).

Concern about overall levels of, and inequities in, reading and writing achievement in New Zealand has led to a range of policies and initiatives aimed at addressing reading and writing standards at a national level. These policies and initiatives are also likely to have influenced the nature of the TLRI projects proposed and funded since 2003, as TLRI projects are required to address themes of strategic importance.

Policy priorities and initiatives

Many of the policies and initiatives of the past decade or so stem from the recommendations in the *Report of the Literacy Taskforce* (Ministry of Education, 1999), and in the subsequent literacy strategy introduced to schools in 2000. The aims of the literacy strategy were to increase the literacy achievement for all students by increasing teacher skills, knowledge, and capacity to respond to student diversity. The recommendations made in the *Report of the Literacy Taskforce*, along with the literacy strategy, led to professional learning and development initiatives, resources, and assessment tools designed to improve the skills of teachers.

Beginning in 2001, a series of professional learning and development initiatives aimed at lifting primary school student achievement in reading and writing were piloted and rolled out. These included the literacy leadership initiative (beginning in 2000), the literacy enhancement initiative (beginning 2001), and the literacy professional development project (beginning in 2004).

These initiatives had in common a focus on developing professional learning communities among school staff. The aim was to build teachers' data literacy, content knowledge, and pedagogical content knowledge, and to share and use student achievement data to evaluate the effectiveness of teaching strategies.

While mainly targeted at primary schools, there were also professional learning and development initiatives for secondary schools focused on reading and writing in the learning areas. These initiatives included the secondary literacy project (beginning in 2003) which aimed to raise student achievement in Years 9 and 10, particularly focusing on underachieving Māori and Pasifika students.

In response to recommendations from the literacy taskforce, the Ministry of Education also funded a series of resources to support literacy teaching and learning in New Zealand schools. These included the texts *Effective Literacy Practice in Years 1 to 4* (Ministry of Education, 2003), *Effective Literacy Practice in Years 5 to 8* (Ministry of Education, 2006), and *Effective Literacy Strategies in Years 9 to 13* (Ministry of Education, 2004). The Ministry also funded the development of new assessment tools for reading and writing, such as the Assessment Tools for Teaching and Learning (asTTle) and the *Literacy Learning Progressions* (Ministry of Education, 2010).

There were also new planning and reporting requirements, beginning in 2003, for primary schools. Although schools were initially free to choose any areas of performance to target, research into the early years of the planning and reporting framework found that most schools chose goals related to reading and writing achievement. This was because assessment tools were readily available in these areas making it easy for schools to provide the Ministry of Education with the type of data it required.¹

Then in 2008 the Education (National Standards) Amendment Act 2008 was passed, making the focus on literacy (and numeracy) mandatory. The *Reading and Writing Standards for Years 1–8* (Ministry of Education, 2009) was published and from 2010 schools were required to report to parents about student achievement and progress against the standards at least twice a year and set targets for student achievement for the following year. By 2012 the annual reports that schools sent to the Ministry were to demonstrate progress in relation to student achievement targets.

Summary

According to the New Zealand curriculum documents, the purpose for teaching and learning literacy in New Zealand schools is to help our young people to lead fulfilling lives and to participate in, and contribute to, the local and global communities that are important to them. The New Zealand curriculum documents describe literacy in broad terms, encompassing different forms of language (according to different social and cultural contexts), and multiple modes (such as, visual, spatial, audio, gestural, and print).

Despite these aspirations, findings from national and international assessments show persistent inequities in student achievement. This has led to a strong policy focus on reducing these inequities through a wide range of initiatives, including the development of new forms of literacy professional learning and development, assessment tools, and other resources to support teachers.

The influence of our current curriculum statements, with their broad representation of what literacy is and what it is for, combined with a policy focus on addressing inequities in reading and writing achievement over the past decade or so can be seen in the nature of the literacy-related TLRI projects published between 2003 and 2014. As we shall see in the next section, many of the TLRI projects funded between 2003 and 2014 were about reading and writing with a broad focus on addressing inequities in achievement.

¹ Hipkins et al. (2007) found that nearly half (49 percent) of the primary principals who responded to their survey indicated that one of the considerations when deciding on planning and reporting goals was the assessment tools available. Just under one-quarter indicated that ease of measurement and ease of showing progress were considerations.



3. Reading and writing achievement

Projects in focus

Enhanced teaching and learning of comprehension in Years 4–9: A research–practice collaboration for Mangere schools. Principal investigator: Stuart McNaughton (funding 2004–5).

Enhanced teaching and learning of comprehension in Years 5–8: Otara schools. Principal investigator: Stuart McNaughton (funding 2005–6).

Measuring classroom literacy practice. Principal investigator: Judy Parr (funding: 2005–7).

“Write-on!”: Investigations into relationships between teacher learning and student achievement through writing. Principal investigator: Ruth Boyask (funding: 2006).

Enhancing capacity to analyse students’ writing. Principal investigator: Libby Limbrick (funding: 2006–7).

Developing teacher–researcher partnerships to investigate best practices: Literacy learning and teaching in the content areas of the secondary school. Principal investigator: Trevor MacDonald (funding: 2006–7).

Sustainability of effective teaching and school practices: Developing a model for sustaining and extending literacy achievement. Principal investigator: Mei Kuin Lai (funding: 2008–9).

School achievement: Why summer matters. Principal investigator: Stuart McNaughton (funding: 2010–11).

Just under half of the literacy-related projects are about reading and writing achievement. The projects in the primary school context focused on ways of improving strategy instruction in reading comprehension or writing. The projects in the secondary school context focused on how to best teach students to access and produce content in different learning areas. These projects shared a “content area literacy” framing. Content area literacy is based on the idea that it is possible to increase student engagement, skills, and knowledge by teaching generic reading and writing strategies that can be applied (with some adaptations) across different learning areas (Brozo & Simpson, 2007; Vacca, Vacca, & Mraz, 2010). Content area literacy often involves content area teachers working with literacy specialists to learn how to incorporate the teaching of reading and writing into their learning areas.

The projects on reading and writing achievement

Three linked studies (McNaughton, MacDonald, Amituanai-Tolosa, Lai, & Farry, 2006; McNaughton, Lai, Amituanai-Tolosa, & Farry, 2008a; and Lai, McNaughton, Timperley, & Hsiao, 2010), conducted by researchers from the University of Auckland, explored how to address disparities in reading achievement, and sustain gains in low decile schools with high proportions of Māori and Pasifika students. A fourth study (McNaughton, Jesson,

The reading and writing projects tended to include some form of inquiry. These inquiries generally involved teachers and researchers working together as professional learning communities to identify areas of need from their shared analysis of student achievement data and from classroom observations. Teachers and researchers then worked out how to address the needs identified through new approaches to teaching and learning, which, in turn, were tested through the collection of data.

Kolose, & Kercher, 2012), set in a group of decile 1 schools, explored how to overcome the summer learning effect² in reading. Projects on lifting student achievement in *writing* include Limbrick (2008) in the primary context and Boyask, Quinlivan, and Goulter (2007a) in the secondary context. McDonald, Thornley, Fitzpatrick, Elia, Stevens, Teulilo, Johnston, Woock, Selbie, McDonald, Pullar, and Low (2008) explored the possibility of accelerating the performance of secondary school students' reading *and* writing in different learning areas. And Parr and Hawe (2009) constructed and trialled a tool (the Observation Guide) for teachers to examine and improve their teaching of reading and writing.

As illustrated in the following quotations, these projects focused on improving teacher content knowledge, and pedagogical content knowledge as a means of lifting student achievement.

It was theorised that a key feature in raising achievement was teacher knowledge. (Limbrick, 2008, p. 2)

The aim of the overall project was to investigate possibilities for improving student writing literacy and achievement ... through research and theoretically informed professional development. (Boyask, Quinlivan, & Goulter, 2007b, p. 1)

The focus on improving teacher practice as a means of lifting student achievement tended to be driven by findings from national and international assessments showing inequities in student achievement, and by the policy initiatives of the time.

The teachers recognised that NCEA has increased the significance of written language to the senior secondary curriculum, making attaining national qualifications dependent upon competency in writing ... Before this project, the school had already made a commitment to the national drive to improve literacy standards, with an in-house professional development initiative. (Boyask et al., 2007a, p. 1)

Research design and methodologies

The reading and writing projects vary considerably in scope. McNaughton et al. (2006) involved seven Mangere schools, up to 70 teachers, and (in different years) between 1,200 and 1,900 students and six Samoan bilingual classes involving (in different year levels) between 140 and 169 students. McNaughton et al. (2008a) then replicated this study with seven Otago schools and a similarly large number of teachers and students. Other projects were much smaller in scope—some involving just one school and a handful of classes over a one-year period.

Research design and methods across the reading and writing projects also vary. McNaughton et al. (2006 & 2008a) used a quasi-experimental design to examine the relationship between their interventions and student outcomes through the use of predicted patterns of growth as a comparison for actual growth in student achievement. Other projects were much more qualitative in nature, providing rich, but less generalisable findings.

The reading and writing projects tended to include some form of inquiry. These inquiries generally involved teachers and researchers working together as professional learning communities to identify areas of need from their shared analysis of student achievement data and from classroom observations. Teachers and researchers then worked out how to

² The summer learning effect is where students, typically from poorer communities and minority groups, make less progress than other students over summer, contributing to a widening gap in achievement that gets larger over time.

address the needs identified through new approaches to teaching and learning, which, in turn, were tested through the collection of data. The following example comes from Limbrick et al. (2008).

