MINISTRY OF EDUCATION
Te Tāhuhu o te Mātauranga

School Leadership and Student Outcomes: Identifying What Works and Why

Best Evidence Synthesis Iteration [BES]

Viviane Robinson, Margie Hohepa, and Claire Lloyd
The University of Auckland

BES
ITERATIVE BEST EVIDENCE SYNTHESIS PROGRAMME
http://educationcounts.govt.nz/goto/BES
New Zealand

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This report is one of a series of best evidence synthesis iterations (BESs) commissioned by the Ministry of Education. The Iterative Best Evidence Synthesis Programme is seeking to support collaborative knowledge building and use across policy, research, and practice in education. This series of syntheses draws together bodies of research evidence to explain what works and why to improve valued education outcomes and to make a bigger difference for the education of all our children and young people. Each synthesis celebrates the work of educators and the inquiry processes that enable educators and researchers to bring about sustainable improvements in education. Each is part of an iterative process that anticipates future research and development informing educational practice.

Earlier BESs have focused on effective teaching and professional learning in schools and on the impact of family and community influences on educational outcomes. This *School Leadership and Student Outcomes BES* will prove a crucial support for school leaders as they address our shared challenge of preparing all our children for the future.

The International Academy of Education has commissioned summaries of the recent BESs developed by the Ministry of Education. While the full reports provide the explanations and vignettes that are needed to support educational change, these short summaries will also be a convenient help for leaders. They will be available on the International Academy of Education website www.iaoed.org and on the UNESCO website http://unesdoc.unesco.org The first of these summaries to be published is:

> Timperley, H. (2008). *Teacher professional learning and development: Educational practices series 18*. International Academy of Education, International Bureau of Education & UNESCO. http://unesdoc.unesco.org/images/0017/001791/179161e.pdf

Further information is available at www.educationcounts.govt.nz/goto/BES, and feedback is welcome at best.evidence@minedu.govt.nz

Published by the Ministry of Education, Box 1666, Wellington, New Zealand 6140
www.minedu.govt.nz

New Zealand educators and educational leaders can order a hard copy of this publication from orders@thechair.minedu.govt.nz

While recognising that the development of a best evidence synthesis is a collaborative undertaking based on scoping and national guidelines developed by the New Zealand Ministry of Education and incorporating contributions from many others with relevant expertise, Viviane Robinson, Margie Hohepa, and Claire Lloyd assert their moral right to be recognised as the authors of this work

Dewey number 371.2
ISBN 978 0 7903 3265 9
Item number 33265
PDF ISBN 978 0 7903 3266 6

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Acknowledgments

The development of this synthesis has been a collaborative effort that has benefited from the support of many people.

The first acknowledgment must go to Dr Adrienne Alton-Lee, Chief Education Adviser, Ministry of Education, for without her vision and determination there would have been no Best Evidence Synthesis Programme. We are grateful, too, that Dr Alton-Lee recognised that it was of critical importance that the programme met the standards of excellence required by both research and practitioner communities.

The writers brought together an advisory group to provide sociological and methodological expertise, professional sector knowledge, and advice and feedback in a range of relevant areas, including Māori and Pasifika schooling. This group comprised Associate Professor Brian Haig, Professor Richard Harker, David Hodge, Debi Marshall-Lobb, Bev Pitkethley, Dr Kabini Sanga, Tali Temese, and Arapine Walker. We are grateful to these people for their wisdom, patience, and support.

We would also like to thank a number of others for their input at various stages in the iterative process by which this BES was developed:

Michael Mintrom assisted with initial scoping and with analysis of the New Zealand policy context. Professor John Hattie, Dr Ken Rowe, and Associate Professor Gavin Brown contributed extensively to the calculation and interpretation of effect sizes. Professor John Hattie and Professor Herb Walberg provided generous expert assistance with the meta-analysis and quality assurance for the content of Chapter 7. Dr Cathy Wylie made a crucial contribution to sections relating to the New Zealand educational context. By enhancing our understanding of sector-based issues, David Eddy helped us make the work accessible to practitioners. Retired Professor Patu Hohepa provided important feedback on our use of Māori terminology.

The authors of the studies on which the cases are based—Jeanne Biddulph, Dr Bryan Tuck, Dr Graeme Aitken, Dr Claire Sinnema, Professor Helen Timperley, Dr Barbara Scott-Nelson, Dr Mere Berryman, and Professor Ted Glynn—provided valuable advice and guidance.

Luke Williams made a substantial contribution to the organisation and preparation of the database of New Zealand theses. Cathie Benson and Beverley Thomson of the New Zealand Council for Educational Research created the national database of theses relevant to educational leadership.

The team at the Ministry of Education, led by Dr Adrienne Alton-Lee and supported by Darren Gammie, provided ongoing advice and, as the BES went through its many iterations, contributed significantly to its final shape. Dr Alton-Lee also extensively promoted this work among key stakeholders in New Zealand and members of the international educational research community.

An external management group, comprising representatives of numerous professional stakeholder groups and associations, provided oversight and timely feedback on key issues and sector-based concerns. We are particularly grateful to those members of this group who gave detailed feedback on drafts of the chapters.

