A Better Start
E Tipu e Rea
Successful Literacy and Learning Theme
Summary Report of Progress
February, 2018
The research forms part of the National Science Challenge, A Better Start.

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A Better Start Successful Literacy and Learning theme is a programme of research exploring early literacy and learning achievement and healthy wellbeing in young children. The project comprises four interconnected studies which incorporate a ‘Braided Rivers’ (He Awa Whiria) approach to research; integrating Māori epistemologies with Western science, and braiding together education and health related disciplines.

Project 1 provides better understanding of factors that influence early reading success within New Zealand, and is developing ethnic-specific predictive models aimed at improving this success. Community perception of data sharing across health and education is also being explored.

Project 2 determines (i) the feasibility, acceptability and appropriateness of an integrated intervention approach designed to accelerate Year 1 reading development for all children and particularly those who enter school with lower levels of oral language ability and (ii) the feasibility and value of parent/whānau shared reading workshops.

Project 3 describes the richness of ‘linguistic landscapes’ (the child’s linguistic environment including their digital world) that help facilitate emerging bilingualism in young preschool and school-aged children.

Project 4 examines the effectiveness of the ‘A Better Start’ integrated literacy approach used in Project 2, for children with a developmental disability (speech sound disorder).

In 2017 A Better Start Challenge and Cure Kids co-funded a series of projects through a contestable funding round. One of these projects aligns closely to our Successful Literacy and Learning theme. This project is investigating literacy interventions that support self-esteem/self-efficacy, and enhance positive behaviours in struggling readers.

Together, this series of projects is providing a collaborative and interdisciplinary approach to supporting children’s literacy and learning success and their healthy well-being.

This report provides an overview of the A Better Start Successful Literacy and Learning theme research activities in the period 2016–2018 and provides a summary of the research team’s Key Performance Indicators that have been achieved.

“Our projects resonate with the Ministry’s Vision Mātauranga framework which declares the importance of research that proposes new ways of doing things, to find answers, to solve problems, and to unlock Māori potential in the quest for a better start for our tamariki”.

Professor Angus Macfarlane
Our People | Ringa Raupī, Ringa Raupā

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Linwood Wellbeing Hub
College of Education Health and Human Development Pasifika Advisory Group

Pasifika community members welcome new Samoan PhD student, Saili Aukuso, to A Better Start.
Successful Literacy and Learning is a series of four interconnected studies. Each study has its own research focus and methodological approach, all with outcomes related to literacy and learning. This diagram provides a schematic overview of the theme and how the four projects interact with each other.
This project’s kaupapa braids together large-scale data from health and education sectors, to better understand factors that support children’s early reading success within the New Zealand cultural context.

A key outcome of this project is to develop national and ethnic-specific predictive models aimed to improve reading success. Key data sources include PIF (Pacific Islands Families Study), IDI (Integrated Data Infrastructure – Statistics NZ) and the GUiNZ (Growing Up in New Zealand) study. We are also exploring parents’, education and health professionals’ perception of sharing data for preschool children and children in their first year at school.

The first study we have undertaken has utilised the Before School Check (B4SC) data, a national screening programme of 4-year old children with a focus on identifying any social, behavioural or development issues which could potentially interfere with their learning and success at school. We have linked this data to Ministry of Education records of whether a child received a school-based literacy intervention. The work is internationally novel and exciting; we are able to overcome many of the methodological issues in the development of screening methods through the size and comprehensive nature of the variables contained within the IDI.

Several key deliverables have been met from the 5 year research plan, including:

1. A formal agreement with PIF (Pacific Islands Families Study) for data sharing protocols has been completed, one article have been produced as a result from the relationship and another is in preparation.

2. Professor Philip Schluter and Professor Gail Gillon have met with Big Data team leader, Dr Rick Audus, to determine research questions relating to Before School Checks and literacy achievement, utilising the IDI. Professor Schluter subsequently completed the accreditation process to access IDI data. Professor Schluter led the analysis and writing of two papers, both of which are currently under review. One focused on the national population, and the second on Pacific population. A third paper is being developed which focuses on Māori children’s literacy needs.

