



MINISTRY OF EDUCATION

Te Tāhuhu o te Mātauranga

# BES Exemplar 2

## Ngā Kete Raukura – He Tauira 2

# Ripene Āwhina ki te Pānui Pukapuka (RĀPP)

Audio-assisted reading to support students' literacy in te reo Māori

This is the second of a series of exemplars being prepared for Quality Teaching for Diverse (All) Learners in Schooling: Best Evidence Synthesis Iteration [BES]

**He Ako Reikura, He Ākonga Rerekura (Te Katoa): Hei Kete Raukura [BES]**

This publication, currently in development, is a second iteration of *Quality Teaching for Diverse Students in Schooling: Best Evidence Synthesis [BES]* (2003).

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ITERATIVE BEST EVIDENCE SYNTHESIS PROGRAMME  
HEI KETE RAUKURA  
<http://educationcounts.govt.nz/goto/BES>  
New Zealand

## Background to BES Exemplar 2: Ripene Āwhina ki te Pānui Pukapuka (RĀPP)

### Audio-assisted reading to support students' literacy in te reo Māori

BES Exemplar 2, 'Ripene Āwhina ki te Pānui Pukapuka' (RĀPP), describes a Māori-led intervention that has proven highly effective in raising reading and reading comprehension levels of students in Māori-medium settings. The intervention involves students listening to recorded te reo Māori as they read accompanying text. The success of the approach stems from its refinement over a long cyclical process of innovative research and development. The intervention has exciting potential to also support and normalise learning in te reo Māori for students, teachers, and whānau in English-medium settings.

The BES exemplars are intended to open up possibilities for working 'smarter rather than harder' in education. RĀPP provides a way to accelerate student achievement in relation to Ngā Whanaketanga Rumaki Māori (the National Standards for Māori-medium education settings) while supporting a range of other valued outcomes.

### **BES exemplars celebrate and support teachers' work**

The teachers, researchers, and whānau featured in this exemplar used RĀPP to develop and monitor student understanding of te reo Māori texts. At the same time, RĀPP connected the students with iwi knowledge and expertise and gave them access to the voices of fluent speakers of te reo Māori. RĀPP also accelerated the students' development of oral language capability.

A meta-analysis was carried out for the *School leadership/He kura rangatira BES* of those few national and international studies and reviews that have shown improvements in student outcomes through school-home/whānau interventions. The results revealed that RĀPP was one of the highest-impact interventions identified in New Zealand or anywhere else, and exemplary in its support for whānau, teachers, and students. RĀPP is a smart tool<sup>1</sup> for accelerated improvement.

Expertise is critical to RĀPP's successful implementation. Those leading the implementation needed the knowledge and ability to:

- engage with mana whēnua at the 'front-end' (before taking RĀPP forward);
- lead a whakawhanaungatanga approach to developing relational trust with whānau, iwi, teachers, and other leaders;
- respond to the unique challenges of building capacity in a language revitalisation context;
- draw upon a range of different forms of expertise, knowledge, and skills;
- mobilise a collaborative 'mahi tahi' approach to success;
- take an inquiry and knowledge-building approach to adapting RĀPP and working effectively in local contexts in ways that are appropriate for mana whēnua and the diversity of Māori learners;
- foster expertise in literacy, literacy assessment, and language learning.

### **Addressing areas of need**

This exemplar has been given precedence because access to language learning in te reo Māori in schools is still limited. Findings of self-reported proficiency<sup>2</sup> for 15–24 year-olds indicate that:

- just under 13% of Māori report proficiency in speaking te reo Māori;
- almost 21% report proficiency in reading;
- just over 16% report proficiency in writing in te reo Māori.

Those who are proficient often attained their proficiency post-school, often through tertiary study.

Despite te reo Māori being a policy priority for schooling, 2009 to 2010 change data reveal a 2.3% decline in students in Māori-medium education and a decline in the number of students engaged for three or more hours per week in te reo Māori language learning.<sup>3</sup> For some Māori students<sup>4</sup> it can be easier to access teaching in a European language such as French than in their own. The problem is exacerbated by the limited availability of materials for the teaching and learning of te reo Māori in English-medium schools.<sup>5</sup> In its WAI 262 Report, the Waitangi Tribunal concluded that “action is urgently needed to turn the negative statistics around” (p. 176).<sup>6</sup>

The RĀPP kaupapa is strongly reflective of the principles of Te Tiriti o Waitangi. Professor Sir Mason Durie<sup>7</sup> explains the potential policy significance of RĀPP:

Thank you for forwarding information about RĀPP. The programme is obviously highly relevant to teachers and to education more generally, and has the potential to contribute to significant gains for Māori. But from my perspective there are two particular reasons why it deserves to be extended for wider use.

First, the past three decades have seen substantial advancements in the revitalisation of te reo Māori, largely through educational innovations, but also through other modes such as broadcasting. Strong foundations have been established coupled with renewed enthusiasm for te reo Māori to be a language that is spoken in many domains and across the lifecycle. However, recent reports (including the WAI 262 Report) suggest that the quality of te reo is extremely variable and the ongoing development of the language has been overshadowed by learning basic levels of fluency. In part this is due to a limited number of competent speakers and an even greater limitation in the number of teachers who are able to confidently teach the curriculum in Māori (rather than simply speaking in Māori). The limitation has been aggravated by the lack of a methodology for teaching in Māori, which is one reason why RĀPP has high relevance. RĀPP provides useful tools and insights that can be applied within classrooms so that students can achieve competence in te reo and wider educational success.

Second, the Whānau Ora programme, currently being implemented across the country, has placed considerable emphasis on education as a key to whānau capability building. It has also recognised that culture is a fundamental component of wellness. While transmission of culture, including language, is essentially a whānau function, it is unlikely that whānau will be in positions where they can provide all language needs for their children, any more than other families can provide the full range of knowledge and skills necessary for the English language. In effect, schools will have major impacts on Whānau Ora, partly because they will prepare students to participate fully in society, and partly because they will contribute to cultural integrity. RĀPP provides a systematic and comprehensive approach that addresses both of those dimensions. By giving teachers tools for teaching in Māori and at the same time expanding the domains of usage, they will be contributing to whānau capability.

Given the relatively low levels of Māori educational achievement, the importance of RĀPP is magnified, not only as a vehicle for revitalisation of te reo Māori, but equally important as a catalyst for engagement in education and for building whānau cultural security.

I look forward to seeing further elaboration of RĀPP in the years ahead.

The Ministry of Education’s most recent Statement of Intent<sup>8</sup> gives priority to high-quality, culturally responsive education that incorporates the identity, language, and culture of Māori students. The priority for Ka Hikitia (the Māori Education Strategy) is for Māori to achieve education success as Māori. Access to te reo o ngā kaumātua (the language of the elders) connects Māori students with the tūāpapa (bedrock) of Māori identity.

Despite the approach’s success, tried-and-tested approach, and the availability of a set of core resources, access to RĀPP has not yet been widened. This BES exemplar is intended as a catalyst for initiatives to enable that access while further developing the approach by applying new technological solutions (for example, developing interactive electronic books) and ensuring its local relevance.

Professor Angus Macfarlane and Sonja Macfarlane advise<sup>9</sup> that the “advancement of RĀPP would operationalise the strategic intent of Ka Hikitia in Te Waipounamu ... where securing te reo Māori teachers is very difficult at the best of times.... The beauty of this kaupapa is the ‘spoken’ word – audio voices being spoken, recorded, and available to many and at any time of the day or night so that

the ‘teaching’ component is less of a stressor for schools; therefore the language promotion is not solely contingent on a rare minority of te reo Māori speakers.” They advise also on the potential importance of the RĀPP strategy in providing access to iwi dialect.