Professor Ben Levin of the University of Toronto and Professor Michel Fullan acted as external quality assurors, bringing their considerable expertise and experience to this work. We have benefited greatly from their thoughtful feedback and critique. A number of other international experts, including Professor William Firestone of Rutgers University, Professor Kenneth Leithwood of the University of Toronto, Professor Karen Seashore Louis of the University of Minnesota, Professor Allan Luke of the University of Queensland, and Professor Doug Wilms of the Canadian Research Institute for Social Policy, offered advice and encouragement.

We are particularly grateful to Dr Claire Sinnema for her expertise in document formatting and creating figures and charts. We would also like to thank Sandie Gusscott of UniServices for her management of the contract and her tireless support of the writers.

Finally, we would like to thank our families for their patience and support as we worked through all the challenges associated with this project.

Viviane Robinson
Margie Hohepa
Claire Lloyd

Nāu te rourou, nāku te rourou, ka ora te iwi.
Through each of our contributions the people will thrive.

Forewords

Te Akatea

Kua noho pārekereke mai a Te Akatea mō te kaupapa, He Manukura, He Hua Ākonga o Te Kete Raukura[1] (BES) mai i te tīmatanga, ā, mutu noa, i runga i te kaha ū, me te mārama hoki ki te pānga nui o ngā tikanga manukura ki te whai mātauranga, otirā ki te whai oranga o ā tātou tamariki katoa.

Ka whāia haeretia te kaupapa nei, ā, ka turuki, he take; ka paneke he whārua, ka mutu ka whakatakotoria he kōrero hei āwhina. Mā te pēnei, kua whai kāinga tō tātou reo, tō tātou āhua o te noho ki roto i te tuhinga kua tāia nei.

Ko te hiahia kia mau ngā whakatau a Te Kete Raukura i ngā manukura katoa o te mātauranga, kaua anake i ngā tumuaki. Kei roto nei ko ngā hua papai o te rangahau hei papa kōrero mō te hunga ngaio ana te hihiri o te mahara, inā hoki kia hurihia ai ngā take pītaritari hei hua angitū kē. He nui hoki ngā kōrero kei roto hei āwhina i ngā kaiārahi ki te whakawhanaunga ki ngā hoamahi, ki ngā ākonga, ki ngā mātua, ki ngā whānau anō hoki, kia pono tahi ai, kia mana tahi ai te noho.

Ahakoa kei whea tātou e noho ana i te paepae manukura o te mōhio, o te pūkenga rānei, tērā e tawhiti atu ai te pae o te wānanga. E mea ana mātou ko tā Te Kete Raukura nei he whakatakoto i ngā kōrero taunaki pai ake, kāore ko ngā mahi pai ake, i te mea, tērā tātou e pai ake ai i roto i ā tātou mahi.

Kei te aronui atu ki te ngako tonu o Te Kete Raukura. Inā hoki, me whai wāhi nui ngā manukura ki te tuitui i ngā whānau ki ngā rau whaihua o te mātauranga. Mā te noho tahi pēnei e tūturu ai te whai tahi i te mātauranga, te kura, te kāinga, te hapori.

Me whakamihi rā a Tākuta Adrienne Alton-Lee mōna i whakapau kaha ki tēnei kaupapa. Māia ana tērā te ū ki tēnei mahi e whai wāhi ai ngā manukura me ngā kaiako ki ngā kete taunaki o te mātauranga e mārama pai ana ki a rātou. Ko tāna e whakapono nei, kia kai mai hoki te Māori i ngā hua o te mātauranga, ā, ko ia te tohu o te mahi tahi nā Te Tiriti o Waitangi i whakatau; he whiri tahi, he whaitahi i ngā huarahi ki te pae o te ora hei takahi mā te ākonga.

Ka mihi anō ki ngā kaituhi matua o Te Kete Raukura nei, arā, a Ahorangi Viviane Robinson rātou ko Tākuta Margie Hohepa, ko Tākuta Claire Lloyd. I mau anō i a rātou ngā tohu manukura o te rangatira, o te wānanga hoki hei raranga i ngā reo katoa i te kete nei, kia kotahi ai te ahu whakamua.

Te Akatea Maori Principals' Association has been involved in the *School Leadership and Student Outcomes BES* from start to finish because we are committed to and understand that school leadership has such an impact on the educational achievement and life opportunities for all our young people.

As we have had input at various stages of the project, we have raised issues, noted gaps, and made valued suggestions. By doing so, we have been able to ensure that the published document contains our voice and speaks to our realities.

We want to see all educational leaders, not just principals, take the findings of this BES on board. It provides a rich source of research findings that can be used as a basis for productive professional conversations, particularly when it comes to shifting the focus from challenges to opportunities. It also contains much that can help leaders build trusting, respectful relationships with colleagues, students, parents, and whānau.

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[1] Te kaupapa Whakairi i Ngā Kete Taunaki ki te Wharekōrero o Te Tāhuhu o Te Mātauranga

No matter where we are at on the leadership experience or skills continuum, we still have plenty to learn. We acknowledge and support that this BES is about best evidence, not best practice. We can always be more effective.

The central messages in this BES resonate with us. We note particularly the finding that leaders must play an important role in creating educationally productive connections with family and whānau. Positive collaborative relationships of this kind will make educational achievement a true partnership between schools, homes, and our communities.

We want to acknowledge the tremendous work of Dr Adrienne Alton-Lee. She has demonstrated incredible commitment to the task of giving leaders and teachers access to the fruit of current research in a form that they can relate to and use. Her passionate belief that Māori, too, must enjoy educational success, and her collaborative way of working, demonstrate the intent of the Treaty of Waitangi in action; providing a framework for collaborative pathways to make a better future for every student.