The iterative model starts with two questions: "What are our students' learning needs?" and, "What are our own learning needs?" As a result of interrogating these questions, teachers established goals for their own practice or teaching actions. Following implementation of these actions, a third question is asked: "What has been the impact of our changed actions?" The responses to this question lead to the cycle restarting. (p. 2)

The reading and writing projects generally involved professional learning and development for teachers based on theory from the research literature or theory-informed tools. Parr and Hawe (2009), for example developed a tool for teachers to use when observing and providing feedback on each others' literacy practice and trialled it with teachers who were concurrently receiving professional development in writing. McDonald and Thornley (2008, p. 2) used a "scope and sequence chart" of literacy skills, individualised to meet the specific circumstances and aspirations of each school and each group of teacher-researchers. Others used existing tools. Limbrick (2008), for example, used national exemplars and the aSTtle matrix. The use of theory and theory-informed tools was adapted (to varying degrees) to the school context, including the needs identified in the baseline data on teacher practice and student achievement.

Most of the reading and writing projects collected pre- and post-data on teacher attitudes, knowledge, and practice. Sources of data included teachers' planning and assessment documents, reflections, and meeting notes; transcripts of focus group discussions or interviews; observation notes of classroom teaching and learning; field notes; and questionnaires.

Student data came predominantly from standardised tests of achievement. A few studies collected data from additional forms of assessment. For example, McDonald et al. (2008) used a content area literacy tool designed to assess students' use of specific reading and writing skills in different learning areas. Some of the reading and writing projects also collected data related to student attitudes and engagement from student interviews, focus groups, or surveys.

Findings related to teacher and researcher learning

The findings from the reading and writing projects show it is possible for teachers to alter their practice in ways that accelerate the reading comprehension and writing achievement of students, including those traditionally underserved by the education system. The McNaughton et al. (2006, 2008a) studies on reading comprehension found approximately one year's PAT: Reading and STAR score gains in addition to nationally expected progress, and that Māori students made similar rates of progress as their peers. Interestingly, gains in decoding also increased to about the same degree as gains in other areas, despite not being a direct target of the intervention. McDonald et al. (2008) found that most groups in their study made between 4 and 57 points in reading and writing in advance of those described in the aSTtle manual as representing annual growth. Limbrick (2008) found that students gained one sublevel, on average, during the test period (just under a year), and in some classes, gained up to three aSTtle sublevels. Parr and Hawe (2009) found gains in student writing, as measured by aSTtle, to be well beyond normal expectations of growth (an average effect size gain over one year of 0.7 relative to where

the students started). Like McNaughton et al. (2006, 2008a), Parr and Hawe (2009) found that Māori students made similar gains to their peers.

For some projects these changes were sustainable over time. For example, Lai et al. (2010) found that during the year following the interventions, the schools in their study were able to accelerate achievement at the same rate as during the interventions and that all ethnic groups gained at similar rates.

The changes teachers made were consistent with the focus of the research and related primarily to their content and pedagogical content knowledge, and the use of student data to inform teaching. Parr and Hawe (2009), for example, found that through professional development in teaching writing and use of the Observation Guide, teachers grew in their knowledge of effective writing practice and the application of effective writing practice. Parr and Hawe (2009) found that most of the teachers who used the Guide adopted the principles of learning conversations and those who were observed assimilated feedback and made changes to their practice. Limbrick et al. (2008) found:

a continued shift towards teachers ... assessing students more consistently and meticulously, and consequently integrating this knowledge about their students into their daily planning and teaching. (p. 3)

The reading and writing projects show it was possible for teachers to make changes to practice when they had a combination of learning opportunities. These included opportunities to reflect on evidence of classroom practice and student achievement, observe each others' practice and engage in research informed and evidence-based conversations following these observations, participate in researcher-supported professional learning communities that involved evidence-based problem solving, and engage in professional development with a focus on content and pedagogical content knowledge. The reading and writing projects also highlight the importance of a school climate which reinforces collective responsibility for teacher learning and student achievement.

Findings related to pedagogy

Explicit instruction, modelling, and scaffolding

The findings of the projects on lifting achievement in reading and writing highlight the importance of explicit instruction of reading and writing strategies. McNaughton et al. (2006, 2008a) found that one of the attributes of effective instruction in comprehension was explicit teaching of strategies, especially in relation to checking and detecting threats to gaining meaning in texts. Another was the deliberate teaching of vocabulary, and in particular, identifying and elaborating meanings of low-frequency words, and unusual or idiomatic uses of words. McNaughton et al. (2006, 2008a) found that high gain teachers more often directed students' awareness to the requirements of activities, clarified expectations, and introduced more complex and less familiar language.

Similarly, McDonald et al. (2008) found that it was possible to improve secondary school students' achievement by identifying and using generic literacy strategies consistently across learning areas, by clearly articulating the purpose and expected outcomes of teaching, by breaking tasks into their component parts, and by scaffolding the use of text. Limbrick (2008) found that students benefitted from more targeted conversations with their teachers in which the metalanguage related to writing was used. Students also



benefitted from more specific feedback. McNaughton et al. (2012) found that teachers in classes with a low summer learning effect more often reported providing students with guidance relating specifically to the summer break about reading strategies, metacognition, engagement, and text selection and use.

Interestingly one of the conclusions drawn in most of the projects was that while instruction in *general* reading and writing strategies that can be used across different learning areas is important, it is not sufficient. Teachers also need to provide students with opportunities to learn the literacies specific to different learning areas. For example, Boyask et al. (2007a) concluded that

While the university researchers recognised that the expert group was attempting to raise awareness of generic literacy strategies to build the capacity of teachers for addressing literacy at the school, they were also aware of limitations of ... generic literacy approaches for enabling ... literacy in specific subject areas. (p. 61)

McNaughton et al. (2006) hypothesised that further gains in student comprehension of literary texts may depend on

the teacher's expertise as a teacher of English, rather than as a teacher of reading comprehension ... [and their] capabilities to extend the amount and range of advanced levels of text reading for students, where guidance is increasingly focused on literature and language study as primary purposes. (p. 123)

Parr and Hawe (2009) concluded that to use their observation guide most fruitfully teachers needed support with developing an explicit knowledge of language and how texts work in different learning areas, along with the capacity to contribute to learning conversations around elements of practice. Lai et al. (2010) found that schools can enhance their effectiveness by developing greater knowledge of the domain or content being studied such as the knowledge of how texts in that domain work.

The projects with a focus on reading and writing achievement also show that strategy instruction needs to be contextualised to students and their school communities.

Situating learning in the contexts of students' lives

Many of the reading and writing projects found that effective instruction was contextualised to the needs of individual students, and involved helping students negotiate the relationships between their in- and out-of-school worlds. The projects demonstrate the importance of keeping teaching and learning channels "wide" by taking a broad and flexible approach to instruction.³ Boyask et al. (2006b) found that

[S]uccess appeared more likely when students' interpersonal relationships with peers, teachers, family members, and others were founded on shared curriculum interests and values regarding the function of schooling. (p. 3)

McNaughton et al. (2006, 2008a) found that high gain teachers were able to incorporate students' cultural and linguistic resources, as well as clarifying areas of confusion.

Effective instruction was also shown to be responsive to wider contextual factors, beyond those associated with individual students, or even classrooms:

³ Phillips, McNaughton, and MacDonald (2002) and McNaughton, Phillips, and MacDonald (2000) link high achievement of Māori and Pacific students to the principle of flexible instruction, where the teacher is able to use diagnostic information to be responsive to the literacy learning of the student.

The focus of the reading and writing projects tended to be more on shifts in teacher knowledge and practice as a means of lifting student achievement than on student learning itself.

[E]ffective instruction needs to be designed to fit the context-specific needs, as determined by past histories of schooling and contemporary profiles. (McNaughton et al., 2008b, p. 3)

What the case studies reveal is the extent to which learning and literacy was shaped by the dynamics of the school and its community beyond the scope of individual teachers and classrooms. (Boyask et al., 2007b, p. 3)

Immersion in meaningful activities

Findings from the reading and writing projects highlight the importance, not just of explicit instruction for students, but also immersion in meaningful reading and writing practices. The findings from these projects demonstrate the value of fostering student enjoyment of language and text use. McNaughton et al. (2006, 2008a) found that high gain teachers introduced more complex and less familiar language, created a classroom community that enjoyed the use and study of language, and exposed students to rich and varied texts. McNaughton et al. (2012) found that enjoyment was the main motivation for students reading over summer, and that knowing about and supporting students' reading interests helped reduce the summer learning effect. McDonald et al. (2008) also had a focus on engaging students in their learning and found that frequent access to curriculum and year-level-appropriate text across the curriculum to be important.

Findings related to student learning

The focus of the reading and writing projects tended to be more on shifts in *teacher* knowledge and practice as a means of lifting student achievement than on student learning itself. All projects collected student achievement data. However, the main purpose of collecting this data was for measuring the effectiveness of changes in teacher practice rather than gaining insights into the way in which students learn, although student learning was, in some of the projects, also an area of interest. Limbrick (2008), for example, found that students use of metalanguage associated with writing increased and McDonald and Thornley (2008) found that

students became more aware of their literacy needs and were able to speak with some authority about the literacy skills their teachers had instructed them in. They also spoke about increased literacy learning and instruction and raised teacher expectations about the independent reading and note-making work they undertook. (pp. 2–3)

The extent to which the projects were able to make links between changed teacher practice and shifts in student achievement varied. Only a few of the projects used methods that *directly* linked teaching with student achievement. Examples include the McNaughton et al. (2006, 2008a) projects which involved mapping data about student strengths and weaknesses in reading comprehension on to patterns of instruction in the classroom, and investigating these patterns further through case studies of "high shift" teachers.

Knowledge building

Collectively these projects make the case that it is possible for teachers to change their practice in ways that are associated with positive shifts in student achievement as measured by standardised tests of reading and writing. Teachers are able to make these shifts through participating in targeted professional learning and development and researcher-supported learning communities engaged in evidence-based problem solving. This finding is consistent with a large body of research in the international literature, as is



the finding that such changes can be sustained over time, at least for the year following the intervention. These findings have been shown in both large, replicable, quasi-experimental design-based projects and through smaller, in-depth, but less generalisable projects. These are important findings given New Zealand's long history of inequities in student achievement.

Of particular importance is the finding that explicit strategy instruction must be contextualised to the needs of specific students, classes, schools, and communities, and the description of what this might involve when working in the context of New Zealand's increasingly diverse population.