RĀPP aligns with the aspirations of iwi. For example, effective implementation of RĀPP would contribute to resourcing the agreed goals of Te Mahere Mātauraka, the Shared Outcomes Agreement that Te Rūnanga o Ngāi Tahu has signed with the Ministry of Education. These goals are:

- To improve the provision of, and access to, quality te reo programmes in immersion, bilingual, and mainstream education
- To increase and support the presence, engagement, and achievement of Māori students in the Ngāi Tahu takiwā
- Curricula, teaching practices, and environments in early childhood contexts and schools, within the Ngāi Tahu takiwā, are increasingly responsive to and reflective of Ngāi Tahutanga.<sup>10</sup>

Tau Mai Te Reo – the Māori Language in Education strategy – seeks to take a more deliberate approach to investment in Māori language learning. Because only around 4% of Māori are in Māori-immersion education, and only around 14% of Māori learners have access to some level<sup>11</sup> of Māori language or Māori-medium learning, addressing the need for growth in provision of te reo Māori requires widespread access to quality language learning experiences across schooling.

Because RĀPP’s effectiveness relies on knowledgeable expertise in its implementation, the challenge for system-wide development and use is to build both capability and access to locally-adapted versions of this smart tool.

## Acknowledgments

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- Associate Professor Margie Hohepa, University of Waikato
- Professor Angus Hikairo Macfarlane, University of Canterbury
- Sonja Macfarlane, University of Canterbury
- Dr Mere Skerrett, Te Whare Wananga o Waitaha
- Garrick Cooper, Aotahi School of Māori and Indigenous Studies, University of Canterbury
- Thomas Haapu, Group Māori, Ministry of Education

Thanks also to the team at Learning Media for your patient and iterative work in developing this exemplar to date.

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- 1 In education, a smart tool is one that supports professional (and in this exemplar, whānau) learning about how to advance student learning. Selecting, developing, and using smart tools was found to be a leadership practice that advanced valued student outcomes in the *School leadership/He kura rangatira BES*. Leaders select and design smart tools by ensuring they are based on valid theories and that they are well designed to serve their purpose. Tools are only designated 'smart' if the evidence indicates that they actually do advance valued outcomes for students.
  - 2 Ministry of Education (2011). Percentage of Māori population proficient in te reo Māori. *Education Indicators*. Retrieved from [www.educationcounts.gov.nz/indicators/main/education-and-learning-outcomes/1887](http://www.educationcounts.gov.nz/indicators/main/education-and-learning-outcomes/1887)
  - 3 Ministry of Education (2011). Māori-medium education as at 1 July 2010. *Education Indicators*. Retrieved from [www.educationcounts.gov.nz/statistics/maori\\_education/schooling/6040/mori-medium-education-as-at-1-july-2010](http://www.educationcounts.gov.nz/statistics/maori_education/schooling/6040/mori-medium-education-as-at-1-july-2010)
  - 4 The Ministry of Education's July 2011 Roll Returns indicate that 50 New Zealand secondary schools that did not offer New Zealand's indigenous and official language, te reo Māori, as a language option for their students, did offer French, a European language. As of 1 July 2011, 23,530 students studied te reo Māori in New Zealand schools at secondary level, around the same number as the 23,234 students who studied French as a subject.
  - 5 Education Review Office (2007). *Review of curriculum materials to support the teaching and learning of Te Reo Māori*. Education Review Office: Wellington. Summary available at [www.ero.govt.nz/National-Reports/Education-Evaluation-Reports-in-Brief-Schools-January-2008/Review-of-Curriculum-Materials-to-Support-the-Teaching-and-Learning-of-Te-Reo-Maori](http://www.ero.govt.nz/National-Reports/Education-Evaluation-Reports-in-Brief-Schools-January-2008/Review-of-Curriculum-Materials-to-Support-the-Teaching-and-Learning-of-Te-Reo-Maori)
  - 6 Waitangi Tribunal (2011). *Ko Aotearoa Tēnei: A report into claims concerning New Zealand law and policy affecting Māori culture and identity. Te Taumata tuatahi*. Retrieved from [www.waitangi-tribunal.govt.nz/doclibrary/public/reports/generic/Wai0262/KoAotearoaTeneiTT1W.pdf](http://www.waitangi-tribunal.govt.nz/doclibrary/public/reports/generic/Wai0262/KoAotearoaTeneiTT1W.pdf)  
This is also referred to as the WAI 262 Report.
  - 7 Durie, M. (2011, October 17). Feedback on Draft BES Exemplar 2: RĀPP. Advice to the Chief Education Advisor, Iterative Best Evidence Synthesis Programme. Palmerston North: Massey University.
  - 8 Ministry of Education (2011). *Statement of Intent 2011/12 – 2016/17*. Wellington: New Zealand Government. Retrieved from [www.minedu.govt.nz/~media/MinEdu/Files/TheMinistry/2011StatementOfIntent/SOI2011Web.pdf](http://www.minedu.govt.nz/~media/MinEdu/Files/TheMinistry/2011StatementOfIntent/SOI2011Web.pdf)
  - 9 Macfarlane, A. H., & Macfarlane, S. (personal communication, formative quality assurance for BES Exemplar 2, Ripene Āwhina ki te Pānui Pukapuka, October 27, 2011)
  - 10 Te Rūnanga o Ngāi Tahu Annual Report (2009). *Ngāi Tahu Education*. Retrieved from [www.ngaitahu.iwi.nz/Publications/Annual-Reports/2009/Office/Service/NTEducation.php](http://www.ngaitahu.iwi.nz/Publications/Annual-Reports/2009/Office/Service/NTEducation.php)
  - 11 The Ministry of Education's July 2011 roll returns show that out of the total number of Māori learners in schooling (171,796), 6,563 Māori learners were in Māori-immersion schools and 24,474 Māori learners were in some level of Māori language learning or Māori-medium education (Level 1–4a).]

## About the BES exemplars

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This new series of BES exemplars is being prepared by the Iterative Best Evidence Synthesis (BES) Programme. Each exemplar has been selected because it illuminates highly effective teaching approaches that accelerate progress for diverse (all) learners in areas where improvement is needed. They exemplify the eleven dimensions of quality teaching using examples that come from across the curriculum and are relevant to primary, intermediate, and secondary levels of schooling.

The series has been given priority in response to requests from teachers and principals for real-life examples that make transparent the nature of highly effective teaching and the professional learning, leadership, and educationally powerful connections with families, whānau, and communities that support such teaching. The exemplars are derived, where possible, from research and development carried out in New Zealand schools and kura. They celebrate the outstanding work of New Zealand educators.

While the BES exemplars show how significant improvements can be made through teaching, they are not ‘magic bullets’. Rather, the exemplars illuminate the high-impact research and development that informed and developed the expertise of the teachers, facilitators, school leaders, and researchers they feature.

The BES exemplars are being progressively released online. They will be a core resource for the forthcoming:

Quality Teaching for Diverse (All) Learners in Schooling: Best Evidence Synthesis Iteration [BES] He Ako Reikura, He Ākonga Rerekura (Te Katoa): Hei Kete Raukura [BES].