Te Akatea also acknowledges the lead writers of this BES, Professor Viviane Robinson, Dr Margie Hohepa and Dr Claire Lloyd. The professional leadership and academic dedication from this distinguished team ensured that all sector voices were heard and represented in this synthesis, ensuring that we were all on the same waka and heading in the right direction.

Debbie Marshall-Lobb
Shane Ngatai
Para Meha
Current and past presidents, Te Akatea

International

The Iterative Best Evidence Synthesis Programme of the New Zealand Ministry of Education is an important contribution to education not only in New Zealand but also internationally. The reviews of research that are being produced through this programme, including the present volume on leadership, are of enormous potential value. In this brief foreword we want to outline why we think this work is important and how it could fulfil that potential.

One of the important changes in education in the last 20 years has been the increasing recognition of the contribution education research can make to policy and practice. Not only do we know much more about effective policy and practice than we did a generation ago, there is growing interest in using that evidence to guide what schools and school systems do. In this regard, education is similar to other fields such as health, where the concept of 'evidence-based' or 'evidence-informed' policy and practice has become widely accepted.

The BES reviews respond to that growing interest in an especially interesting way. They are, of course, careful reviews of the research. That is a requisite but not easy to do. When setting out to create a synthesis, there is inevitably disagreement on such matters as which studies to include and how to weigh evidence across studies that differ in sample size, measurements, length of intervention, and so on. The Best Evidence Synthesis Programme takes a very practical approach to these issues, using clearly articulated processes that aim to include all research of reasonable quality while giving particular attention to New Zealand studies. These syntheses are also particularly valuable in that they include many specific examples and pay careful attention to what the application of the findings would look like in reality. Thus the subtitle: Identifying what works and why. While this feature may seem unremarkable, many reports of research give all too little attention to what the results might actually mean for educators.

The evidence base for the synthesis is impressive. There are over 280 references listed, and some of these are themselves reviews of large numbers of studies. The report is a great

statement of current knowledge. Of course knowledge is always provisional, and as more studies are done, we will learn more and some of our ideas will shift. That is true in every area of human inquiry. While we look forward to the refinement and in some cases changing of what we currently believe to be true, we are also of the view that the results of this synthesis provide a sound basis for educators to work from and that we can all be confident that moving in the directions suggested in this review is the right thing to do.

The *School Leadership and Student Outcomes BES* is a rich discussion of factors that school leaders can shape with the expectation that they will lead to better outcomes for students. It has long been thought that leadership is a critical determinant of school outcomes, and recent evidence, much of it reviewed in this report, has helped us understand how leadership works (or fails to work) to make schools better places for students. Robinson, Hohepa, and Lloyd work carefully through a large body of research to extract some clear and compelling findings and implications for school and system leaders. They weigh the evidence carefully in terms of both its methodology and its applicability to the New Zealand context. We were particularly impressed by the combination of what they call 'forward mapping' and 'backward mapping' strategies. Looking at research on improved outcomes and then extracting the leadership implications is an innovative and useful approach. The discussion of community and family influences is also important as a balance to the strong focus on in-school activity in many of the chapters.

What is most impressive is the specificity and precision of the key findings. This is not a descriptive document but rather one that gets inside complex issues and explains them insightfully and causally. For example, the authors show that 'transformational leadership' is not specific enough to make a difference. Rather, what is needed is focused 'pedagogical leadership', in which the principal participates directly with teachers as a learner, figuring out how to make progress in terms of students and their needs. School leaders need to be leaders of teacher learning rather than just facilitators of collegial discussion.

The authors do not stop with incisive analysis. They devote an entire chapter to the 'knowledge, skills, and dispositions' of effective leaders that arise from their findings. In other words, they focus also on the 'hows' of leadership.

We believe that any school leader, system leader, or person with an interest in educational improvement or leadership will find this report stimulating and valuable. Certainly both of us did.

Having such a high-quality review is an important accomplishment, but it is not enough. This is a long document—290 pages and more than 100,000 words. Although well-written and full of useful information, it is likely that relatively few practitioners or policy makers will read the report in its entirety or remember all of its key points. We know also that written documents, while important in generating knowledge from research, are insufficient to create changes in behaviour. The 'mobilisation' of this knowledge, and its transformation into changed and better schools, will require much effort beyond the publication of this important report.

The challenge for all partners in New Zealand (and beyond) will be to make sure that the lessons and implications of this synthesis leap off the pages and become part of the fabric of education. This means much more than creating some professional development events or new resources. It means considering how the findings herein can be reflected in school and national policy. (This is particularly important in a country like New Zealand, which has such a decentralised education system.) It means monitoring to see if practices seen as desirable are in fact in place in most schools or are being adopted by ever more schools. It means finding ways in which these ideas can be translated into 'the way things are done around here'. This represents a huge implementation challenge.

This BES report on leadership will be for nought unless there is a concerted plan to develop the core capacities of effective leadership in all New Zealand schools. For us, this would need to mean more than simply deriving a plan from the findings. It would mean taking

a concrete problem (such as raising the bar and closing the gap in literacy in New Zealand schools) and incorporating the key leadership capacities into the implementation of that plan. It is always better to start with the concrete and then incorporate whatever is needed to bring about improvement.