There is evidence of knowledge building within related groups of projects (such as those on reading comprehension carried out by researchers from the University of Auckland). There is also evidence of findings from certain reading and writing projects being used as stepping off points for subsequent projects by different teams. One example is Gwilliam and Limbrick's (in progress) project addressing the summer learning effect through collaboration between one school and the local library, and which steps off from the findings of McNaughton et al. (2012). Another is Jesson and Wilson (in progress) on how notebook computers can be used in out-of-school time to support the reading and writing achievement of Year 5 to Year 13 students.

Some of the reading and writing projects have built knowledge about the use of particular methods, such as the quasi-experimental design developed for the projects on reading comprehension. This design avoids the need to use an external control group in which some students miss out on the interventions being carried out, thus avoiding the logistic and ethical difficulties the use of an external control group entails.

Implications for policy

Findings from the reading and writing projects have implications for policy in terms of supporting sustainable teacher–researcher partnerships. McNaughton et al. (2008b) observe that

We need to consider how to foster such partnerships, both in terms of the kinds of partnerships being developed, and the infrastructure to support the development and sustainability of such partnerships. (p. 3)

And McDonald and Thornley (2008) argue that

The extent to which this focus can be maintained outside of an initiative such as the TLRI is an ongoing question. (p. 3)

The reading and writing projects have, to a lesser extent, provided work that opens up *new* research and policy directions, although the findings from these projects have provided a sound rationale for further research on curriculum literacies—the topic I turn to next.

Of particular importance is the finding that explicit strategy instruction must be contextualised to the needs of specific students, classes, schools, and communities, and the description of what this might involve when working in the context of New Zealand's increasingly diverse population.



4. Curriculum literacies

Projects in focus

Te reo tāaitai: Developing rich mathematical language in Māori immersion classrooms. Principal investigator: Tamsin Meaney (funding: 2005–6).

Mathematics: She'll be write! Principal investigator: Tamsin Meaney (funding: 2007).

Teaching literature in the multicultural classroom. Principal investigator: Terry Locke (funding: 2007–8).

Our place: Being curious at Te Papa. Principal investigator: Jeanette Clarkin-Phillips (funding: 2007–8).

Learning to friendly argue in a community of mathematical inquiry. Principal investigator: Roberta Hunter (funding: 2009–10).

Children as teachers, families as learners. Principal investigator: Margaret Carr (funding: 2012–13).

The projects discussed in this section focus on the literacies associated with particular learning areas.⁴ These projects are concerned less with generic reading and writing skills needed to access the 'content' of learning areas, and more on the literacies specific to particular learning areas.

The differences in the literacies of the learning areas stem from the different ways in which knowledge is created and communicated in different disciplines. Moje (2008) describes disciplines as places where knowledge is produced through human interaction according to certain norms of practice. Each discipline has its own conventions for interacting, and for producing, representing, communicating, defending and challenging ideas. An important aspect of participating in a discipline is learning the norms of practice for producing and communicating knowledge in that discipline. Participating in a discipline also involves taking up the identities, values, and beliefs associated with it. It involves using the texts of that discipline, which requires background knowledge. Disciplinary literacy involves using the discourses of a discipline like an insider or expert (Shanahan and Shanahan, 2012; Draper & Siebert, 2010).

It is important to remember that, while the literacies of different curriculum areas are associated with different disciplines, what appears in curriculum documents and is enacted in classrooms is not just a less complicated version of disciplinary knowledge and practices. Rather, the written and enacted curriculum is an adapted version of disciplinary knowledge and practices designed to educate students for social and economic purposes. The term 'curriculum literacies' (Wyatt-Smith, Cumming, Ryan, & Doig, 1999) is useful because it includes a reminder of the fact that what goes on in schools involves an adapted form of work in the disciplines.

⁴ In the research literature different terms are used to describe the literacies specific to particular learning areas, including "disciplinary literacy" (Moje, 2008) and "curriculum literacies" (Wyatt-Smith, Cumming, Ryan, & Doig, 1999).

The emphasis in these projects was on providing students with opportunities to develop the literacies specific to particular learning areas.

There is plenty of research which shows that school subjects have distinctive language use and practices, and which highlights the limitations of teaching literacy only as a set of generic strategies (Gee, 2008; Moje, 2008; Shanahan & Shanahan, 2008; Street, 1984; Wyatt-Smith, Cumming, Ryan, & Doig, 1999). For example, Wyatt-Smith & Cumming (1999) found considerable variation in the literacy demands of different learning areas. The researchers concluded that it is no longer appropriate to talk about 'literacy across the curriculum'. Instead there is a need to talk about curriculum literacies to represent:

the interface between a specific curriculum and its literacies, rather than literacies related to curriculum in a generic sense, or a single literacy that can be spread homogenously across all curriculum (p.32).

A focus on curriculum literacies can be seen as a more future-focused area of work in its focus on the relationship between producing and communicating knowledge. Research in the area of curriculum literacies is a relatively new area for New Zealand research, especially in the ECE and primary school sectors.

The curriculum literacies projects

Six of the TLRI projects published between 2003 and 2014 include a curriculum literacies focus. Meaney, Fairhall, and Trinick (2007a) focused on the teaching and learning of te reo tātai—*the mathematical register*—in te reo Māori to primary and secondary school students. In a related project, Meaney, Trinick, and Fairhall (2009) focused on mathematical *writing* in te reo Māori. Locke, Cawkwell, and Sila'ila'i (2009a) focused on the literacies of English (in particular, literary criticism) in primary and secondary school classrooms. Hunter and Anthony (2011) focused on the teaching and learning of mathematical talk and activity in the primary school. In two related projects from the ECE sector Clarkin-Phillips, Carr, and Paki (2012) and Carr, Clarkin-Phillips, Thomas, Armstrong, Beer, Crowe, Fruean, Greene, Lowe, O'Brien, Perrot, Shepherd, Tinning, Twaddle, Waitai, and Wiles (2014) explored opportunities for children to learn the literacies associated with museums and galleries, as part of a project on teaching and learning at a kindergarten—*Tai Tamariki*—situated in the Museum of New Zealand Te Papa Tongarewa.

Consistent with a curriculum literacies framing, the emphasis in these projects was on providing students with opportunities to develop the literacies specific to particular learning areas.

The theoretical framework for the whole project was that writing was a sociocultural activity that responds to changes in the activity that is being written about, the relationship between the writer and their audience and the method of presentation. (Meaney et al., 2009, p. 74)

[The aim is] to optimise equitable access for all students to increasingly sophisticated forms of mathematical discourse and mathematical practices. (Hunter & Anthony, 2011, p. 2)

Some of the projects sought to track progression in curriculum literacies acquisition. Meaney et al. (2009), for example, explored what progression in mathematical writing looks like in a Māori-medium setting by collecting more than 2,000 student writing samples and categorising these by genre and mode.

Other projects responded to the challenge of providing culturally appropriate and inclusive opportunities for students to take on discipline-related literacies and identities. Meaney et al. (2009) considered questions of language, culture, and identity in relation to mathematics, observing that

With te reo Māori still in a process of regeneration after almost becoming extinct in the 1970s there was a need to consider how the teaching and learning of writing in mathematics could be done in a culturally appropriate way. (p. 9)

Meaney et al. (2009) argue that

As a discursive practice, mathematical writing will have an impact on students' identity. Whether this identity forming will be in conflict with the students' Māori identity will depend on how the discursive practices are taught. (p. 9)

They argue that questions such as "What is writing in mathematics?" and "What constitutes an appropriate mathematical written text?" need to be situated in the context of aspirations for students in kura (Meaney et al., 2009, p. 10).

In the English-medium context, Locke et al. (2009a) consider questions of language, culture, and identity in relation to literary criticism, observing that

[S]tudents with an interest in literature, for whom English is a second or additional language, have two options. They "do" it in English, or (at least at senior levels) they do not do it at all. (p. 1)

Hunter and Anthony (2011) explored

the sorts of culturally responsive pedagogy teachers can use to optimise equitable access for students to proficient forms of mathematical talk and activity. (p. 2)

The school sector projects tended to begin with a theoretical framing related to curriculum literacies that the researchers and teachers unpacked together. Teachers and researchers then used their new thinking from their engagement with theory or theoretically based frameworks to reflect on, and make changes to, their teaching practices.

Research design and methodologies

It is important there is coherence between the theoretical framing of the projects and the methodologies used. The curriculum literacies projects all used qualitative methodologies including case study research, action research, self-study, ethnography, critical discourse analysis, design-based research, kaupapa Māori research, accounts methodology, and participatory research.

The school sector projects tended to begin with a theoretical framing related to curriculum literacies that the researchers and teachers unpacked together. Teachers and researchers then used their new thinking from their engagement with theory or theoretically based frameworks to reflect on, and make changes to, their teaching practices. The researchers in the Meaney et al. (2007a, 2009) projects, for example, introduced teachers to the mathematics register acquisition (MRA) model and strategies shown to support students gaining a metacognitive awareness about their learning of the mathematical register. The researchers in Hunter and Anthony (2011) introduced teachers to a framework tool for developing students' participation and communication through the numeracy achievement levels. The researchers and teachers in Locke et al. (2009a) explored teachers' discourses, and policy discourses, of the English learning area.

The curriculum literacies projects included data on a broader range of student outcomes than the reading and writing projects, including data on student engagement, agency, attitudes to learning, participation, communication, metacognition, and metalinguistic understanding. Locke et al. (2009a), for example, describe motivation around responding to and composing literary texts as "a large focus of the project" (p. 180).

Consistent with their focus on all the literacies associated with a particular learning area, the curriculum literacies projects also collected data on student outcomes from a

The teachers and researchers found that standardised tests of reading comprehension and writing did not always measure what they had taught.

wider range of *sources* than the reading and writing projects. These sources included questionnaires, video and audio recordings, interviews, and student work samples.