This publication, currently in development, is a second iteration of *Quality Teaching for Diverse Students in Schooling: Best Evidence Synthesis [BES]* (2003). For updates on progress, go to the BES website at [www.educationcounts.govt.nz/goto/BES](http://www.educationcounts.govt.nz/goto/BES)

While teachers are the primary audience for these BES exemplars, they are also intended as a resource for leaders, policy makers, and all those involved in supporting the work of teachers. To support their use in a variety of contexts, each exemplar incorporates the following features:

- A section on background information explains the significance of the exemplar. It highlights the expertise of the educators that enabled accelerated improvement and identifies the area of national need that they addressed in their work. You may prefer to read the exemplar before reading this background information.
- A list of supporting resources is provided for those who wish to investigate further. Full text copies of cited articles can be requested from the BES website.
- A ‘Professional learning: Starter questions’ tool is intended to support schools seeking to use the exemplars as catalysts for improvement. Specifically, it is intended to support an inquiry and a knowledge-building approach to improvement that is responsive to the unique needs of the students, teachers, and wider community in each context.
- An ‘Implementation alerts’ checklist highlights the complexity of change for improvement, emphasising the fact that ‘how’ change happens and is supported is critical to success.

The pedagogical approaches explained in these exemplars do need, of course, to be appropriately integrated into a comprehensive plan for improving teaching and learning.

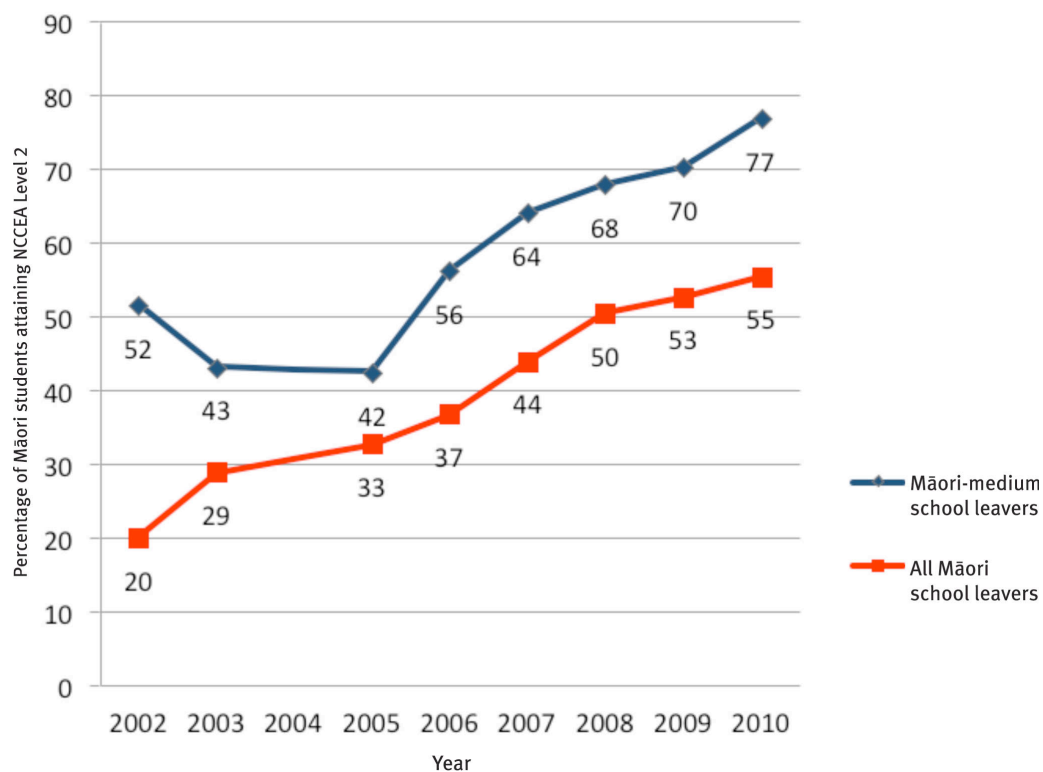
### Feedback to inform BES development

We will draw upon your feedback when finalising the exemplars for this new BES iteration. Please send any feedback to [best.evidence@minedu.govt.nz](mailto:best.evidence@minedu.govt.nz)

# BES Exemplar 2. Ripene Āwhina ki te Pānui Pukapuka (RĀPP)

## Audio-assisted reading to support students' literacy in te reo Māori

<b>Source</b>	Berryman, M., Woller, P., & Togo, T. (2008). RĀPP: Tape-assisted reading to support students' literacy in Māori in two bilingual schools. In L. Graham (Ed.), <i>Proceedings of the Narrowing the Gap: Addressing Educational Disadvantage Conference</i> (pp.1–10), The University of New England. Armidale, Australia: University of New England. Available at <a href="http://www.une.edu.au/simerr/pages/projects/28narrowingthegap.pdf">www.une.edu.au/simerr/pages/projects/28narrowingthegap.pdf</a>
<b>Introduction</b>  <i>'Effect size' is a statistical measure of the impact of an intervention on an outcome. Hattie<sup>1</sup> shows that the average yearly effect of teaching in New Zealand in reading, mathematics, and writing from year 4 to year 13 is <math>d = 0.35</math>. Effect sizes above 0.40 represent an improvement on business-as-usual and effect sizes of <math>d = 0.60</math> are considered large.</i>	<p style="text-align: center;"><i>Ko te reo te mauri o te mana Māori. [Language is the life force of mana Māori.]</i></p> <p style="text-align: right;">Sir James Henare</p> <p style="text-align: center;"><i>Te reo Māori is a taonga. It is the platform upon which mātauranga Māori stands, and the means by which Māori culture and identity are expressed. Without it, that identity – indeed the very existence of Māori as a distinct people – would be compromised.</i></p> <p style="text-align: right;">Waitangi Tribunal, 2011, p. 154<sup>2</sup></p> <p>This exemplar features Ripene Āwhina ki te Pānui Pukapuka (RĀPP), an audio-assisted reading strategy that can accelerate students' literacy achievement in te reo Māori. It does this by using the knowledge and expertise of fluent Māori speakers to provide audio recordings of books in te reo Māori. Students are supported to select audio recordings of appropriate difficulty level and interest that they can read as many times as they like. As they listen, they follow the text carefully until they are able to read the text independently. This valuable resource is used to support student learning at home and at school.</p> <p>RĀPP came out of collaborative research and development led by Māori. Fluent Māori speakers, including kaumātua<sup>3</sup> and community leaders, read a series of 100 Māori language stories onto tape. The speakers modelled competent and lively reading. The stories cover eight reading levels within the Ngā Kete Kōrero framework and are accompanied by carefully sequenced assessment, feedback, and development activities.</p> <p>RĀPP has achieved very large effect sizes of up to <math>d = 2.75^4</math> for reading level gains over two terms. Through careful, ongoing implementation, using strategies to support reading comprehension, RĀPP can advance achievement by the equivalent of several years compared with business-as-usual classroom language learning.</p> <p>While RĀPP supports literacy development for all students, it is particularly effective for those who start out well behind. Though developed and proven in Māori-medium settings, the approach also has great potential for strengthening the development of te reo Māori in English-medium settings.</p> <p>Ka Hikitia<sup>5</sup> (the Māori Education Strategy) has, as Government priorities, Māori language education and Māori succeeding as Māori in education. As Figure 1 demonstrates (see over), Māori are achieving more highly at NCEA Level 2 in Māori-medium education than in English-medium education. This pattern of relatively high achievement in Māori-medium occurs despite the lower socio-economic status of the school communities concerned. Māori-medium schools have a mean decile rating of 2.24 compared with 4.45 for the schools of all Māori school leavers. Yet in 2010, 249 of the 324 students leaving Māori-medium education left with NCEA Level 2. That year, there were 10,542 Māori school leavers in all.</p>



**Figure 1. Percentage of Māori-medium Māori school leavers and all Māori school leavers with NCEA Level 2 or above (2002–10)**

These results seem all the more impressive when it is understood that the Māori-medium education system has existed for not quite three decades. Now funded by government, it was originally funded by iwi<sup>6</sup> and whānau<sup>7</sup> who had a vision to revitalise New Zealand’s indigenous language. However, despite its success, the number of students in Māori-medium education is decreasing. In mid-2010, over 91 percent of Māori students were to be found in English-medium schools.