All of this will take time and dedicated effort. It is, however, the only way that the promise of this report will be achieved. An important milestone has been reached with the publication of this BES, but its true value rests in the actions that all of you, individually and collectively, take to ensure that its learnings guide education in New Zealand in the future. Many useful education research reports have been produced over the years, but few have had the impact on practice that they might have had. We urge all readers to take active steps to ensure that the full value of this great report is realised.

Ben Levin, Professor and Canada Research Chair, Ontario Institute for Studies in Education, University of Toronto
Michael Fullan, Professor Emeritus, Ontario Institute for Studies in Education, University of Toronto

New Zealand School Trustees Association

The contents of the *School Leadership and Student Outcomes BES* build our knowledge and understanding of leadership. However, the final document reflects only a small proportion of the influence that this work has had for those of us who have been involved in its development. The process of developing the BES has triggered new learnings. It has built stronger links, within and across the sector, between academics and practitioners, and it has provided springboards for new initiatives in leadership.

Best of all, we found that "unpicking" each section, as we reviewed it, raised questions in our own minds and those of our colleagues and helped us to think in a more disciplined way about what matters: our students, and how leadership contributes to enhancing their achievements.

The researchers faced a particularly daunting path as they worked through the iterative processes and challenges. They were tested at times, but the final result is a robust resource that inquires, informs, and guides.

As representatives of boards of trustees, we acknowledge the quality and unique nature of the educational leaders in our schools. How we select, develop, and "grow" these leaders is of critical importance. High-quality leaders are essential to operating our successful model of schooling and contributing to the education system as a whole.

The leadership BES also poses a new challenge. We have to ensure that as we continue to build the capacity of one group of leaders—principals and school leaders—we do not forget to look at comparable capacity building for the other group—members of boards of trustees. Within our unique model of self-management, we must ensure that a balance exists and promote highly effective governance.

NZSTA commends the researchers on a job well done and applauds Adrienne Alton-Lee for getting us there.

Lorraine Kerr, President, New Zealand School Trustees Assocation
Elaine Hines, Manager Training and Development
Colin Davies, Manager Service Delivery

New Zealand Principals' Federation

The New Zealand Principals Federation (NZPF), as one of the instigators of the *School Leadership and Student Outcomes BES*, gave feedback to the writers during the creation of this work. NZPF representatives robustly challenged and scrutinised the work as it progressed, and we now welcome its completion and its affirmation of the importance of principals' leadership.

The strengths of this BES lie in its potential to be used by school leaders as a formative tool and in the recognition it gives to the rich complexity of New Zealand's current governance model. It also provides information that leaders can use to help them set priorities that reflect what is important for student learning.

With the change to Tomorrow's Schools in 1989, transformational leadership was necessary to introduce and embed self-management. Twenty years on, however, in today's more global society, school leadership needs to change the focus to reflect the need for a more pedagogical approach within our current self-managing context. We know that the closer leaders are to the learning, the more likely they are to have a positive impact on students' achievement.

If principals are to embrace the potential within this very useful document, it's important that the BES is not used to evaluate current leadership practice in a summative or prescriptive way. Using it in such a way could lead to unintended and undesirable outcomes. The findings have important implications for the policy makers who are charged with advancing professional leadership. It is vital that they understand both the spirit and the intent of the leadership BES so that they can build on its potential to exert a positive influence on leadership across New Zealand's schools.

The NZPF believes this document is a tool that will support, enhance, and challenge current leadership practices. We would be very disappointed if it was perceived as only setting out a model for compliance.

The NZPF supports the opportunity that this valuable document offers to principals to deepen and update their professional knowledge. In particular, we recommend that principals use this BES as a personal tool that gives them information to reflect on and use to enhance best practice in their diverse school contexts.

Ernie Buutveld
President, New Zealand Principals' Federation

New Zealand Pasifika Principals' Association

Pasifika principals congratulate the writers of the *School Leadership and Student Outcomes BES*. The findings of this BES identify leadership dimensions that impact positively on outcomes for students.

Knowledge of these leadership dimensions equips school leaders to focus on the core business of teaching and learning, which leads to improved student outcomes. Well-informed leadership is critical to improving outcomes for Pasifika students, whose academic success levels in New Zealand education remain low. The education system's failure to address the needs of Pasifika students continues to be a cause of national concern. For example, there is no clear policy direction to help schools build on the language diversity of children who move from Pacific Islands language nests into primary schools.

We acknowledge that there is a lack of research on leadership that relates directly to improving outcomes for Pasifika students in New Zealand. We also note that many initiatives to improve

student learning have so far failed to make a significant impact on the achievement of Pasifika students. Leaders need a vision that has Pasifika students achieving excellence in New Zealand schools. While some do achieve at a very high level, they are too few. Much more needs to be done and done quickly. Stand-down, suspension, exclusion, and expulsion rates for Pasifika students continue to be high relative to the total school population. This BES, like those before it, highlights a continuing dearth of research and development with a focus on improving provision for Pasifika students in New Zealand. We therefore strongly recommend caution so that this document is not regarded as a panacea that will address all leadership challenges, including the challenge of improving Pasifika students' levels of academic achievement. Historically, raising the academic achievement levels of these students has been challenging, and it continues to be so.