The teachers and researchers found that standardised tests of reading comprehension and writing did not always measure what they had taught. Locke et al. (2009a), for example, found that

asTTle tests “construct” reading in questionable and non-context-specific ways with insufficient recognition of such notions as “genre” and “rhetorical function”. (p. 181)

And that there was a

mismatch between ways asTTle test features “construct”, for example, response to text and how teachers envisage response to text in their own programmes. (Locke et al., 2009a, p. 181)

Locke et al. (2009a) found, therefore, that teachers who used asTTle rather than tests of their own design were “compromised in their ability to test what they had actually taught” (p. 181).

Consequently most of the curriculum literacies projects used assessment tools developed for their studies in conjunction with, or instead of, standardised tests. Researchers in the Meaney et al. (2007a, 2009) projects used their MRA model, and Hunter and Anthony (2011) used their numeracy participation and communication framework tool. Some of the teachers in Locke et al. (2009a) designed their own assessments aligned with their teaching focuses.

Findings related to teacher and researcher learning

The curriculum literacies projects found it was possible for teachers to improve their teaching of curriculum literacies when they had opportunities for:

- learning the literacies of the learning area themselves (including the metalanguage of the learning area)
- professional learning and development related to teaching curriculum literacies to the diversity of students in New Zealand schools
- engaging in inquiry cycles that involved designing, discussing, trialling, monitoring, and reflecting on new ideas for teaching curriculum literacies.

Of particular importance in the school sector projects was time for teachers to engage with curriculum literacies themselves. The notion of curriculum literacies and the metalanguage associated with particular learning areas was new to many of the teachers. Locke et al. (2009b) found, for example, that, at first, the

primary teacher-researchers in this project did not readily think of themselves as teachers of literature and, for three of them, literary metalanguage was something they were unfamiliar and even uncomfortable with. (p.2)

Meaney et al. (2007b) found that

The teachers’ discussion about what aspects of the mathematical register students needed to know when they started in a year level and what would be taught was ongoing. The teachers found this discussion useful as it gave them a sense of how ideas and the accompanying language demands developed. (p. 3)



Some projects collected evidence on shifts in teachers' use of disciplinary-specific language. Meaney et al. (2007a), for example, found that the junior teachers had increased the proportion of mathematical words used in their lessons.

Findings related to pedagogy

Explicit instruction, modelling, and scaffolding

Learning curriculum literacies is challenging and findings from these projects demonstrate the importance of explicit instruction, modelling, and scaffolding. Locke et al. (2009a), for example, highlighted the importance of modelling and scaffolding response to, and meaning making around, literary texts. In particular the team found that metalinguistic understanding is not developed easily and

needs to be carefully and systematically modelled by teachers using relatively straightforward texts (in terms of vocabulary level) ... which still use sophisticated literary devices. (p. 178)

Hunter and Anthony (2011) found that learning to construct, present, and question mathematical explanations was "a lengthy process", which required teachers to "continually press students to provide conceptual mathematical explanations" (p. 3). They found that to achieve this

teachers needed to gradually build on and extend their expectations for the students to engage in justification and mathematical argumentation. (p. 3)

Meaney et al. (2007b) found that the strategies teachers chose to trial in their classrooms

tended to be those ones that supported students gaining a metacognitive awareness about their learning of the mathematics register. (p. 2)

Carr et al. (2014) found that introducing and using gallery signs and messages in the kindergarten, and constructing books of artefacts to provide conversation prompts helped their children develop the literacies associated with galleries.

Situating learning in the context of students' lives

Like some of the reading and writing projects, the curriculum literacies projects demonstrate the importance of keeping teaching and learning channels wide by taking a broad and flexible approach to instruction. Locke et al. (2009b) found that the study of traditional texts such as Shakespeare is facilitated by "a multistrategy approach" and that the enjoyment of literary reading can be facilitated by the availability of class libraries "into which students have had input and which offer them text choices." (p. 2). Locke et al. (2009a) concluded that it was important to provide "a number of approaches to meaning making being taken" (p.157).

Meaney et al. (2007b) found that while there was a sense of progression for acquiring aspects of the mathematics register across the kura related to the year level of the students,

the relationship between the strategies that teachers used and the year level that they taught was much less clear. Factors such as the topic of the lesson and how new the material was introduced to students did influence the teachers' choice of strategies. On the whole, most strategies tended to be independent of age. (p. 3)

Of particular importance in the school sector projects was time for teachers to engage with curriculum literacies themselves.

For the curriculum literacies projects providing students with immersion in meaningful activities involved establishing working environments in the classroom that resembled those associated with particular disciplines or fields of work.

This finding led Meaney et al. (2007b) to conclude that

Combining a range of strategies ... seems to be part of what makes effective support for students who are operating at the different stages. (p. 3)

One of the reasons for this was that

different students will respond better to some scaffolding and modelling strategies than to others. Thus, it is important to provide a range of scaffolding and modelling strategies to match these different students' needs. (Meaney et al., 2007b, p. 3)

For the curriculum literacies projects, contextualising instruction to students' lives involved providing students with opportunities to take on the identities associated with particular disciplines, in culturally inclusive ways. Locke et al. (2009b) found that the reasons for students' literary textual preferences "are complex" and "may be more influenced by theme and topic than the cultural setting of a text" (p. 2), and that "the cultural background of a student influences the way they read a text closely" (p. 3). Locke et al. (2009b) found that while students did not always choose to read texts in their first language, valuing students' first languages through the use of translation activities could enhance motivation.

Hunter and Anthony (2011) found that

Focusing on the cultural, social and mathematical wellbeing of all the students resulted in positive learning outcomes for Pasifika students. (p. 2)

Immersion in meaningful activities

For the curriculum literacies projects providing students with immersion in meaningful activities involved establishing working environments in the classroom that resembled those associated with particular disciplines or fields of work. The kindergarten teachers in Clarkin-Phillips et al. (2012) and Carr et al. (2014) provided children with opportunities to visit, talk about, and use the gallery spaces in Te Papa, to engage with the curators who worked there, and to create a gallery space in their kindergarten in which they used the literacies of curators, artists, and docents as they created their own exhibits and exhibitions.

The primary school teachers in Hunter and Anthony (2011) established a classroom environment of collaborative mathematical inquiry and argumentation in which the literacies and activities of mathematicians were emulated. They found that

Through listening, discussing and recording their mathematical thinking, the students were given opportunities to organise and re-organise their mathematical understanding as well as critically evaluate and build on the thinking of their peers. (p. 3)

They concluded that

Changing the ways students engage with mathematics through regular participation in collaborative group tasks can result in major improvements in student learning outcomes. (p. 3)

Findings related to student learning

Most teachers from the curriculum literacies projects felt that the changes they made had a positive effect on the curriculum literacies of their students, although this varied within and between projects. Changes observed in students included:

- increased use of curriculum literacies
- new views of themselves in relation to a learning area
- increased engagement, agency and empowerment in relation to a learning area.

There was evidence of students beginning to think, speak, read, write, and behave like members of the disciplinary communities associated with particular learning areas. Clarkin-Phillips et al. (2012) found that the specialised language associated with museums and galleries had “become part of the vocabulary” of children at their kindergarten:

Words such as displaying, titles, taonga, white and yellow lines, gallery, museum, artist, host, feature regularly in children’s conversations both at the kindergarten and visits upstairs [to Te Papa]. (p. 8)

There was evidence of students beginning to think, speak, read, write, and behave like members of the disciplinary communities associated with particular learning areas.

Carr et al. (2014) found that children began acting as guides, exhibitors, and gallery designers, showing an appreciation of exhibits, following and reminding visiting families of museum protocols, and offering visitors explanations of exhibits and demonstrations of art and craft processes.

Similarly, Hunter and Anthony (2011) found that the students in their study began to take on new ways of thinking, communicating, and behaving in relation to mathematics, and began to take on new identities:

Students developed new ways of thinking about mathematics and their relationship with mathematics, and came to view their roles differently. (p. 2)

The curriculum literacies projects also found that when teachers focused on curriculum literacies there was evidence of increased student engagement and agency. For example, Hunter and Anthony (2011) found that

The students’ role in inquiry mathematics learning activities required a dramatic change from passive receiver to active learner. (p. 2)

Knowledge building

The TLRI curriculum literacies projects have built new knowledge in several important ways. Firstly, they have helped establish a curriculum literacies research base in the New Zealand context. While there is a large body of research on the teaching and learning of curriculum literacies (or disciplinary literacy) internationally, there has, until recently, been little research in New Zealand. The policy initiatives and research in New Zealand before the TLRI tended to focus more on the teaching and learning of generic reading and writing strategies which can be adapted and applied to different learning areas or contexts. The TLRI has enabled work in the field of curriculum literacies to be developed in New Zealand.

Secondly, the international research on curriculum literacies has tended to be situated in middle and secondary school contexts. The TLRI projects contribute to new knowledge building by exploring the acquisition of curriculum literacies in the ECE and primary school sectors. The findings from these projects suggest that even quite young children are able to acquire sector and curriculum literacies when given age-appropriate opportunities to do so.

The TLRI projects also explore relatively new research questions in relation to curriculum literacies. One example is the question of what progression in the literacies of a

What might it mean, for example, to be a Māori mathematician or a Samoan literary critic? These are important questions, especially with our current focus in New Zealand on developing culturally responsive pedagogies.

curriculum might look like. Another is what this progression might look like when students are acquiring a second language such as te reo Māori. A third is the question of how to provide students with opportunities to take on the literacies and identities of particular disciplines in culturally appropriate and inclusive ways. What might it mean, for example, to be a Māori mathematician or a Samoan literary critic? These are important questions, especially with our current focus in New Zealand on developing culturally responsive pedagogies. The TLRI curriculum literacies projects have highlighted the importance of asking these questions, have provided some models of how we might go about answering them, and have provided a research knowledge base that others can build on.