3. Professor Schluter has been approved by GUiNZ (Growing Up in New Zealand) as an external researcher, a proposal for a paper accepted, and meetings are occurring to continue to progress this relationship and data release.

“All Before School Check variables significantly predict literacy need in early primary school years BUT they only tell us part of the story – and a robust national screening programme will need to cast its net wider.”

Professor Philip Schluter
Project 2 | Pūtere 2

Intervention study

The intervention study for Successful Literacy and Learning aims to facilitate early literacy success for children commencing school with lower levels of oral language ability. This study has followed 247 children in the Eastern suburbs of Christchurch, through their first year of school. In the first project completed we have investigated the response to a classroom-based intervention for 143 of these children who commenced school with lower oral language skills.

The intervention is an integrated instructional approach implemented by teachers to enhance children’s phonological awareness, vocabulary and letter knowledge through shared book reading and associated activities. Speech-Language Therapists and Resource Teachers for Learning and Behaviour (RTLBs) have provided additional support for teachers and children as necessary.

Sub-projects with this community of learners have also occurred, including shared reading workshops for whānau of preschool and Year 1 children. Additionally, a comprehensive whānau questionnaire has been developed. The questionnaire focuses on Hauora: Health and wellbeing, Hononga: Reading together at home, Hinengaro: Reading practices and Harikoa: Positive identities. Kaupapa Māori methodology has informed the holistic approach to the questionnaire framework as well as the ways in which the questions were framed (i.e. utilising non-judgemental, mana-enhancing and strengths-based language).

Project 2 has made excellent progress on several key deliverables, exceeding projected numbers for recruitment and forming relationships with several key stakeholders in the community. Deliverables met include:

1. Two whānau-focused workshops focused on fostering shared reading at home have been delivered. One publication is in preparation, outlining the key findings from these whānau workshops.
2. Engagement has been undertaken with 7 primary schools within the Linwood/Aranui area, resulting in the screening of 247 children in Year 1 at school who are being followed over 12 months.
3. In-depth assessment of 143 children with lower oral language ability, and careful evaluation of their response to class and small group interventions has been completed.
4. Comprehensive whānau questionnaires have been completed with ~65 whānau. One publication is in preparation outlining the key findings from this questionnaire.
5. Co-construction of intervention design with participating junior school teachers has been undertaken.
6. Professional Development website has been established for teachers, and PLD workshops delivered.
7. Workshops with RTLBs and a hui with SLTs were held regarding additional support for the cohort of children.
8. Implementation of the teacher led intervention in 23 classrooms across 7 schools has been completed. Data reliability, analysis, and interpretation of intervention findings has also been completed. One publication is in preparation describing the results with 2 further publications in planning.
9. RTLB’s implementation of additional small group support for children with lower levels skills has been completed, with data analysis in progress.

“The findings from the intervention study are particularly exciting. This is one of the first studies internationally to demonstrate accelerated performance in phonological awareness, vocabulary and word reading skills concurrently for children with lower levels of oral language ability through teacher led intervention implemented in real world settings”.

Professor Gail Gillon
Project 3 | Pūtere 3
Emergent bilinguals in a digital world

The kaupapa of Project 3 explores the intertwining of emergent bilingual development and the use of digital technologies to support the development of bilingualism in the early years of education. This project has two main strands – the gathering of ‘linguistic landscapes’ (descriptions of the linguistic environment) in early childhood education (ECE) and primary school settings, and the implementation of workshops to showcase best practice and increase the richness of preschool and school classroom environments to support emergent bilinguals. Enriching the linguistic landscapes in the physical and digital worlds of 4–6 year old children can better enable many more to grow up as bilingual language learners.

The first two years of this project have seen several key deliverables met and exceeded, including:

1. Linguistic landscapes of 6 mainstream ECE centres were completed in 2016 (including an exemplary Māori and Samoan centre), revisited in 2017 with further data analysis underway. Three linguistic landscapes have also been completed and shared focusing on 3 Linwood/Aranui primary schools. One publication with ECE findings has been submitted to a leading journal and further publications are planned.