Pasifika people in New Zealand are truly diverse. There is diversity in their ethnicity, academic achievements, economic resources, languages, and family composition. About 60 percent of Pasifika students are New Zealand born. Some Pasifika families have been here for many generations, while others are recent arrivals. Pasifika students currently make up more than 9% of our student population. It is estimated that by 2021, 17% of New Zealand young people will be Pasifika.

The academic success rate across the group of Pasifika students remains low. Currently we do not have the critical mass of Pasifika people in school leadership to successfully implement the findings of this BES in a way that will significantly benefit Pasifika students. Growing, developing, and nurturing Pasifika leadership in New Zealand education must be considered a policy priority if we are to lift academic success for Pasifika.

Enosa Auvaʻa, Faʻatili Iosua Esera, Soana Pamaka, Sonia Davies, and Tali Tiatia
New Zealand Pasifika Principals' Association

New Zealand Association for Intermediate and Middle Schooling

The *School Leadership and Student Outcomes BES* provides an engaging practical tool for school leaders responsible for the education of students in the middle years. Emerging adolescents are a unique group and require a specific style of teaching and therefore a specific style of leadership.

The primary focus of middle school leaders is to know what is happening with this age group and to have empathy with them. Emerging adolescents experience many changes in their lives; they are changing academically, emotionally, physically, and socially. This brings a unique dimension to the issues of leadership in intermediate and middle schools.

How we provide leadership is determined by the issues that we face in our daily lives. This BES acknowledges that during a leader's journey in a school, a variety of leadership strategies are required. The impressive depth of the research, both qualitative and quantitative, and the use of various research methodologies, including case studies, make this a most worthwhile document to inform leadership practice.

We recommend that middle school leaders reading through this BES allow themselves time to reflect on their own practice as leaders.

Dr Brian Hinchco, Wendy Esera, and Bill Noble
New Zealand Association for Intermediate and Middle Schooling

Secondary Principals' Association of New Zealand

The Secondary Principals' Association of New Zealand (SPANZ) welcomes this document and is confident that it will make an important contribution to the knowledge about how to be a highly effective leader. The big message from the *School Leadership and Student Outcomes BES* is that the more leaders focus (in their relationships, their work, and their leadership) on the core business of teaching and learning, the greater will be their influence on student outcomes. This BES provides reviews of international and local research that will help current and aspiring principals to raise achievement and reduce disparity in our schools. It will improve outcomes for all students, including Māori and Pasifika students.

The leadership BES draws together relevant research findings from around the globe and then links these findings in a most exciting way. The authors have provided us with a carefully researched document about in-depth professional learning, and this provides a strong basis for the future of educational leadership in New Zealand schools. The leadership BES also makes a significant contribution to global knowledge about educational leadership. SPANZ is very proud that Professor Robinson has already received two international awards in recognition of the early work for this BES—the Hedley Beare Award and the Davis Award.

This BES clearly outlines the five leadership dimensions that have the most significant impact on student outcomes. It identifies what works and why. Of these dimensions, "promoting and participating in teacher learning and development" has the biggest effect—it is twice as effective as "establishing goals and expectations" or "planning, coordinating, and evaluating teaching and the curriculum".

The leadership BES has also successfully identified the leadership knowledge, skills, and dispositions that lead to positive outcomes in both Māori-medium and English-medium classrooms and schools. The information that building relational trust is critical to managing change will come as no surprise to educational leaders. However, the in-depth discussion in the BES will provide invaluable support to leaders as they focus on building this trust.

The careful analysis and synthesis of the research findings in this BES will not only help leaders in schools but will also guide government investment in school leadership. The leadership BES is a rich, deep, and easily accessible document. Its publication is a breakthrough in educational leadership research. SPANZ is delighted to have been involved with the leadership BES development process and congratulates the authors on this world-leading research synthesis.

Peter Gall
President
Secondary Principals' Association of New Zealand

New Zealand Secondary Principals' Council

It has been a professional privilege for the New Zealand Secondary Principals' Council to be part of the external management group throughout the development of the *School Leadership and Student Outcomes BES*. We applaud the Ministry of Education's vision in funding such a comprehensive, ground-breaking synthesis. In particular, we applaud Dr Adrienne Alton-Lee for her leadership of the project.

We know that school leadership makes a difference. We also know that the great bulk of the literature on school leadership does little to explain how leaders can generate significant changes in what teachers teach, how they teach, and how well students learn. The substantial achievement of this BES is that, for the first time, we have lucid, detailed, research-based

explanations of the links between the work of school leaders, the work of teachers, and student outcomes.

The report acknowledges that New Zealand principals, in our highly devolved education system, work very hard. In the Tomorrow's Schools environment, there is a risk that a disproportionate amount of principals' time may be taken up by financial, property-related, and administrative matters.

The research in the BES tells us, with greater clarity than ever before, that school leaders are most effective when they are at the centre of the teaching and learning in their school, that is, when they are pedagogical leaders. They are most effective when they set clear pedagogical goals, when they develop staff consensus around those goals, when they provide the tools for teachers to achieve the goals, when they immerse themselves, as leaders, in the professional development associated with those goals, and when they foster trustful relationships in their schools.

Given how busy principals are, becoming effective pedagogical leaders will be a challenge! It is, however, a challenge that the NZSPC completely endorses. We also endorse the idea of distributed leadership, which is embedded in this BES. Beneficial pedagogical changes in secondary schools can be made only when a wide variety of leadership roles in schools is affirmed and supported.