The focus of this exemplar is on enhancing access to te reo Māori for students in both English- and Māori-medium schools. Currently, only some 35–40 percent of Māori learners are offered the opportunity to learn te reo Māori at school and only 14 percent of Māori learners have access to at least 12 percent or more of curriculum teaching in te reo Māori.

Historically, education policies have not prioritised Māori language, with the result that many parents and whānau of Māori students did not have access to te reo Māori at school. Consequently, many people who are strongly committed to their children’s te reo learning do not feel competent to help. RĀPP not only supports parents and whānau to support their children’s learning, it provides them with the opportunity to learn and consolidate their own te reo Māori.

This exemplar demonstrates the powerful role that a smart tool<sup>8</sup> such as RĀPP can play in supporting teachers and whānau to accelerate literacy achievement in te reo Māori. The value of this tool is emphasised by the fact that the remarkable gains achieved by the previously low-achieving students in this exemplar were made at a time of significant staff change. Despite these challenges, the teachers saw the value, potential, and practicality of this smart tool:

*Teacher: I liked the monitoring book that the tamariki<sup>9</sup> could use to self-assess when they were ready to kōrero to an adult. I also liked the cloze activities. I liked the resource itself, everything being there to use. It’s really straightforward and I can see the benefits. I liked the interaction with home. The kids were good and everything came back.*

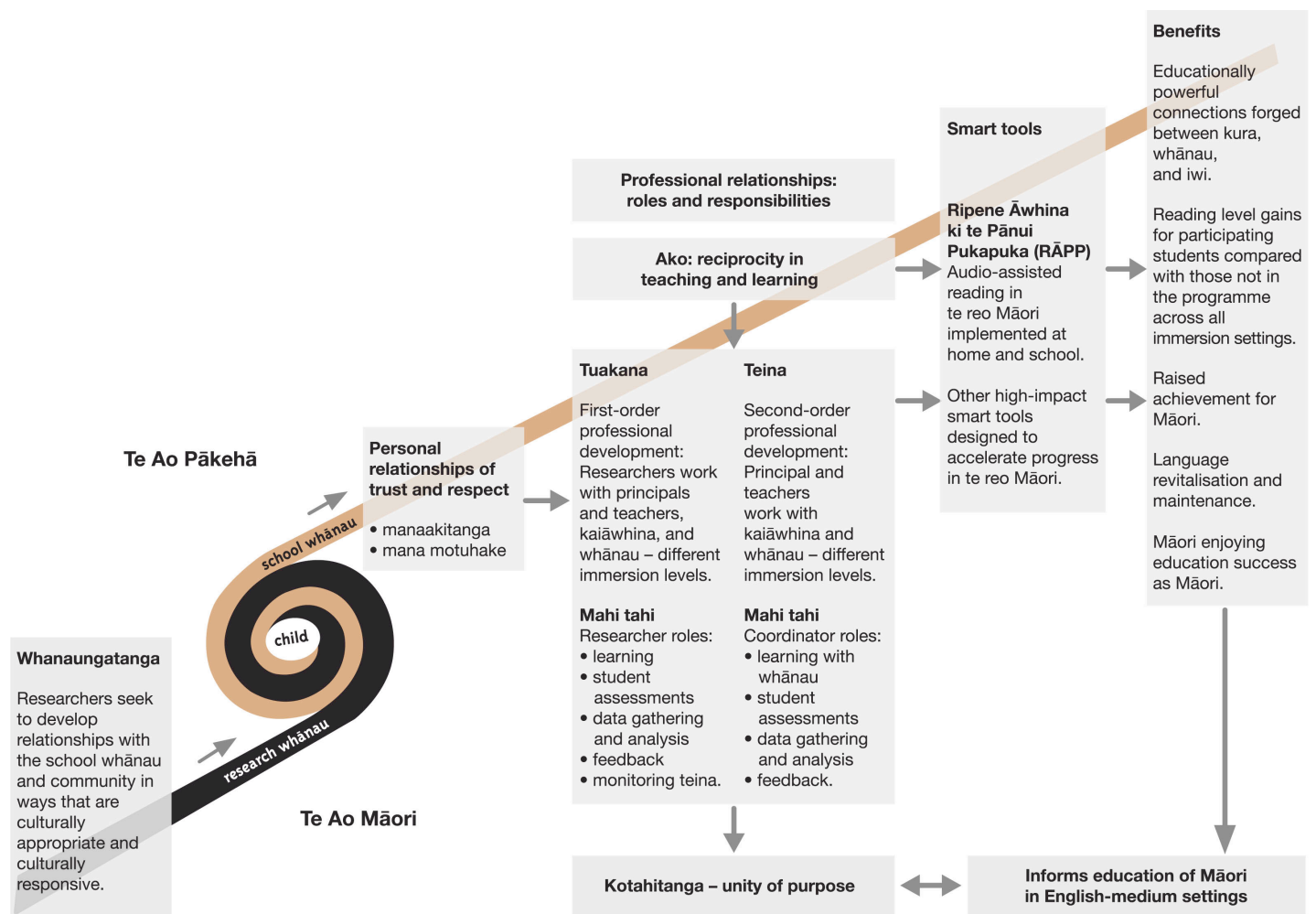
This exemplar includes reflections from kura staff and researchers on how RĀPP’s implementation could be even further strengthened. These reflections are intended to help others to optimise the use of these smart tools to accelerate Māori language learning.



## Research and development underpinning the intervention

The focus of this exemplar is on the use of RĀPP as a smart tool for students, teachers, and whānau. It is a tool that the Poutamu Pounamu Research and Development Centre whānau successfully implemented with schools that provided different levels of Māori language immersion. For policy makers seeking to ensure widespread access to RĀPP, it is essential to make transparent the interdependent, collaborative, research and development processes that underpinned its effectiveness. The diagram below illustrates how the research whānau used culturally appropriate and responsive approaches to establish relationships with key school staff, their whānau, and their Māori community before engaging in the work.

Language revitalisation poses particular challenges when whānau who otherwise would be a strong source of support have been deprived of access to their language. Building their trust and respect is critical for success. The research and development focus in this case was not only on literacy and assessment supports for student learning but also on professional and community learning supports for teachers and whānau. The terms ‘first order’ and ‘second order’ are used to indicate that the researchers provide the first round of professional development. But as they do so, they work with the principal and a number of teachers to ensure that they will then be able to offer a comparable level of professional support to their colleagues and whānau. One of these people takes responsibility for co-ordinating the people and processes. Ako<sup>10</sup> is crucial for ongoing problem-solving and improvement.