2. ECE and school-based workshops have been completed, focused on increasing the richness of classroom environments to support children who are emergent bilinguals. Workshops have also been held in community-based settings such as a local Samoan church, to share this information with additional community members.

3. A website has been produced as a central space for resources, strategies for supporting bilingualism in the digital world including ‘pop up’ workshops and research.

4. The policy guidance deliverable exceeded expectation with submission of ‘Languages Policy Guidelines Note’ to leaders in new Labour government and their agencies, following extensive stakeholder engagement. The Hon Kelvin Davis, Associate Minister of Education, responded that this guidance note will inform the Ministry’s “work on language policy development”.

5. The project has also informed the 2017 update of the early childhood curriculum, Te Whāriki, and the new curriculum for Digital Technologies & Hangarau Matihiko.

“The digital world can be intentionally deployed to strengthen connections between education and homes for linguistically diverse children, especially those connections focused on promoting intergenerational language transmission. Teachers, families, stakeholders and policy makers appreciate guidelines and strategic support to provide an environment which best supports linguistically diverse children.”

Distinguished Professor Niki Davis
Project 4 comprises a sub-sample of the 247 children participating in the Year 1 classroom-based intervention (described in Project 2). This subsample are those with diagnosed developmental disabilities and their response to the class level intervention is being evaluated.

Key deliverables for Project 2 are tracking well, including:

1. Identification of 40 children with developmental speech disorder in addition to lower level oral language skills, their response to phonological awareness and vocabulary instruction at both the class/ large group level and their response to follow-up smaller group intervention has been evaluated.

2. Whānau of children identified with development disability have completed the whānau questionnaire, providing comprehensive information on these children’s health, wellbeing and early reading experiences.

In addition to project deliverables, a publication has been produced describing the practices of an international sample of Speech-Language Pathologists working with children with ASD (Autism Spectrum Disorder).

“A surprising number (nearly 16%) of the 247 Year 1 children screened have a developmental speech disorder in addition to lower level oral language skills. Understanding their response to class level intervention is crucial as these children are at heightened risk for persistent literacy difficulties”.

Associate Professor Brigid McNeill
Responding to A Better Start Key Performance Indicators (KPIs) is an ongoing focus of the Successful Literacy and Learning theme. This section highlights a selection of key KPIs targeted by our theme, and how we are meeting or exceeding these targets. Further milestones will be met during the remaining 18 months of the project, ending June, 2019.