There is also evidence of cumulative knowledge building in the completed and current curriculum literacies projects. For example, Meaney et al. (2009) built on Meaney et al. (2007a); and Carr et al. (2014) built on Clarkin-Phillips et al. (2012). Current projects include Emerson et al. (in progress), who are investigating how to support student transition to tertiary institutions through interventions focusing on the literacies of the social sciences, business, and science in the senior secondary school and first year of tertiary study. Wilson and Oldehaver (in progress) are exploring patterns of talk about text in senior English, science, and health/physical education classes in two secondary schools.

Implications for policy

The curriculum literacies projects identify implications for policy. These relate to two main areas. The first relates to supporting teachers' discipline-specific metalinguistic understanding, especially in the primary school sector. Locke et al. (2009a), for example, observe that there are implications for both teacher education and professional development in supporting teachers to build disciplinary specific metalanguage.

The second relates to the availability of assessment tools designed to measure discipline-specific literacies. For example, Hunter and Anthony (2001) argue that

When assessing learning we need to look beyond improvement in mathematical scores to how students engage with mathematics and the relational aspects with their peers. (p. 3)

Locke et al. (2009a) argue that

The limitations of standardised testing instruments such as aSTtle need to be recognised and other forms of diagnostic testing encouraged, including diagnostic tests developed at school and classroom level. In relation to high-stakes assessment regimes such as NCEA, standards need to be revisited with a view to evaluating their construct validity. (p. 154)



5. Critical literacy and multiliteracies

Projects in focus

A Collaborative Self-Study into the Development of Critical-Literacy Practices—A Pilot Study.
Principal investigator: Susan Sandretto (funding: 2005).

A Collaborative Self-Study into the Development and Integration of Critical Literacy Practices.
Principal investigator: Susan Sandretto (funding: 2006–7).

Teaching Literature in the Multicultural Classroom. Principal investigator: Terry Locke (funding: 2007–8).

Literacy Learning in eLearning Contexts: Mining the New Zealand Action Research Evidence.
Principal investigator: Sue McDowall and Vince Ham (funding: 2011).

Critical Multiliteracies for “New Times”. Principal investigator: Susan Sandretto (funding: 2011–13)

Our Place: Being Curious at Te Papa. Principal investigator: Jeanette Clarkin-Phillips (funding: 2007–8).

Children as Teachers, Families as Learners. Principal investigator: Margaret Carr (funding: 2012–13).

The projects discussed in this section include a focus on critical literacy and multiliteracies. The term “critical literacy” encompasses approaches to teaching and learning informed by two main theoretical positions. One stems from neo-Marxism and from Paulo Freire’s work on developing literacy as a means of overcoming oppression in the third world. Neo-Marxist/Freirean critical literacy focuses on addressing social inequities caused by abuse of power through the analysis, and deconstruction of texts. The other theoretical position stems from poststructuralist ideas about language, ideology, and identity. Poststructuralists draw on the structuralist insight that things do not have meaning in themselves, but are structured to convey meaning. They aim to “show up” the limitations of meaning making through deconstructing text. This involves revealing the ideology of a text by uncovering the textual strategies used to privilege a particular world view and to suppress or cover up alternative or contradictory ideas. Deconstruction shows how discrimination is perpetuated through texts and how the ideology of a text positions readers and constructs reading subjects.

The poststructuralist argument is that it is through language that we are made the subjects of ideology.⁵ Texts, for example, invite us into subject positions—the way of seeing the world implied by the text. If we choose to accept this reader subject position

⁵ Poststructuralists see the construction of the human subject as occurring through language. The ideas of discourse developed by Michel Foucault (1979, 1981) are important here. Discourses are made up of the social practices—the way we think, behave, talk, look, read, and so forth, in particular contexts. These discourses create our subjectivity—how we see ourselves and our place in the world. The idea here is that there is no self apart from discourse. The self is a social construct in which discourses are constantly shifting in relation to each other and in their relative strength within a person’s sense of themselves.

we become subjects of the text—that is, we see the world in the way implied by the text. However, there are many subject positions possible and we can choose to read the text in different ways. This requires an understanding not only of the way in which language works but also an understanding of oneself and ones' place in the world.

In the school context, critical literacy involves helping students build the capacity to choose reading positions according to their own needs, rather than succumbing to the subject position implied by the text.

Critical literacy is an important component of multiliteracies (Anstey & Bull, 2006; Sandretto with Klenner, 2011). The term “multiliteracies” comes from the New London Group (1996). This group of academics identifies two goals for literacy learning: “creating access to the evolving language of work, power, and community” and “fostering in students the critical engagement necessary to design their social futures and achieve success through fulfilling employment” (p. 9). The group argues that teaching a single national form of language (such as standard English) does not adequately prepare students for participating in today's society. Instead, the group argues, we must think in terms of multiple, or multiliteracies. This is because increased cultural and linguistic diversity in local communities and new technologies are generating a plurality of texts and influencing the ways in which meaning is created and exchanged.

Globalisation and increasing cultural and linguistic diversity means we are exposed to a wider range of cultures and languages. Changes in society mean there are also many kinds of *English* literacy being used in different cultural, social, and professional contexts. With new technologies, meaning is being made in ways that are increasingly multimodal as linguistic modes of meaning are interrelated with visual, audio, gestural, and spatial modes. To succeed in today's society, students must be able to negotiate these multiliteracies and adapt to constant change.

The New London Group (2000) argues that the notion of multiliteracies overcomes the limitations of traditional approaches by

emphasising how negotiating the multiple linguistic and cultural differences in our society is central to the pragmatics of the working, civic, and private lives of students. (p. 9)

Rather than focusing on “correct” or “standard” usage, the pedagogy of multiliteracies focuses on “designs of meaning”. These designs of meaning are linked to the identities and contexts of the meaning makers and so are not necessarily “right” or “wrong”. Rather they either work (are viable) or don't work (are not viable) for a particular social or cultural context.

The critical literacy and multiliteracies projects

The critical literacy and multiliteracies projects explore ways of reconceptualising literacy, literacy practices, and literacy pedagogy. Sandretto et al. (2006a), for example, carried out a pilot study investigating ways of incorporating critical literacy strategies within guided reading lessons for Years 3–6 students in two schools, and investigated subsequent changes in students' ability to relate texts to their lives and comprehend text. This pilot was followed by a related study by Sandretto and the Critical Literacy Research Team (CLRT) (2008a) on the use of critical literacy strategies across a range of curriculum areas in four primary schools, and in English at one secondary school. A third study (Sandretto & Tilson, 2013) built on this work, investigating how teachers can bridge students' in-



and out-of-school literacies to enhance their critical analysis of multiple text types such as books, films, websites, and videos.

Locke et al. (2009a) explored how to better use the cultural and linguistic resources of primary and secondary school students (i.e., the multiliteracies of the classroom) in the study of literary texts. McDowall, Davy, Hatherly, and Ham (2012) investigated opportunities ECE, primary, and secondary students had when working in e-learning contexts to develop the literacies needed for living and learning in the 21st century.

In the ECE sector, Clarkin-Phillips et al. (2012) explored how to foster the construction of stories about the world and its representation in objects and exhibitions at a kindergarten—*Tai Tamariki*—situated at Te Papa. In a related study, Carr et al. (2014) explored children’s capacity as exhibitors, gallery designers, and museum guides to make meaning in a variety of modes as they interpreted, created, and explained exhibits.

The projects discussed in this section all shared an interest in addressing what is seen as a mismatch between what is taught and assessed in New Zealand schools and the diverse array of literacies today’s young people need in their out-of-school lives. The leaders of these projects argue that we need to re-think what literacy is, what it is for, and how we teach it, to better prepare students for their social futures. They argue that a multiliteracies approach will better enable us to draw on the wide array of literacies students bring with them to school, and to address inequities in student achievement.

The leaders of these projects argue that we need to re-think what literacy is, what it is for, and how we teach it, to better prepare students for their social futures.

Research design and methodologies

As discussed in earlier sections, it is important that methodologies align with the theoretical framings of the projects. The critical literacy and multiliteracies projects demonstrate just that. These projects used qualitative methods informed by sociocultural and poststructural theories. The methodologies used include various combinations of action research, self-study, case study, ethnography, and critical discourse analysis. The sources of data include interview transcripts, videotaped lessons, audiotaped stimulated recall interviews with student focus groups, audiotaped peer interviews with the participating teachers, and student assessments.

Like the reading and writing projects, the critical literacy and multiliteracies projects in the school sector included interventions targeting the teacher. However they did not use a traditional “improvement” frame. Rather than beginning with an analysis of student achievement and classroom observation data, the researchers in these projects began by working with teachers to consider the literacies needed for living in today’s world. The teachers and researchers then used their new thinking to review, reflect on, and make changes to their literacy practices, and literacy pedagogy.

One feature that distinguishes the projects discussed in this section from many of those discussed earlier is the focus placed on learning from, as well as about, students. The secondary teachers in Locke et al. (2009a) often supplemented assessments with surveys and questionnaires “drawing students into their confidence as partners reflecting on their learning” (p. 156). Locke et al. (2009a) described how

students enjoyed and profited from this confidence vested in them as stakeholders in their learning and that this confidence encouraged them to enter into dialogue with teachers about their learning. (p. 157)

One of the challenges identified in the projects was how to measure student outcomes given the dearth of non-standard literacy assessment tools designed for the New Zealand context, and the lack of standardised assessment tools for critical and multiliteracies.