**Figure 2. Ako: Reciprocal benefits within culturally responsive relationships – the work of the Poutama Pounamu Research and Development Centre**

<p><b>Learners and learning context</b></p>	<p>This exemplar describes what happened when the RĀPP intervention was carried out in two bilingual primary schools (Kura 1 and Kura 2). The approach was new to the principals, who sought information and support from researchers to implement the programme with their teachers:</p> <p><i>Research whānau member: The principals both understood the importance of whakawhanaungatanga to their Māori community's buy-in and commitment. Both had prioritised time with researchers to establish their own connections to the people and the processes behind this resource. While we [researchers] had a longstanding previous connection with the principal from Kura 2, this was the first time that we had met the principal from Kura 1. We were invited to meet with teachers and whānau members in this school and to talk about how the resource had been developed and could be used. Through these formal cultural processes, teachers and whānau were then able to determine themselves how they would participate.</i></p> <p><b>Kura 1</b></p> <p>Because all the parents who attended the hui at Kura 1 wanted their children to participate, all ten year 2 to 4 students took part. At school, the programme was implemented by a kaiāwhina<sup>11</sup> with the support of a lead teacher. It was also implemented by parents and whānau at home.</p> <p>Baseline data were gathered at the end of term 1. The programme was implemented over terms 2 and 3, after which the students returned to business-as-usual teaching in term 4. They were assessed again at the end of term 4, allowing comparison between their progress in terms 2 and 3 with their business-as-usual gains in the regular literacy programme. The baseline data showed that, in terms of reading ability, the students ranged from the developing stage (level 8: kete kieke e) on the Ngā Kete Kōrero framework to the developing fluency stage (level 21: kete pīngao o).</p> <p>Due to family illness, the lead teacher had to take extended leave during the period of implementation, meaning that the RĀPP programme was applied inconsistently at school. However, it was continued by parents and whānau at home, with the school taking responsibility for ensuring the availability of the resources.</p> <p><b>Kura 2</b></p> <p>In Kura 2, the participating students were in years 2 and 3 and were chosen because they needed to develop reading skills and confidence. The baseline data showed that all these students fell within the developing reading stage (level 6: kete kiekie a to level 10: kete kiekie i). Matching baseline and post-intervention assessment data were available for 18 students.</p> <p>The intervention was planned to start in term 2 but, unexpectedly, was not able to proceed. Instead, the principal stepped in to lead the programme over terms 3 and 4, taking students out of the classroom to engage them with the programme in a withdrawal setting. Parents and whānau were not involved in this implementation.</p>
<p><b>Outcomes</b></p>	<p><i>Principal: I think it's a positive programme, a real good programme. It has lifted their reading levels and especially [their] confidence and fluency.</i></p> <p>The effect sizes for student achievement gains in te reo Māori for Kura 1 and 2 were very large, even in an initial trial, and far exceeded the rate of business-as-usual gains (which Hattie has calculated as around <math>d = 0.35</math> per year). Students who were able to engage with RĀPP were able to make the equivalent of several years of accelerated progress in two terms. Significantly, the greatest progress was made by the students whose baseline reading level placed them amongst the lowest achievers.</p> <p><b>Kura 1</b></p> <p>In Kura 1, the effect size for the mean reading level gains for students whose baseline data showed them to be reading at levels 10 and below was <math>d = 2.75</math>. Over the two intervention periods in terms 2 and 3, the students at the kete kiekie stage gained 2.7 reading levels on average. In comparison, in term 4, the phase when they experienced business-as-usual teaching alone, they improved by only 0.9 reading levels.</p> <p>One of the notable features of this implementation was that whānau continued to support their children's learning, even when a change of teacher could have jeopardised the programme. When the lead teacher returned and analysed the programme's effect on the students, she concluded: "I really think it is an effective programme." She then worked with the principal to seek external funding to enable the programme to continue.</p> <p><b>Kura 2</b></p> <p>The effect size for reading level gains for students who were at levels 10 and below in Kura 2 was <math>d = 2.06</math>. These students started from a much lower baseline than those in Kura 1. With consistent implementation in the withdrawal setting, they gained an average 3.6 reading levels over the two ten-week intervention periods in terms 3 and 4. This progress was made possible by the school principal taking a pedagogical leadership role and ensuring that additional support was provided to the lowest achievers.</p>



*Lead teacher: I think it is an effective programme. Within our school, I have got years 0 to 4 and that is why I found it difficult with them all at different stages to give them the quality time.*

Although audio-assisted reading seems an easy way of supporting student learning, it cannot be fully effective without attention to comprehension and progression. Accordingly, it was important to incorporate teacher professional learning around the use of both the teaching and the diagnostic assessment strategies. For example, the RĀPP resource and assessment material recommended orienting students to stories prior to reading and supporting them to make connections to their knowledge and experiences. The material also included a set of diagnostic procedures for use as pre- and post-assessments. These procedures included:

- taping and assessing a three-minute Māori oral reading sample;
- asking three related oral recall questions after student silent reading;
- conducting an oral cloze task.

Teachers using RĀPP determine the instructional level by using any two of the following criteria:

- reading level accuracy of 90 percent or higher;
- reading rate of 21 correct words or more per minute;
- combined oral comprehension score of 41 percent or more (using the oral reading sample and cloze assessment).

The comprehension activities are vital to the success of the intervention. The Ngā Kete Kōrero team found that, given the phonemic regularity of the Māori language, measures of students' reading competency based on accuracy and fluency alone tend to overestimate levels of comprehension.<sup>14</sup>

#### **Planning for continuous improvement**

A key finding of the *Teacher professional learning and development BES* is that teachers come to value their participation in professional learning and development when they see their new teaching practices leading to accelerated student achievement. This was the case in both Kura 1 and Kura 2. Although both schools faced challenges in providing consistent leadership for the programme, they overcame these challenges because they valued the improvement that the smart tool was making.

The next challenge for the schools was to implement RĀPP as business as usual. By the end of the initial intervention, Kura 1's lead teacher was already planning ahead and anticipating the merit of training another kaiāwhina to assist:

*Lead teacher: I went for Ngāti Whakaue [tribal] funding for next year to ensure that I have someone in the middle block to run that programme and pull the tamariki out of the classrooms, say a group of five for say 45 minutes doing their RĀPP mahi [work] and comprehension, just talking about the books. If I can get the support next year, I will train the kaiāwhina, get the parents on board, and do five-days-a-week slots. I think it will be great. So we have looked closely at the end of last term to see how we can really make it stand in the school. It's a stepping stone. This year was our first year [using RĀPP] and we can only get better and we are keen to carry on with it.*

In 1997, Hohepa<sup>15</sup> highlighted the dearth of meaningful texts in te reo Māori then available to schools and families. Since then, there has been considerable progress in the development of such resources. RĀPP shows how much more value can be created when students, teachers, parents, and whānau have access to audio-recordings made by fluent Māori speakers that accompany texts of increasingly challenging material.

The principal of Kura 2 strongly suggested that tapes were becoming outdated. As new technologies emerge, so do new possibilities for creating text and audio resources in te reo Māori (for example, interactive electronic story books).

## **Outcomes focus**

### **Hua te ako, hua te akonga**

Quality teaching is focused on valued outcomes and facilitates high standards for diverse learners.

In these two contexts, all the adults concerned valued te reo Māori highly. The RĀPP smart tools enabled them to accelerate progress and realise higher levels of student achievement.

These schools found it challenging to focus on specific outcomes because the classes concerned comprised students from several year levels. Because the RĀPP stories cover a range of Ngā Kete Kōrero levels, the teachers were able to provide differentiated learning support to students with widely varying levels of achievement. Critically, RĀPP was especially effective for the lowest achievers.

The approach inherently attends to a range of valued outcomes. In earlier interventions, the researchers had trialled other literacy resources that accelerated student progress through fluent reading of increasingly difficult text, but they slowed growth in comprehension. RĀPP supported development of both comprehension and decoding strategies.