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<tr>
<th>KPI</th>
<th>Our actions</th>
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<tr>
<td>Projects will demonstrate clear co-creation methodology</td>
<td>We have actively engaged with community and stakeholders during the design phase of the projects; our research team includes members from differing disciplines and institutions; and we have an ongoing commitment to collaborate cross-culturally, with our team comprising several Māori and Pasifika investigators, PhD students and advisors.</td>
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<td>Early career researcher involvement in projects</td>
<td>The Successful Literacy and Learning theme has a high proportion of early career researcher involvement, including Research Fellows, PhD students and research assistants.</td>
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<td>Projects will include public media engagement and announcements of Challenge activities across all communication forums (print, broadcast, digital and social media)</td>
<td>Our theme engages with public media through a variety of forms. We produce a quarterly newsletter, which is distributed to 300+ subscribers; we have been involved with several local and national news media providers via print and broadcast mediums, both in English and Samoan; we produced a promotional video for sharing on social media channels and provide regular updates on our theme’s activities for inclusion in the wider A Better Start newsletter and on the A Better Start Facebook page. We also hosted an international Literacy and Learning Symposium, from which our keynote speaker presentations have been placed on YouTube. Additionally, a researcher from our project was the successful recipient of Cure Kids Contestable Funding, which received local and national attention in print media. At a local level, our engagements with community have been considerable. We have hosted several workshops across the projects with both a co-construction and dissemination focus, hui’s with Māori and Pasifika Advisory Groups, and meetings with representatives from health and education sectors.</td>
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<td>Research will provide national communication of science, contribution to Government and provider policies/recommendations</td>
<td>Our communication for this KPI has taken several forms. For example, Associate Professor Una Cunningham produced a media release in response to a Green party call for compulsory Te Reo in schools on Stuff.co.nz. Distinguished Professor Niki Davis and colleagues prepared a Language Policy Guidance Document on supporting bilingualism, which has been well received by the Ministry of Education. In addition meetings have been held with key Government members regarding literacy and learning priorities and research-based practice for reducing educational inequalities.</td>
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<td>Evidenced-based guidelines are developed for teachers and parents for appropriate use of digital technologies to foster emerging bilingual literacy development</td>
<td>Project 3 contributes strongly to this KPI through the gathering of linguistic landscapes to act as exemplars of best practice in English, Samoan and Māori language early childcare centres. These findings have been used to create resources and guidelines for fostering emerging bilingualism. A website has been created to house these resources, and several workshops have been held to share findings with community and stakeholders.</td>
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<td>Research will demonstrate improvement in literacy in Year 1 children, notably Pacific and Māori children and those from less affluent families</td>
<td>Results from Project 2’s intervention study have demonstrated the positive impact of the intervention to accelerate the literacy development of children with lower levels of oral language in a community with a high proportion of Māori, Pacific and children from low-socioeconomic families.</td>
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<td>A validated reading prediction model will be produced, that predicts end of Year 1 reading achievement at school entry to manage children with reading difficulties</td>
<td>Project 1 and 2 are tracking well to deliver this KPI. Before School Check data suggests we can identify children who will need a literacy intervention before they start school. Screening data involving phonological awareness measures accurately identified children in need of additional support to foster reading success.</td>
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Successful Literacy and Learning researchers have a focus on dissemination of their research findings via a number of different methods. Articles and Book Chapters directly related to our funded research showcase the innovative methods and exciting research results to an international audience through peer review journal publications.

While still in the data analysis stage for many projects, our team has been focused on producing manuscripts to be published in high-ranking international journals. Presentations have provided an alternative stage to showcase our kaupapa.

The audience of these presentations have varied, from students and research colleagues at conferences, to community members and key stakeholders at community events. Media presentations in local and national sources bring our research to the public, creating relatable links and connecting to real-life outcomes. Other study outputs include three websites, two resource manuals, and a Language Policy Guideline. Further outputs are anticipated before the end of the project period in June, 2019.
Articles and Book Chapters


Derby, M. (2017). ‘H’ is for Human Right: An Exploration of Literacy as a Key Contributor to Indigenous Self-Determination. (Under review)


Presentations


Other

Adoption of Macfarlane, A’s ‘braided rivers’ model: Superu report – Bridging cultural perspectives, February, 2018.


Community Workshop: Workshop for Pasifika whānau raising children with two languages, August, 2017.

Community workshop: Workshop for Pasifika and other whānau raising children with two languages, June, 2017.


Presentation: Presentation to Mātauraka Mahaanui (the Ngāi Tahu Advisory group to the Ministry of Education for the regeneration of Education in Greater Christchurch), April, 2017.

Community workshop: Linguistic landscape workshop at the Kidsfirst hui, April, 2017.


TV interview: CTV news https://www.youtube.com/watch?v=GHbMqO96jd&list=PL1D0DE06F568484A4&index=1


Radio interview: Waateanews.com https://secure.zeald.com/uma/play_podcast/x_4podlink/NzkyNyY=/

Media publication: http://www.stuff.co.nz/national/education/8923687/Compulsory-Te-Reo-Can-it-really-be-done


Media publication: https://soundcloud.com/speakupkorerotia/bilingualism-in-single-language-society

Blog post: http://latlab.canterbury.ac.nz/a-better-start/linguistic-landscapes-education/

Research award: The New Zealand Association for Research in Education (NZARE) has presented the 2016 NZARE Group Award to UC’s Te Rū Rangahau: The Māori Research Laboratory, directed by Professor Macfarlane, for high quality research involving Māori.

Community workshop: Motivating reluctant children to speak their heritage language, September 2016.

Community workshop: Workshop on enhancing shared reading experiences for children (part 1 of 2), September, 2016.


Community workshop: Motivating parents to speak their language to their children, November, 2016.
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