We applaud the intellectual virtuosity of the writers of this BES, and we hope that it will have a substantial influence on how secondary school principals go about their work.

Graeme Macann
Chairperson
New Zealand Secondary Principals' Council

Normal School Principals' Association

The *School Leadership and Student Outcomes BES* underlines the need for school leaders to focus on pedagogical leadership. It identifies and describes aspects of leadership that result in improved student outcomes and, in doing so, provides a valuable tool for professional reflection, engagement, development, and action. While not exhaustive, this best evidence synthesis is extremely valuable and significantly progresses the literature on educational leadership in the New Zealand setting. We applaud a research base that is specific to educational leadership and its impact on student achievement. We have not previously had this clarity.

The leadership BES should inform the future direction for leadership in New Zealand schools. This will enable schools to build on the progress already made in terms of balancing the managerial and pedagogical leadership demands of a self-managing educational environment. As well as providing a sound basis to inform policy making, the BES will guide further research and development relating to the leadership dimensions that are needed to improve students' learning outcomes and to the interplay between these dimensions.

The key messages of the BES need to be made accessible to the educational leadership community throughout New Zealand. Understanding these messages will add depth to leaders' understanding and enable them to construct possible pathways forward that will engage professional educators at all levels and lead to improved student engagement and student achievement. Our hope is that leadership development programmes will take account of the findings of this research. School leaders, wherever they are located and whatever their position on the continuum of leadership, should be conversant with this BES in order to effectively lead and nurture leadership.

It should be noted that this BES has a clear synergy with an earlier document, the *Teacher Professional Learning and Development BES*, and promotes the same "teaching as inquiry" model. The challenge for the profession is to use these two documents to improve the effectiveness of teaching and learning.

Irene Cooper, Diane Leggett, Jennie Stewart, John Faire, and John McKenzie
The Normal School Principals' Association Executive

New Zealand Area Schools Association

The New Zealand Area Schools Association is very pleased to see this important piece of research on the connection between school leadership and student learning outcomes. There is no shortage of research and reports on leadership in education, but to have some that is New Zealand based is very rare. To have research carried out with the thoroughness of the BES team makes it even more valuable.

This research has the potential to lead to significant change in the leadership of New Zealand schools. It is currently recognised that New Zealand principals carry a greater load of administrative responsibility than anywhere else in the OECD. In area schools, this responsibility is especially heavy. These schools are all in rural areas, and the research shows that rural principals carry a greater administrative load than their urban counterparts. In providing an education for students ranging in age from 5 to 18 years, area school principals also have to oversee all the issues and challenges of both primary and secondary education.

As a result of the *School Leadership and Student Outcomes BES*, we now have proof that a focus by principals on promoting and participating in teachers' professional learning and development is the single most significant factor in improving student outcomes.

The challenge now, for all associated with student learning, is to turn these findings into reality. Schools have to use data to guide them in their strategic planning, and with the publication of this BES, data is now available for the authorities to use to make decisive and effective changes in school leadership. To ignore this research would be to blight the chances of current and future generations of New Zealand students.

John Garner, for the New Zealand Area Schools Association

Deputy and Assistant Principals and Syndicate Leaders, Primary and Intermediate

In our everyday working lives as teachers with leadership responsibilities, we are bombarded with educational literature, some of which is relevant and some of which is not. We are grateful, therefore, to the authors of and contributors to the *School Leadership and Student Outcomes BES* for making sense of research and providing us with a guide and a reference tool. It is reassuring that the tool so validates our roles within the school.

School leaders often have one foot in the principal's office and one in the classroom. We are, therefore, uniquely placed to influence and model best practice for positive student outcomes. The leadership BES, while acknowledging that all schools are unique, places its priority on improving student outcomes. This BES is a tool that empowers us to make informed decisions based on evidence, case studies, and theory. It clarifies our thinking and helps us to prioritise.

The significant findings of the BES are outlined in the early chapters and these, we believe, are essential reading for all school leaders and teachers. We found that reading the early chapters triggered reflections on our own current practice and motivated us to read the later chapters and gain a deeper understanding. For example, evidence of how significant a role homework can have in supporting or undermining student achievement is mentioned early in the BES, and then Chapter 7 offers the reader related case studies and analysis. This provides insight to help guide each school in developing homework principles as a positive way of connecting home and school.

Leadership manifests itself in a variety of ways in the school setting. Whether school leaders are looking for guidance at a personal, team, school, or community level, we believe that this BES will be both affirming and supportive in helping us all to improve student outcomes in our diverse educational settings.

Adrienne Plowright, Assistant Principal, Farm Cove Intermediate School, Pakuranga
Sarah Pledger, Syndicate Leader, Balaclava School, Dunedin
Michael Gendall, Deputy Principal, Fergusson Intermediate, Trentham
Martin Hookham, Deputy Principal, Korokoro School, Lower Hutt
Richard Arthurs, Assistant Principal, Manurewa East School, Manukau
Denise Hancox, Deputy Principal, Ngaio School, Wellington

National Association of Secondary Deputy and Assistant Principals

Educational leaders have a responsibility to be aware that their leadership will have a significant impact on the outcomes for students in their school. This document is a synthesis of 134 studies, both local and international. The *School Leadership and Student Outcomes BES* provides the reader with an insight into what the evidence suggests is best practice. It identifies the links (some of them complex) between leadership and student outcomes, and it enables the reader to begin to understand which leadership dimensions have the greatest impact on student outcomes.