## **Connections**

### **Tūhono**

Make educationally powerful connections.

In a language revitalisation context, it can be a challenge to create effective language and culture links between school, home, and the wider community, including iwi. In this case, audiotapes, read in a lively way by fluent Māori speakers, are a community resource that creates and strengthens those connections. During the text preview, the teacher helps the students make explicit connections between the text and their own lives.

In Kura 1, the students' parents and whānau became a significant resource for supporting and accelerating their children's literacy learning. This aligns with the findings of the *School leadership/He kura rangatira BES*, which demonstrates the powerful effects of schools, parents, and whānau working together to support children's learning. Accordingly, RĀPP is most effective when used at both school and home. The challenge for schools is to find ways to enable this process.

<p><b>Scaffolding</b></p> <p><b>Te ako poutama</b></p> <p>Pedagogy scaffolds, and provides appropriate feed forward and feedback on, learning.</p>	<p>RĀPP is inherently a scaffolding tool. Students are able to use the oral language of the tapes to help them make sense of the words that are in front of them as printed text. And the students are able to check their own pronunciation against that of a fluent speaker.</p> <p><i>Turei: Because they are cool. Those fellows can do it and then we can copy. So you can know how to read it. It's fun and a bit cool.</i></p> <p>The RĀPP tapes not only scaffolded student learning, they also demonstrated to parents and whānau how they could support their children's learning.</p>
<p><b>Responsiveness</b></p> <p><b>Tauaronui</b></p> <p>Quality teaching is responsive to student learning processes.</p>	<p>Oral language competence plays a pivotal role in facilitating students' comprehension of written text, particularly in the case of second language learning. With RĀPP, the students could work at their own instructional level with a resource of their choosing. When a tape engaged their attention, they could repeat and manipulate it to meet their own needs. The tapes affirmed the students' cultural identity and, by giving them access to the language, enhanced their enjoyment:</p> <p><i>Tiare: 'Cause it was cool ... because they were telling the story. By reading the book with it [it helped me] to read the story.</i></p> <p>With the RĀPP resources, students were able to get responsive feedback by discussing their understandings with adults at kura and (in the case of Kura 1) at home on a regular basis.</p>
<p><b>Caring and inclusive learning communities</b></p> <p><b>Te ako, he tohu manaaki, he piringa tangata</b></p> <p>Pedagogical practices enable classes and other learning groups to work as caring, inclusive, and cohesive learning communities.</p>	<p>Because the RĀPP audio-recordings feature the voices of Māori – often local kaumātua or other community members – students participate in a learning community that extends to local and other iwi. Mere Berryman considers that the success of implementation depends upon the extent to which relational trust is established, also a finding of the <i>School leadership/He kura rangatira BES</i>. The mahi tahi (co-operative) approach of the research whānau involved working collaboratively and carefully to build the necessary relational trust between schools, Māori elders and communities, and students. Trust is most likely to be established when, given all of the information, whānau themselves are able to determine how and when they will participate, as happened with the whānau in Kura 1. Figure 2 highlights the importance of beginning with the development of mutually beneficial, culturally responsive relationships.</p> <p>In Kura 1, the RĀPP resources were regularly shared with students at home and at school. RĀPP helped create a cohesive learning community that supported children's literacy and cultural knowledge across both kura and home settings. A strength of RĀPP is that it uses the available community knowledge and expertise, but it also scaffolds the language knowledge and capability of parents and whānau who have little te reo Māori, thereby enhancing their ability to support their children's learning.</p> <p>RĀPP resources provide students with the opportunity, either in one-to-one or in small-group contexts, to predict the likely outcomes of storylines, make connections to prior experiences, identify new vocabulary and language structures, and talk about what this means. They do this within the context of caring relationships with teachers and whānau who collaborate to support their literacy learning.</p> <p>As teachers and professional leaders become proficient in the use of RĀPP, the opportunities to use it to build cohesive learning communities increase.</p>
<p><b>Opportunity</b></p> <p><b>Kapohia, akona</b></p> <p>Opportunity to learn is effective and efficient.</p>	<p>RĀPP gave students many and regular opportunities to 'match' a competent oral/aural reading model with a meaningful written text. They listened to taped stories at their own instructional level while they read along. They could replay the tapes at will, increasing their reading mileage at the same time as they built and confirmed new vocabulary:</p> <p><i>Principal: They do their reading and everything on their own with their tapes and we go through the book three times each day and we did that regularly. RĀPP definitely has to be done daily. It is getting the kids into a routine of doing it.</i></p> <p>The students enjoyed this opportunity to learn.</p> <p><i>Rangi: The way they sound the words out.</i></p> <p><i>Kerry: To read with it ... helped me to read.</i></p> <p><i>Shanaia: Because I like to read ... Yeah. ... By listening to it and then reading with the book.</i></p> <p><i>Danny: I liked listening to it, and reading it, and learning some more words.</i></p> <p>The tapes and books gave the students the spaced practice that is so important for learning. When used at both kura and home, their impact can be even greater.</p> <p>Just listening to stories being read has been found to increase student vocabulary.<sup>16</sup> So RĀPP offers students multiple benefits: they have ready access to text, modelling is provided by a fluent speaker, they have opportunities to expand their vocabulary and affirm new learning, and they are able to make cultural connections.</p>

## Thoughtful learning strategies

### Takina te wananga

Pedagogy promotes learning orientation, student self-regulation, metacognitive strategies, and thoughtful student discourse.

The RĀPP task design pays careful attention to reading comprehension as well as reading fluency. As a result, students are oriented to meaningful language learning.

Before involving an adult, the students were required to assess their own progress by doing the comprehension activities that accompanied the taped reading resource. Together with the audio resources and the written texts, these comprehension activities supported students to initiate, monitor, and record their own reading progress. This emphasis in RĀPP on self-regulation was crucial in motivating students to engage with the written text.

The teachers valued the metacognitive orientation of this intervention for the way it supported the students to manage their own learning:

*Teacher: I liked the monitoring book that the tamariki could use to self-assess when they were ready to kōrero to an adult.*

## Assessment for learning

### He aromatawai i roto i te ako

Teachers and students engage constructively in goal-oriented assessment.

Assessment for learning is the cornerstone of the RĀPP approach. Because many students in Māori-medium education have not had the opportunity to learn te reo Māori from birth, the Ngā Kete Kōrero framework was designed with ascending reading levels instead of reading ages:

- harakeke (pre-emergent);
- kete harakeke (emergent);
- kete kiekie (developing reading);
- kete pīngao (developing fluency);
- miro (fluency).

Within each stage, there are ascending levels of difficulty. The levels are named using the vowels (for example, 'kete kiekie a', 'kete kiekie e', and so on).

Previous research had demonstrated that because of the phonemic regularity of te reo Māori, measures of reading competence based on accuracy and fluency tended to over-estimate level of reading comprehension. For this reason, two comprehension activities were prepared to accompany each book and tape.

At the start of the intervention, students were assessed to ensure that they received appropriate resources, given their current reading level. The researcher began each assessment with a brief discussion of a story, relating it to the student's experience. The student was then given three minutes of uninterrupted time to read the story silently for themselves. The researcher then asked them three oral questions involving recall.

If the student couldn't answer any of the questions, the researcher would choose another book at an easier level. If the student answered at least one question correctly, the student was then taped reading aloud for three minutes. The tapes were analysed for book level, accuracy, and number of correct and incorrect words per minute.