Carr et al. (2014) included children as participants in the research to

emphasise the notion that children themselves can develop a stronger and more authentic understanding of their own meaning-making practices through action research that seeks their views. (p. 3)

Likewise the teachers and researchers in Sandretto and Tilson (2013) sought to connect literacy instruction with students' out-of-school literacies by learning from, as well as about, learners. Students were involved in whole-class lessons, and five students from each class were also involved as researchers examining their own multiliteracies. These students conducted auto-ethnographies of their own multiliterate practices, shared their findings at a research poster fair, and took part in an end-of-year research hui with teachers, principals, and researchers. In addition each teacher conducted an ethnography of one student's in- and out-of-school literacy practices as a means to prompt critical reflection on their teaching practices. Researchers also ran focus group interviews with the student researchers following videotaped lessons to help identify ways of improving teaching practice. Sandretto and Tilson (2013) described the role of students as a key element:

A very important element of the design of the project was how we positioned students. They acted as researchers who shared their sage advice with the teachers and researchers on the project. (p. 9)

One of the challenges identified in the projects was how to measure student outcomes given the dearth of non-standard literacy assessment tools designed for the New Zealand context, and the lack of standardised assessment tools for critical and multiliteracies:

The difficulty with measuring the students' growth in reading comprehension in relation to their increasing development of critical-literacy skills was that there are not any standardised measures of reading comprehension that ask the kinds of questions we were asking students. (Sandretto et al., 2006b, p. 3)

In some cases teachers developed their own assessment tools; in some cases they made use of more general assessment tools such as running records, STAR, and aTTle; and in some cases teachers used both types of tools. Sandretto et al. (2006a), for example, used running records to measure shifts in reading comprehension and developed a poster describing the team's conception of critical literacy which helped teachers and students to reflect on their teaching and learning. Sandretto and the CLRT (2008a) then used this poster to develop and pilot a critical literacy rubric to chart the growth of students' understanding and application of critical literacy. They argue that because the rubric reflects the teaching, it is "an authentic form of assessment" (Sandretto & CLRT, 2008b, p. 3). They also found that stimulated recall interviews (where students were interviewed by researchers directly after a lesson) were a useful way to map and formatively assess students' growing understanding of critical literacy (2008a).

Some of the secondary school teachers in Locke et al. (2009a) designed their own close reading tests using a critical literacy approach. These teacher-created assessments enabled teachers to focus more specifically on what they were teaching than if they had used more generic or standardised literacy tests.



Findings related to teacher and researcher learning

The critical literacy and multiliteracies projects found that shifts in teacher practice occurred when teachers and researchers had time to explore the theoretical ideas associated with critical literacy and multiliteracies, to reflect on teachers' literacy pedagogies and practices, to trial new approaches, and to share findings from these trials. The teachers developed their own critical and multiliteracies as well as improving their teaching of critical literacy and multiliteracies.

The research teams found that to make changes to their practice teachers needed opportunities to:

- reconceptualise literacy and associated practices and pedagogy
- learn from students about their out-of-school literacies and how to use them in the classroom
- trial new literacy pedagogies and practices and reflect on the outcomes of the trials, preferably with input from their students
- discuss their experiences in cross-school (and in some cases cross-sector) groupings so that teachers could learn from the experiences of those working in different contexts.

The findings from these projects highlight the importance of careful text selection by teachers for effective instruction in critical literacy and the analysis of multimodal texts, and the high level of skills required by teachers for the selection and use of such texts with students.

Findings related to pedagogy

Explicit instruction, scaffolding, and modelling

As with the curriculum literacies projects, findings from the critical literacy and multiliteracies projects demonstrate that the concepts involved are challenging for students. Teachers needed to provide explicit instruction especially in the use of metalanguage. They also needed to provide modelling and scaffolding. Locke et al. (2009b) concluded that for the widespread uptake of critical literacy teachers need to learn how to

carefully scaffold “interrogations” of texts which highlight the ways in which language features construct a version of reality”. (Locke, 2009b, p. 4)

The team concluded that explicit instruction and scaffolding “fosters the transition from dependence to independence as students learn to develop their own way of ‘questioning’ texts” (Locke, 2009b, p. 3).

The teachers in Sandretto et al. (2006a) and Sandretto and the CLRT (2008a) used critical questions to support students to examine a wide variety of texts, and restructured traditional guided-reading lessons by implementing a critical literacy focus on the second reading of the text. They used their definition of what critical literacy meant to them in the New Zealand context to illustrate key teaching points.

The findings from these projects highlight the importance of careful text selection by teachers for effective instruction in critical literacy and the analysis of multimodal texts, and the high level of skills required by teachers for the selection and use of such texts with students. Sandretto et al. (2006b, p.2) found that the “careful selection of texts that lend themselves to critical examination” enhanced their instruction of critical literacy across curriculum areas. Locke et al. (2009b, p. 3) found that critical literacy concepts such as portrayal, representation, construction, and version “are best taught in a

The critical literacy and multiliteracies research teams found benefits for students when teachers used what they learnt from and about students to inform their practice.

situation where students are exposed to a range of texts dealing with a similar subject or topic". McDowall et al. (2012) found that opportunities to work with texts in a range of modalities provided students with opportunities

to compare the ways in which meaning can be made in different modalities, the textual choices available when making meaning for different social purposes, and the relationship between textual choices and social purposes. (p. 6)

These opportunities enabled students to build a meta- or systems-level of meaning making.

However the selection and use of multimodal texts required some skill. McDowall et al. (2012) found that

The skills required to determine the difficulty of, and scaffold students' use of, multimodal texts are complex. Teachers needed to understand what makes texts in different modes difficult and the challenges and supports that can be wrapped around such texts to ensure that they can be used effectively for learning. (p. 5)

Situating learning in the context of students' lives

The critical literacy and multiliteracies research teams found benefits for students when teachers used what they learnt from and about students to inform their practice.

Sandretto and Tilson (2013) found that by positioning students as partners in learning the project team could start to "articulate the ways that teachers can bridge students' in- and out-of-school literacies" and that this bridge supported teachers and students in their critical analysis of multiple types of texts (Sandretto & Tilson, 2013, p. 9).

Locke et al. (2009a) described how the teachers in their project had "thought long and hard about issues of cultural and linguistic inclusiveness in relation to their own classroom teaching" and were involved in "active reflection on their relationship with their students and school communities" (p. 153). The teachers saw knowledge of the cultural and linguistic backgrounds of the students they taught as

having an effect on their classroom management practices, choice of reading materials and design of learning activities and processes. (Locke et al., 2009a, p. 153)

Immersion in meaningful activities

For the critical literacy and multiliteracies projects, immersion in meaningful activities involved providing students with opportunities to make more use of their out-of-school literacies in the classroom. This included providing students with opportunities to work with a wide range of text types and in a wide range of modalities – audio, visual, spatial, gestural, and multimodal, as well as print. Sandretto and the CLRT (2008b) emphasise the importance of providing "a wide diversity of texts, including stories, articles, visual, and digital texts" (p. 2).

For the critical literacy and multiliteracies projects, immersion in meaningful activities also involved providing students with opportunities to work in diverse and flexible groups and opportunities to drive the direction of talk about text. The findings from these projects suggest that these opportunities enhanced students' capacity to make meaning and analyse text, their engagement with text, and their agency. Locke et al. found that the opportunity to share responses to text was "a motivating factor in the enjoyment of and engagement with literary texts" (2009a, p. 156). This was especially so when the groups were diverse and there were opportunities to consider different perspectives:



Responses to literary texts are facilitated when students are given opportunities for structured intercultural dialogue. (Locke et al., 2009b, p. 2)

The researchers and teachers from the critical literacy and multiliteracies projects explored a range of strategies to enable collaborative, student-led meaning making and analysis of text. Sandretto et al. found, for example, that this was best achieved through enough wait time, and the construction of a “talking atmosphere” (Sandretto & CLRT, 2008b, p. 2) where students felt comfortable to contribute to the discussion. Clarkin-Phillips et al. (2012) found that teacher strategies for encouraging meaning-making dialogue included

constructing boundary objects, providing resources for the children to represent their ideas, inviting perspective-taking, focusing the children’s attention, recognising and suggesting analogies and comparisons, introducing a problem or a puzzle, listening to the children’s views, and asking genuine questions. (p. 2)

In some projects, teachers used ICTs to ensure diverse perspectives were available for collaborative meaning making and analysis:

ICTs gave students new opportunities to share their texts with, and elicit feedback from, people in time and place that would otherwise be unavailable to them. (McDowall et al., 2012, p. 6)

Several projects also found that the use of ICTs helped student-led dialogue because it enabled decentralisation:

Teachers used ICTs such as class wikis to establish decentralised systems which encouraged talk between students rather than via the teacher resulting in a change of the traditional teacher—student roles and relationships. (McDowall et al., 2012, p. 6)

The sharing of responses to literary texts is facilitated by a range of forum vehicles, from hard copy vehicles such as journals and response templates, to digital forums such as intranet class forums and blogs. (Locke 2009b, p. 2)

For the critical literacy and multiliteracies projects, immersion in meaningful activities involved providing students with opportunities to make more use of their out-of-school literacies in the classroom. This included providing students with opportunities to work with a wide range of text types and in a wide range of modalities.

Findings related to student learning

The research teams found that, overall, when a critical and multiliteracies approach to teaching and learning was taken:

- students built their critical literacy and multiliteracies
- students were engaged and empowered
- students were more able to make connections between texts and their own lives
- students’ literacy as measured by general literacy assessments, such as running records or asTTle, continued to improve as would be expected.

Some argue that students must learn the “basics” (such as how to decode, encode, and comprehend text) before engaging with critical literacies and multiliteracies which are sometimes seen as the “frills” that come later, once the “basic” literacy skills have been mastered. Others argue that all of these practices operate together and so are best taught and learnt concurrently. Is it a case of “either or” or is it a case of “both and”? Can you both focus on teaching critical and multiliteracies and enable students to learn how to decode, encode, and comprehend text? Findings from the critical literacy and multiliteracies projects suggest that “both and” is possible.

The researchers and teachers found that, overall, students continued to make expected progress in reading and writing as measured by tools such as such as running records or

In addition to maintaining progress in decoding, encoding, and comprehension in print texts there was evidence that students built their critical literacy and multiliteracies.

asTTle. Sandretto et al. found that while results on running records were mixed, “most children increased their reading accuracy and their reading age, and many increased their level of comprehension” (Sandretto et al., 2006b, p. 3), and that students were “able to engage with texts more deeply” (Sandretto & CLRT, 2008b, p. 2). Locke et al. (2009a) found that students’ close reading ability was enhanced when a critical literacy approach was adopted. McDowall et al. (2012) found that opportunities to work across a range of modes “supported engagement and achievement in reading and writing print texts, especially for students with a history of underachievement in these areas” (p. 2).