This BES describes the specific leadership dimensions that are desirable to improve the outcomes for Māori and Pasifika students. By drawing on local initiatives, such as Te Kotahitanga, educational leaders can gain an insight into the diverse cultural challenges that exist for all school leaders.

The use of vignettes to illustrate a range of approaches makes the document both readable and engaging. The vignettes challenge the reader to reflect on current practice and illustrate some practical ideas for further development. The executive summary and the individual chapter summaries that are included in the document enable it to be used in a variety of ways. The diagrams that appear throughout the BES provide visual support for the text and summarise key messages.

What is most exciting about this synthesis is that it supports the idea that distributing leadership across the school is empowering. The closer that leaders get to the core business of teaching and learning, the more significant is their impact on student outcomes. It is therefore vital that schools recognise the importance of growing leadership capability within all areas of the school community. This document is a "must read" for all educational leaders.

Annette Taylor, Nelson College Assistant Principal, and NASDAP President
Joanna Leaman, until recently Tawa College Assistant Principal and Wellington DAPA Executive
Denise Johnson, Wellington High School Deputy Principal
Maree Flannery, Pakuranga College Deputy Principal

NZEI Te Riu Roa

NZEI welcomes the publication of the *School Leadership and Student Outcomes BES* and recognises the size of the task and the work involved in bringing it to fruition. NZEI applauds the consultative process of this leadership BES. Many key groups have had the opportunity to be represented on the steering group, and a range of professionals have responded to the BES and given feedback. This BES has identified theories on which to base positive action and dimensions of leadership that lead to improvement in student outcomes. The BES is clearly focused on student achievement, high standards, and pedagogical leadership.

It was encouraging to see the links made to the OECD country reports and the attempts that have been made to weave through the report the responsibilities that are specific to New Zealand principals. NZEI supports the inclusion of Māori conceptions of leadership, which not only improve student outcomes but also have a positive impact on the school and the wider community.

The document includes information about areas of immediate interest to practitioners at different levels of leadership practice and presents these in such a way that readers can select sections of immediate interest or relevance. This will support research-informed practice and highlight the important part that relationships play in leadership in New Zealand schools. The vignettes bring life to the document and act as exemplars of effective practice. They illustrate diverse experiences in the New Zealand setting, which make this research more easily accessible to a wider audience.

The journey to successful leadership depends on efficiency and effectiveness across all the dimensions of leadership practice over time. The BES identifies the five dimensions of leadership that have the most impact on student learning, and the challenge for school leaders is to interpret this information in relation to their own context and their identified priorities at a given time. It takes time (and may involve career path changes) to move forward from novice to expert practitioner in leadership roles and to learn to be effective in different contexts. New leadership practices or dimensions come to the fore at different stages.

The BES strongly affirms the power of effective leadership to improve student outcomes. However, leaders' practice is influenced, over time, by a range of variables, which can interfere with a focus on pedagogical leadership, and a different focus may sometimes be valid in a specific context. A good leader ensures that other leaders are developed within the school and ensures that they have opportunities to use and develop strengths, with professional development tailored to individual needs.

The idea that schools will need external experts to help them effect change creates a challenge for rural schools, where there is not the breadth of leadership to support the principal's position. Providing such experts would require shifts in the policy and resourcing infrastructure. It is good to see many of the challenges of leadership acknowledged, and we note that the conclusions of the report included a request for further research. NZEI welcomes the idea of further research that will take into account the diverse range of leadership practice in New Zealand. Such research will be necessary to extend the reach of this BES so that it can meet its potential in terms of user uptake.

NZEI would like to see the evidence provided by this BES forming the basis of planning for leadership and sustainability for the schools of the future. The best evidence tells us that providing pedagogical leadership, at all levels throughout a school, is crucial for this sustainability.

We confirm the view of the researchers that this BES is a starting point for good practice and that, on a national basis, time and support need to be provided to enable groups of professionals to engage in informed and robust debate on effective leadership.

Frances Nelson
NZEI Te Riu Roa National President
Te Manukura

New Zealand Post-Primary Teachers' Association

NZPPTA is a union that understands the importance of strong professional leadership and supports initiatives that provide high-quality, well-resourced support for secondary schools. This has guided our involvement in the development of this and previous best evidence syntheses, in our current provision of Curriculum Support Days, which help secondary teachers to grapple with the new curriculum, and in our provision of regular professional conferences that are open to everybody. To this end, NZPPTA endorses this very practical guide towards excellence in educational leadership.

The *School Leadership and Student Outcomes BES* presents the research evidence that connects school leadership and student outcomes. It affirms that the most effective type of leadership in schools prioritises pedagogical leadership over those aspects of leadership that are more management-focused. The second part of its title—"Identifying What Works and Why"—speaks of the accessibility of this BES; in many ways it reads like a "go to …" manual. School leaders can save themselves a great deal of uncertainty and time by reading this synthesis of the research into school leadership.

This BES affirms the importance of the relationship between researchers and schools, where the process of inquiry into what works and why is grounded in the real experiences of teachers, students, and school leaders.