Following the oral reading, a cloze card was presented. This was a section of a different text at an identical level with target words blanked out. The researcher read the cloze card to the student, who was asked to supply words that would fit the gaps. Exact matches and appropriate substitutions were accepted. The two oral comprehension scores were then combined.

As a result of Nga Kete Kōrero research and development work<sup>17</sup> carried out over some time, criteria were set for identifying students' instructional reading levels. A text was determined to be at a student's instructional reading level if the student could achieve two of the following three criteria:

- reading accuracy level of 90 percent or higher;
- reading rate of 21 correct words or more per minute;
- combined oral comprehension score of 41 percent or more.

The teachers went on to use these assessments to identify when students' fluency and comprehension had improved to the point where they could increase the difficulty level of the texts used.

The students were also actively involved in self-assessment. They maintained monitoring books that helped them assess when they were ready to talk to their teacher or a parent about a book. The students understood that RĀPP was designed to help them achieve their goals:

*Cameron: They teach you words ... to make you brainy.*

*Aria: Because it helps me to learn how to read.*

*Mere: It helps you read ... by telling me the words.*

*Harre: You get better at reading because they [the tapes] help you read.*

<p><b>Alignment</b></p> <p><b>Tatarite</b></p> <p>Curriculum goals, resources, task design, teaching, kura practices, and home support are effectively aligned.</p>	<p>RĀPP can create a bridge between kura and iwi, thereby resourcing the use of te reo Māori in meaningful learning contexts. This smart tool draws on the funds of knowledge and expertise of local Māori and Māori who have created the resources.</p> <p>The RĀPP tapes, books, and assessment procedures demonstrate effective task design. In Kura 2, the principal was able to step in and use them. In Kura 1, parents and whānau successfully ran the intervention in the absence of the lead teacher. Because RĀPP is a smart tool, it can be adapted. However, an aligned approach involving classrooms, homes, whānau, and the collaboration of local iwi and whānau maximises the potential of educationally powerful connections.</p>
<p><b>Resources</b></p> <p><i>Full text copies of cited articles can be requested by New Zealand schools through the Ministry of Education's Research Behind BES service:</i></p> <p><a href="http://www.educationcounts.govt.nz/goto/BES">www.educationcounts.govt.nz/goto/BES</a></p>	<p>Berryman, M. (2007). <i>Repositioning within discourses of self-determination</i>. Unpublished doctoral dissertation, University of Waikato, Hamilton. <a href="http://adt.waikato.ac.nz/public/adt-uow20080429.133202/">http://adt.waikato.ac.nz/public/adt-uow20080429.133202/</a></p> <p>Berryman, M. (2011). Interview with Michael Deaker. Available on the BES website: <a href="http://www.educationcounts.govt.nz/goto/BES">www.educationcounts.govt.nz/goto/BES</a></p> <p>Berryman, M., &amp; Woller, P. (2007). RĀPP: Tape-assisted reading to support students' reading in Māori in two bilingual schools. <i>SET Research Information for Teachers, No. 2</i>, pp. 19–23.</p> <p>Medcalf, J. (1996). <i>T.A.R.P. The tape-assisted reading programme: A demonstrably effective reading programme</i>. Hastings: Special Education Services, Flaxmere.</p> <p>Medcalf, J., Moore, D., &amp; Medcalf, M. (2003). Listening to read: Further research on the tape assisted reading program (TARP). <i>Set: Research Information for Teachers 1</i>, pp. 22–25.</p> <p>Ministry of Education (2011). <i>He Reo Tupu, He Reo Ora</i>. Wellington: CWA New Media/Huia Publishers. Available at <a href="http://hereoora.tki.org.nz/">http://hereoora.tki.org.nz/</a></p> <p>Ngā Kete Kōrero Framework Team (1996a). <i>Ngā Kete Kōrero policy project report. Final report</i>. Wellington: Ministry of Māori Development.</p> <p>Ngā Kete Kōrero Framework Team (1996b). <i>Ngā Kete Kōrero framework teacher handbook: A framework for organising junior Māori reading texts</i>. Wellington: Huia Publishers.</p> <p>The series of 100 Māori language stories, at eight levels of the Ngā Kete Kōrero Framework were developed on tape by the Poutama Pounamu Research and Development Centre for an initial trial in 2003. Each book has two activities to further support the audio story. These activities are two cloze cards (kupu whakaurunga) and one three level guide (puāwaitanga). As technology is changing, new approaches to audio access and a widening range of stories are needed for students and whānau.</p> <p><i>He Reo Tupu, He Reo Ora</i> is a new online multimedia resource that provides opportunities for students to learn te reo Māori at primary school, and supports teachers who are teaching the language in an English-medium classroom setting. It can easily be adapted for secondary students. The resource includes unit plans, assessment information, second language learning information, and a DVD with animated cartoons in te reo Māori. The literal meaning of the title is 'a growing language is a living language'. The title signifies the way languages grow and evolve, and the importance of learning and using languages to keep them alive and dynamic.</p> <p>This exemplar advocates wider access to RĀPP for kura, whānau, and schools. However, the success of this intervention depends not only on the core resources but also on the expertise of those supporting the learning of teachers, students, and whānau to use them effectively.</p>

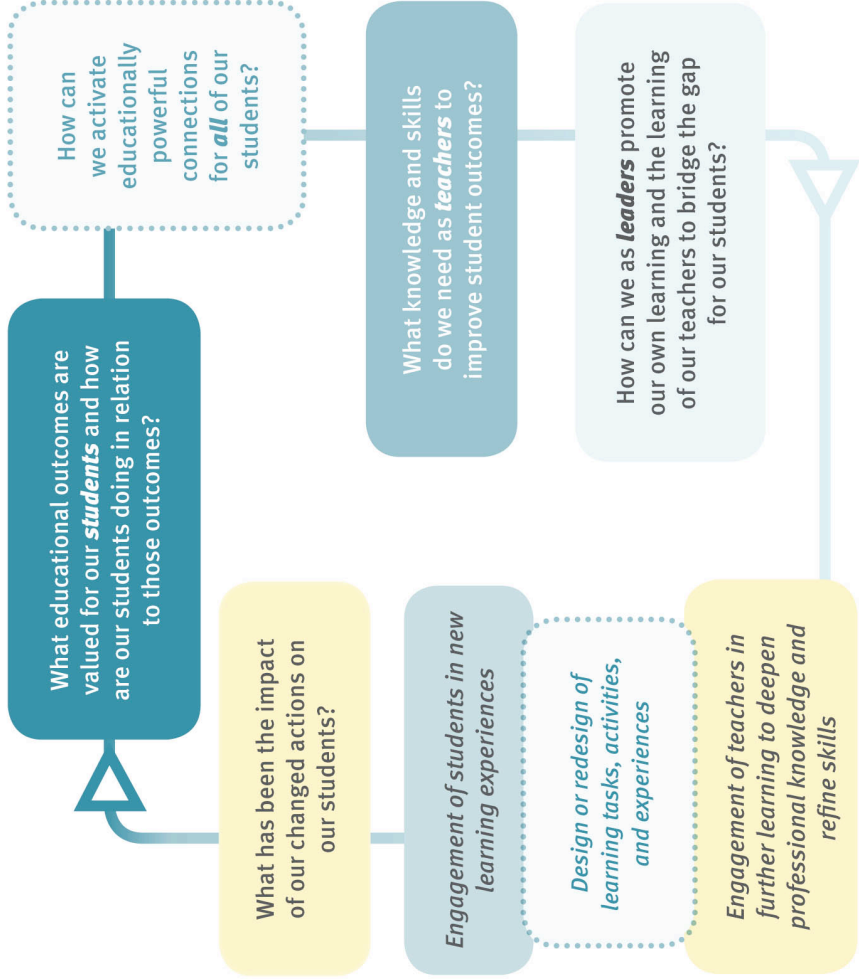
# Mahia te mahi : Professional learning: BES Exemplar 2 starter questions

## Valued student outcomes

What are our students' strengths in te reo Māori and what are their learning needs?