In addition to maintaining progress in decoding, encoding, and comprehension in print texts there was evidence that students built their critical literacy and multiliteracies. Clarkin-Phillips et al. (2012) found that children were “recognising alternative perspectives” (p. 2). Carr et al. (2014) found the children were “demonstrating messages in a variety of modes” (p. 4). Sandretto and team found that students “enhanced their understandings of critical literacy and their ability to think critically” (Sandretto & CLRT, 2008b, p. 2). McDowall et al. (2012) found evidence of students encoding and decoding, making meaning with, using, and thinking critically about visual, audio, gestural, spatial, print, and multimodal texts.

There were findings about the concepts that students found particularly challenging, and these tended to be related mainly to critical literacy. Locke et al. (2009a), for example, found that students struggled to understand “the way in which language is used to *position* readers to read the world in particular ways” (p. 146). However it is worth the effort. The research teams found that, overall students were engaged and empowered when critical literacy and multiliteracies approaches to the study of text were used. Locke et al. (2009b) found that students “enjoy critical literacy approaches to literary (and textual) study” (p. 3) and that a critical literacy approach to reading “invites and empowers students to construct their own versions of literary texts” (p. 3). McDowall et al. (2012) found that working with diverse texts enabled a wider range of students to work to their strengths and experience success in literacy learning.

The researchers and teachers found that, overall students were more able to make connections between texts and their own lives. Clarkin-Phillips et al. (2012) found that children were “making connections with prior knowledge” (p. 2) and Carr et al. (2014) found that children were able to “call on prior knowledge to make meaning and give explanations” about museum exhibits (p. 4). Sandretto et al. (2006a) found that students were able to make more links between texts and their lives, and that students could use their personal experience as a means to question and challenge texts. However if students “do not have the requisite experience to foster multiple readings of texts, there is the possibility that they may be excluded from a text” (Sandretto et al., 2006b, p. 3).

Knowledge building

The TLRI has enabled new and important future-focused areas of research to be developed specific to the New Zealand context. Before the work by Sandretto et al. (2006a, 2008a, 2013), there was little research on critical literacy or multiliteracies set in the New Zealand school sector. There is a large body of international work on critical literacy which we in New Zealand can learn from. However this body of international research conducted in the decade prior to the TLRI has had surprisingly little effect on New Zealand educational policy, curriculum documents, literacy support material, standardised assessment tools, or professional learning and development, given its



prevalence in other places, including Australia. There are also limitations in the extent to which we can apply the international work on critical literacy to New Zealand, given the impact of context. As Luke (2000) argues,

It is dangerous to generalise any educational approach from one national/regional and cultural context to another. (p. 449)

As well as enabling projects in areas new to the New Zealand context to be developed, the TLRI has enabled these projects to be built on over time through subsequent projects (for example, the related Sandretto projects (2006, 2008, and 2013), and the related Clarkin-Phillips et al. (2012) and Carr et al. (2014) projects). There is also evidence of cumulative knowledge building across TLRI projects carried out by different teams in different institutions. Locke et al. (2009a), for example, stepped off the work of Sandretto and the CRLT (2008), exploring critical literacy and multiliteracies in the one particular learning area (English), and in secondary as well as primary school contexts.

The TLRI has enabled new and important future-focused areas of research to be developed specific to the New Zealand context.

Implications for policy

There has until recently been little policy work on critical literacy or multiliteracies set in the New Zealand school sector. One exception is the multiliteracies working group established by the e-learning section of the Ministry of Education in response to a growing demand to revise literacy policy and resources, and to consider the influence of information and communication technologies on literacy (Jones, 2009). This group drafted a framework for multiliteracies acquisition which took a multiliteracies lens to the four resources model (Freebody & Luke, 1990; Luke & Freebody, 1999) of learning the code, making meaning, using texts, and analysing texts. The working group concluded that

we need to expand on current practice models to take account of the need for young people to develop a range of social, creative, ethical and cultural practices to make meaning in a technology rich and culturally diverse world. (p. 1)

Unfortunately the findings of this group did not come to fruition and was “a missed opportunity for New Zealand literacy policy” (Sandretto & Tilson, 2013). Two of the TLRI projects described here (McDowall et al., 2012, and Sandretto & Tilson, 2013) were led by members of the working group. These researchers carried on some of the work started by the multiliteracies working group in their TLRI projects. Both projects explored what the four resources model (Freebody & Luke, 1990; Luke & Freebody, 1999), originally designed for reading might look like when applied to multimodal texts. The TLRI therefore served an important function in allowing policy work started by the Ministry of Education to be continued.

The findings of the critical literacy and multiliteracies projects have implications for future policy work, as well as research. While none of these projects had policy as their main focus, all saw the solution to the problem they were addressing as lying, at least in part, at the policy level. They called for changes to the messages in policy, and in curriculum documents, resources, and assessment tools funded by the Ministry of Education, about what literacy is and how it is best taught and assessed in. Sandretto et al. (2006a) for example highlight the need to

develop standardised tools for teachers to use in the New Zealand context that will enable them to chart the student growth in critical-literacy skills and reading comprehension in detailed ways ... without tying students down to one correct answer. (p. 26)

Locke et al. (2009a) argue that

more attention needs to be given to ensuring that teachers at all levels are equipped with approaches to literature teaching such as critical literacy which enable them to find ways of empowering their students to be critical analysts of the ways texts operate powerfully in society. (p. 154)

McDowall et al. (2012) argue that to if we want e-learning contexts that provide opportunities for the literacy learning needed in the 21st century (and not just novel ways of meeting 20th century literacy learning goals) then we need

a definition [of literacy] that encompasses all modes of meaning making and different cultural contexts ... [and to] act on the implications of such a definition in the development of: policy, curriculum support materials, assessment tools, teacher training, professional learning ... and resource development. (McDowall et al., 2012, p. 7)



6. Where are the strengths and gaps overall?

My focus in this final section is not so much on the quantity or quality of *outputs* from the TLRI in terms of presentations, publications, or citations in peer reviewed journals. In his response to Zepke and Leach's (2011) review of the TLRI tertiary sector review, Huntington (2011) observes that such calculations are difficult to carry out and do not necessarily represent the evolution of ideas or building of new knowledge *per se*. I ask, instead, to what extent the literacy-related projects have expanded our knowledge about literacy, literacy pedagogies, and literacy practices.

Consolidating existing knowledge

Just under half of the literacy-related projects focus on lifting achievement in reading and writing, especially for Māori students and for Pasifika students. Consistent with recent research showing the teacher to be the main system influence on student achievement (Hattie, 2012), most of these projects involved researchers working with teachers to improve literacy content and pedagogical content knowledge as a means of lifting student achievement. These projects address Principle One of the TLRI to address themes of strategic importance to education in New Zealand in that they “align with current and future priorities for teaching and learning” and “focus on deepening our understanding about how we might address current inequities in educational outcomes” and on “creating the teaching and learning processes that will support success for all types of learners in the 21st century”.⁶

Consistent with the current policy focus on evidence informed practice and teaching as inquiry, most projects used standardised tests such as aTTle, PAT: Reading, and STAR to measure the impact of changed teacher practice on student achievement. These projects show it is possible to make changes to teaching practice and to lift, and in some cases accelerate, the reading and writing achievement of students, including those traditionally underserved by the education system. Some of the projects also show that it is possible to sustain these changes over time. Given the long history of inequities in reading and writing achievement in New Zealand, these are important findings.

The projects that focus on lifting achievement in reading and writing align closely with the Ministry priorities of the last decade. One of the benefits of this coherence is a thoroughly covered field of work with opportunities for consolidating knowledge. The TLRI has enabled the weaving together of different strands of work in the fields of reading and writing achievement carried out by different researchers, research institutions, and by policy-makers. In some cases the TLRI has enabled work initially funded by the Ministry to be continued or extended. It is clearly advantageous to support policy-makers and school staff in the areas of literacy that are important to current thinking.

The projects that focus on lifting achievement in reading and writing align closely with the Ministry priorities of the last decade. One of the benefits of this coherence is a thoroughly covered field of work with opportunities for consolidating knowledge.

⁶ These quotations come from a description of TLRI Principle One in the TLRI *Expression of interest information pack 2015*, p.3.

The need to expand our knowledge

However, as several TLRI reviewers and review respondents have observed, there can be limitations in only funding projects that build incrementally on what we know. In her review of the ECE projects, Nuttall (2010) observes that one of the limitations of the high level of coherence across these projects is that many of them have:

a somewhat self-referential quality, that means the projects tend to be theory-confirming rather than theory-building, giving credence to present understandings rather than challenging or reordering those understandings. (Nuttall, 2010, p. 9)

In his response to Zepke and Leach's (2011) review of the tertiary sector projects, Huntington (2011) asks:

Does the work being produced through these projects significantly challenge or make a new contribution to our existing understanding of tertiary education, or is it a relatively small addition to a large and established body of knowledge? (p. 4)

In response to the school sector projects, Hipkins (2012) reflects on

the limitations of evidence-based change as the only (or most) defensible basis for shaping and adopting new directions. (p. 1)

She asks:

To what extent does a focus on what we *already know about* keep us trapped right there? (p. 1)

The TLRI invites projects that move into new spaces. Principle Two of the TLRI states that, as well as building on existing research the projects will be "forward looking". The projects may focus on developing "new constructs and concepts in teaching and learning", on "new research paradigms and/or methodologies", and on "innovative policy and practice".⁷ An implication is that, as well as consolidating knowledge, we have to focus on building new knowledge. Some of the literacy projects do just that.