When and how do our students get opportunities to hear expert speakers of te reo Māori? Whose voices do our students need to hear? How can we ensure access to a wide range of engaging and fluent speakers on topics such as the students' sports and other heroes? How might we increase these opportunities?

When and how do we scaffold the language learning of our lowest achievers? How might we increase this scaffolding? Would RAPP be an approach worth exploring with our students? What impact do we think RAPP might have on our students and how will we track the impact?



## Teachers

What new learning will we need to engage in if we decide to develop and use RAPP? How will we do this? How can we access expertise to assist us?

How can we develop supports, resources, and routines to manage the practical challenges of RAPP?

How can we ensure the resources we use activate educationally powerful connections for all of our students?

How can we ensure that our students are supported to use the self-assessment activities?

How can we collaborate with whānau to support the use of RAPP at home as well as at school?

How can we integrate and optimise the use of RAPP in teaching practice to help normalise the use of te reo Māori in our classrooms?

How can we use the inquiry and knowledge-building cycle to make good decisions about our next steps?

## Leaders

What does the nationwide and school-wide student evidence tell us is happening for our students? Why is this happening? Where do we need to focus? How can we access expertise to guide us?

Would RAPP be an approach worth exploring at our school or in our region? What strengths would we bring to its implementation? What would be the impact of its development and use on teachers and on students?

How can we learn from these researchers' success in creating and brokering relational trust and collaboration across iwi, whānau, school, and student and other communities?

What are the implications of this for leaders? What new learning should we be engaged in? How will we do this? What is the role of the board of trustees?

Who are the people and what are the resources in our school, community, local iwi, and nation that can support us with this? How can we ensure that whānau themselves are able to

determine whether, how, and when they will participate? How can the processes of 'koha' help us to understand this better?

How can we create the system infrastructure to build upon the cycles of research and development that have resulted in such effective tools and processes?

As technology changes, how can collaborative research and development be advanced to ensure wide access to updated forms of RAPP for tamariki, rangatahi, teachers, and whānau across New Zealand and elsewhere?



## Appendix. BES Exemplar 2 implementation alerts

	Not recommended	What the research shows about more effective implementation
Whanaungatanga	Beginning the work with whānau after you have begun the work with their tamariki	<p>Plan carefully, well ahead of time.</p> <p>Recognise the important funds of knowledge that whānau bring as allies to their child's learning.</p> <p>Start with a small group of whānau and their tamariki. Try to include some whānau who already collaborate with you.</p> <p>Provide opportunities for whānau and their tamariki to get to know you and get to know each other.</p> <p>Get to know them better.</p> <p>If possible, include someone who can share their experiences of working with RĀPP elsewhere.</p>
Ako	<p>Telling whānau and their tamariki what you will be doing and what you want them to do</p> <p>Expecting that everyone must participate</p>	<p>Lay down the 'koha'<sup>18</sup>: what you would like to do and what benefits this would promote.</p> <p>Provide opportunities for whānau and their tamariki to ask questions and contribute their ideas.</p> <p>Co-construct reciprocal roles and responsibilities.</p> <p>Allow whānau to determine how they will participate.</p>
Mahi tahi	<p>Expecting that whānau cannot care for and return materials in a timely manner</p> <p>Running RĀPP without explicit links to individual reading levels and ongoing monitoring</p> <p>Selecting students' books and related materials for them</p> <p>Running the programme without a regular review and development of practices</p> <p>Meeting with groups of students to monitor their work</p> <p>Seeing this as merely listening and following the text</p>	<p>Have high expectations of whānau and their tamariki contributing and taking care of resources.</p> <p>Display the resources in an attractive and enticing manner and so that book levels are easily distinguishable.</p> <p>Use a regular and ongoing assessment, needs analysis, and review cycle, sharing this information regularly with the tamariki and their whānau.</p> <p>Make the goals transparent to whānau and students.</p> <p>Use explicit teaching to help students to understand their own reading level and how this applies in their selection of appropriate materials.</p> <p>Allow students to select their own book and related materials.</p> <p>Monitor regularly the selection processes and related activities to ensure that they are on track and the display remains attractive.</p> <p>Meet individually with students to monitor their listening logs, confirm their ongoing comprehension, and extend their work.</p> <p>Ensure a culturally responsive approach so that students can, in choosing their own materials, bring their own cultural knowledge and prior experiences to the reading task as the foundation for new learning.</p> <p>Give regular and specific feedback to tamariki and to whānau; this can be written or by word of mouth.</p>
Te Kotahitanga	Keeping the programme to yourself	<p>Maintain the relationships with whānau.</p> <p>Recognise and celebrate RĀPP successes with them.</p>

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- 1 Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London: Routledge.
  - 2 Waitangi Tribunal (2011). *Ko Aotearoa Tēnei: A report into claims concerning New Zealand law and policy affecting Māori culture and identity. Te Taumata tuatahi*. Retrieved from [www.waitangi-tribunal.govt.nz/doclibrary/public/reports/generic/Wai0262/KoAotearoaTeneiTT1W.pdf](http://www.waitangi-tribunal.govt.nz/doclibrary/public/reports/generic/Wai0262/KoAotearoaTeneiTT1W.pdf)  
This is also referred to as the WAI 262 Report.
  - 3 'Kaumātua' means 'knowledgeable and respected elders'.
  - 4 In response to a request from the Iterative Best Evidence Synthesis Programme, the effect sizes were initially calculated by Dr Paul Woller and then checked by Associate Professor Gavin Brown, Dr Earl Irving of the University of Auckland, and Professor John Hattie, of the University of Melbourne (then at the University of Auckland).
  - 5 Ministry of Education (2007). *Ka Hikitia – Managing for Success: The Māori Education Strategy 2008–2012*. Wellington: Ministry of Education. Available at [www.minedu.govt.nz/theMinistry/PolicyAndStrategy/KaHikitia.aspx](http://www.minedu.govt.nz/theMinistry/PolicyAndStrategy/KaHikitia.aspx)
  - 6 'Iwi' means 'tribe'.
  - 7 'Whānau' means 'extended family'.
  - 8 In education, a smart tool is one that supports professional, and in this exemplar, whānau learning, about how to advance student learning. Selecting, developing, and using smart tools was found to be a leadership practice that advanced valued student outcomes in the *School leadership and student outcomes BES*. Leaders select and design smart tools by ensuring they are based on valid theories and that they are well designed to serve their purpose. Tools are only designated 'smart' if the evidence indicates that they actually do advance valued outcomes for students.
  - 9 'Tamariki' means 'children'.
  - 10 'Ako' means 'reciprocity in teaching and learning'.
  - 11 'Kaiāwhina' means 'teacher aide'.
  - 12 This section draws on *The New Zealand curriculum* and the parallel document, *Te marautanga o Aotearoa*. It includes quotes and paraphrases from page 14 of *Te marautanga o Aotearoa* and page 14 of *The New Zealand curriculum*.  
Ministry of Education (2007). *The New Zealand curriculum*. Wellington: Learning Media.  
Ministry of Education (2008). *Te marautanga o Aotearoa*. Wellington: Learning Media.
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