Expanding our knowledge

Conceptualising literacy outcomes in new and productive ways

Some of the projects have expanded our knowledge by focusing on a broader range of literacy outcomes than achievement in reading and writing. These outcomes include:

- making meaning with audio, gestural, spatial, visual, and multimodal, as well as print, texts
- acquiring the literacies of different curriculum areas
- critically analysing the reading positions offered by texts, and choosing one's own reading positions
- engagement, motivation, participation, contribution, and agency in literacy learning.

In focusing on a broader range of literacy outcomes these projects address a challenge raised in previous reviews of the TLRI projects. This challenge relates to the focus on traditional academic outcomes at the expense of other learning outcomes. In their review

⁷ These quotations come from a description of TLRI Principle Two in the TLRI Expression of interest information pack 2015, p.4.



of the school sector projects Hill and Cowie (2012) suggest one reason for this focus on traditional outcomes is that

Education policy in New Zealand is highly focused on improving educational outcomes especially for those students most at risk of under-achievement. Perhaps because the TLRI requires that projects must align with “current and future priorities for teaching and learning” and “how we might address current inequities in educational outcomes”, the focus in some of the projects reviewed was more focused on attainment than other learning outcome types. (p. 32)

As might be expected, the projects focusing on a broader range of literacy outcomes found evidence that students were developing a broader range of skills and knowledge and a broader understanding of what literacy is and what becoming literate involves.

Hill and Cowie (2012) identify the need to consider

what counts as learning, the scope of the learning that we value and are interested in, and how to document or make this learning visible and communicable to learners and to others. (pp. 23–24)

In response to Hill and Cowie (2012), Hipkins (2012) expresses concern about

the lost opportunities to develop a wider range of insights about the types of learning outcomes we might value, in addition to those pertinent to traditional academic learning. (p. 3)

She asks:

Could/should TLRI be more proactive in opening up research-informed conversations about other types of outcomes/other types of evidence? Indeed, should we be more explicit about what learning *is*? (Hipkins, 2012, pp. 5–6)

In a similar vein Sandretto (2012) asks “How can we develop projects that explore what counts as learning?” and “How can we make learning explicit in ways that honour its diversity and flexibility?” (p. 5).

As might be expected, the projects focusing on a broader range of literacy outcomes found evidence that students were developing a broader range of skills and knowledge and a broader understanding of what literacy is and what becoming literate involves. These projects also found that students were more engaged and demonstrated greater agency in their literacy learning than they had previously. Interestingly these projects also found that students still made progress in the areas of achievement measured by the standardised tools (and certainly got no worse) as well as developing important new capabilities.

New pedagogies and practices

Some of the literacy-related projects have expanded our knowledge about literacy pedagogies and practices, especially in relation to the importance of providing explicit instruction (especially in the use of metalanguage), and in relation to contextualising literacy teaching and learning to the schools and communities of the students concerned. Some have elicited student experiences of, and feedback on, new ways of thinking about what literacy is, and new approaches to literacy teaching and learning. These projects address a challenge made in earlier reviews of the TLRI projects to consider a programme of work that “positions students to be involved in more agentic and authentic ways” and “locates students as powerful partners in research on teaching and learning” (Sandretto, 2012, p.6).

Clearly there is a pressing need to address the assessment question in relation to the literacy (and other) capabilities needed and valued in today's world, whether by developing standardised tests in a broader range of areas, or by rethinking our notions of assessment altogether.

New ideas about assessment

Other projects have expanded our knowledge in the area of assessment by developing tools which assess a broader range of literacy outcomes than reading comprehension and writing. The researchers and teachers involved found these tools had high validity in that they assessed what was being taught, and that the tools engaged students and teachers in ongoing learning in ways that standardised tests did not. However, while highly valid, these project-designed tools were not able to provide the reliability of standardised tests. As a result some researchers highlighted the need for standardised tests in newer areas of work such as critical literacy. Clearly there is a pressing need to address the assessment question in relation to the literacy (and other) capabilities needed and valued in today's world, whether by developing standardised tests in a broader range of areas, or by rethinking our notions of assessment altogether.

One of the nine conditions identified by Keri Facer to enable future building schools is to “assess for competency not certification” (Facer, 2011, p. 129). She observes that

Our existing assessment system was designed in an era in which it was difficult to capture and circulate information about a person. The next two decades are likely to usher in a period in which we are able to produce massive amounts of data about the individual on an ongoing basis, in which we are able to analyse that data intelligently and provide continuous feedback. In this setting, the annual ritual of exam halls and sporadic high stakes testing, rather than constant ongoing observation and feedback on practice in the context of people and resources will be hard to sustain. (p. 130)

Facer (2011) argues that with changed governance arrangements and the development of a local curriculum comes the possibility of schools developing “more meaningful assessment arrangements that are not wholly determined by comparative test scores” (p. 129). She argues that

There is an urgent and pressing need, then, for educators, students, parents and employers to begin to talk about what a fair representation of the student might be for their own benefit, to inform their teachers, and as a means of explaining their potential and their expertise to the wider world of employers and communities. (p. 130)

Some of the literacy-related TLRI projects have started this work by developing and trialling prototypes of different forms of assessment which could be used to inform students, teachers, communities and employers about students' capabilities in ways appropriate and useful for current and future times. These are forms of assessment focused on: the literacies perceived to be most valued in citizens and employees now and in the future; and the *purposes* for which literacy assessment information is needed.

Doing literacy research that matters

To sum up this TLRI Project Plus study, what we see across the literacy-related TLRI projects completed between 2003 and 2014 are two important series of projects. We see a series of robust and replicable projects that provide reliable and generalisable findings showing it is possible to make changes to teaching practice and to lift, and in some cases accelerate in sustainable ways, the reading and writing achievement of students, including those traditionally underserved by the education system. And we see another series of projects exploring new ideas in literacy teaching and learning that are consequently more experimental in their design and produce more tentative, and context-specific findings. These projects suggest that by broadening our concepts of what it



means to be literate, we can provide students with opportunities to develop a repertoire of literacy practices that equip them for a multiliterate future without jeopardising opportunities to develop more traditional reading and writing capacities.

Both series of projects are important. Collectively these projects address TLRI principles to fund projects that address themes of strategic importance to education in New Zealand, that are designed to enable substantive and robust findings, that build on the existing research evidence, that address gaps in our knowledge, and that are forward looking and innovative, developing new constructs and concepts in teaching and learning and new research paradigms and methodologies.

Implications for research

So, what we have learnt from the TLRI literacy-related projects which may help us find our way forward with literacy research? What do we know now that we didn't know before? We know more about literacy itself, and about the acquisition of curriculum literacies, critical literacy, and multiliteracies in the New Zealand context—in the ECE and primary school, as well as in the secondary school, sectors. The findings from some of these projects suggest that even quite young children are able to acquire these literacies when given age-appropriate opportunities to do so.

We know more about the risks associated with generic approaches to literacy instruction and the need to contextualise instruction to the needs of specific students, classes, schools, and communities and what this might involve when working in the context of New Zealand's increasingly diverse population. We have seen the benefits when teachers learn from students about their out-of-school literacies and how to use them in the classroom, and seek student input on the impact of the new literacy pedagogies and practices they trial.

We know more about the types of interventions that help teachers shift their practice and the need for capability building rather than programmes as such. We know that teachers are able to make shifts in their practice through participation in targeted professional development and researcher supported learning communities engaged in evidence-based problem solving. We know more about the importance of providing time for teachers and researchers to explore theoretical ideas together, to trial new approaches, and to share findings from these trials, and time for teachers to develop their own literacies and metalanguage as well as their teaching of these.

We know more about collaboration, and the value for building knowledge about teaching and learning that comes when teachers have opportunities to discuss their experiences in cross-class, cross-school, and cross-sector groupings. We know that clusters can be more than the sum of the parts.

Implications for policy

What are the implications for literacy *policy*? As discussed earlier, there have been a number of policy initiatives over the last decade or so, focussed on lifting student achievement in reading and writing. Currently time and resources are spent on improving traditional literacy outcomes. Some people argue that students must learn the 'basics' (such as how to decode, encode, and comprehend text) before engaging with curriculum literacies, multiliteracies, and critical literacy which are sometimes seen as the 'frills' that come later. Others argue that all of these practices operate together and so are best taught and learnt concurrently. Is it a case of 'either or' or is it a case of 'both and'?

We know more about literacy itself, and about the acquisition of curriculum literacies, critical literacy, and multiliteracies in the New Zealand context—in the ECE and primary school, as well as in the secondary school, sectors.

This work involves re-thinking and re-building the what, why, and how of literacy assessment in ways that contribute to building young people's capabilities for proactively shaping the type of world we want to live in, now and in the future.

Findings from some of the projects on curriculum literacies, multiliteracies, and critical literacy suggest that 'both and' is possible. The researchers and teachers from these projects found that, overall students continued to make expected progress in reading and writing as measured by tools such as such as asTTle. And in addition to maintaining progress in decoding, encoding, and comprehension in print texts there was evidence that students built other important capabilities.

The findings presented here suggest there would also be value in literacy policy that addresses more explicitly the need for curriculum literacies, critical literacy, and multiliteracies, and provision of the necessary curriculum resources and assessment tools. This might, in the first instance involve funding research into what assessment of future-focused literacies might look like.

There are no models of what literacy assessment for a future-oriented education system might look like. However the international (e.g., Facer, 2011) and New Zealand (e.g., Bolstad & Gilbert with McDowall, Bull, Boyd, & Hipkins, 2012) work on future-oriented education, the literature on innovation in assessment, and the prototypes developed as part of some of the literacy-related TLRI projects, could be used to inform the development of future-oriented literacy assessment processes. This work involves re-thinking and re-building the *what*, *why*, and *how* of literacy assessment in ways that contribute to building young people's capabilities for proactively shaping the type of world we want to live in, now and in the future.

The teachers involved in TLRI projects made shifts to their practice with intense support from researchers but this cannot be provided to all teachers in New Zealand. So what do we do about scaling up? The findings of the literacy-related projects highlight the importance of policy that fosters teacher-researcher partnerships and provides the infrastructure to support the development and sustainability of such partnerships.



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