The BES also recognises the importance of a school culture that values and supports staff professional learning and development. Teachers flourish in highly collaborative environments where there is a strong sense of collective responsibility for improving outcomes. The active involvement of all members in such a school culture is vital – it connects principals, senior and middle management, and classroom teachers. The leadership BES confirms the value of distributed leadership as an essential element in building a positive school culture. School leaders, from heads of department and faculty through to senior management and principals, will find this document an invaluable practical resource.

Leadership today is not what it was 20 years ago. The goalposts have changed. This BES challenges some beliefs about what is effective but encourages shifts towards interrogating leadership practice in very positive ways, which are supported by research evidence and data. Where there are resourcing implications for implementing the effective practices that are described in this BES, it is imperative that this is recognised in government policy for funding schools.

The need for funding raises significant challenges to governments that believe in the fundamental importance of quality public education. The New Zealand government has recognised the importance of pedagogical leadership in programmes such as the First-time Principals' programme, the Aspiring Principals pilot, and the new programme provided by School Support Services as part of the recently launched Professional Leadership Plan 2009–10. However, the real work of dismantling the administrative tasks that distract principals from focusing on pedagogical leadership has yet to be done.

Kate Gainsford
President
New Zealand Post-Primary Teachers' Association

New Zealand Catholic Education Office

The *School Leadership and Student Outcomes BES* will be warmly welcomed and applauded by the education community. It brings into sharp focus the philosophies and practices that

New Zealand principals and other school leaders can use to attain high achievement levels for all their students, irrespective of their socio-economic backgrounds.

The wealth of New Zealand is its people. High standards in education are the primary drivers both to lift economic performance and to strengthen the social mosaic of our diversity. This nation is inextricably linked to the Asia–Pacific region, where two-thirds of the world's population lives. Despite our small size we are a respected international player, and we can continue to be so if the educational outcomes of our young people are world-class—not only at the top end of the spectrum but across all our young people. We face challenges in achieving this goal!

Progress in educational achievement is incremental rather than resulting from a sudden revolution. Principals' leadership that is focused on pedagogical goals is crucial if schools are to succeed in making this progress. The other part of the recipe for success is learning leadership delivered by classroom teachers who work collaboratively with each other, and with their students and parents, to lift student achievement. The fact that growing numbers of New Zealand schools are demonstrating that it is possible to do what once seemed impossible proves that the approaches to leadership learning outlined in this BES actually work. "Yes we can!" is a chorus that we could all adopt.

As we focus on pedagogical leadership, we must not lose sight of the wide range of actions and attitudes that students instinctively respond to. Student achievement occurs when those who deliver their education show a professional love of their work and are dedicated to the welfare of their charges—when they actively engage their students and recognise that the students themselves have useful things to say about how they learn. At the same time, school leaders need to create a culture that respects the humanity and sacredness of individual students. The school should welcome students and make them feel that their school is their place. An effective school culture is also goal orientated and well organised. Excellent pedagogy, embedded in such a culture, will ultimately bring about the achievement we all desire.

The research-validated ideas and approaches to leadership that are analysed in this BES will contribute to the educational effectiveness of leaders, not only in New Zealand but also in the international community. The BES will also enhance the reputation of our educational researchers. Most important of all, it provides the tools that will enable our teachers to meet the challenge of ensuring that all our students can achieve to their potential, so that they will be better able to contribute to the well-being of our global community of nations.

The Ministry of Education and the authors are to be congratulated on this BES, which will be very helpful to the principals, teachers, and administrators who systematically study and analyse its findings. Kia kaha.

Pat Lynch
New Zealand Catholic Education Office

Independent Schools of New Zealand

The *School Leadership and Student Outcomes BES* takes an in-depth look at pedagogical leadership. There is no doubt that the role of educational leader is becoming ever more complex, encompassing not only educational responsibilities, but areas from human relationships through to finance and marketing. While recognising the wide range of roles that principals are asked to take on, this BES focuses specifically on pedagogical leadership and how, by exercising this kind of leadership, principals can most effectively facilitate student learning.

Leadership is of crucial importance in any organisation and, in this respect, schools are no different. Anecdotally, we all know the impact that good leaders have on their schools. By

acting with integrity and treating others with respect, they build trusting relationships and create environments in which inquiry, risk taking, and collaborative effort are encouraged.

Despite the increasing demands on our time, we must not lose sight of the importance of the pedagogical leadership role and the positive effect that this type of leadership can have on teaching, learning, and—most fundamentally—student outcomes.

Julie Moor, Principal, Rangi Ruru Girls' School, Christchurch
Lynda Reid, Principal, St Cuthbert's College, Auckland
Graeme Yule, Headmaster, Scots College, Wellington

New Zealand Educational Administration and Leadership Society

The New Zealand Educational Administration and Leadership Society (NZEALS) applauds the authors of the *School Leadership and Student Outcomes BES*. Their focus on learning and teaching as being at the heart of New Zealand school leadership is a welcome emphasis. We recognise the challenges in New Zealand education and the need for leaders to reflect on evidence. This BES has the potential to have a significant impact on learning for students, teachers, leaders, and the community.

The BES document is a timely reminder that leaders need to focus on the core activities of teaching and learning. It encourages school leaders to review priorities, focusing on the learners, pedagogy, and the community. We strongly recommend that every educator read this document.

One of the major achievements of this BES is identifying the dimensions of school leadership that make a difference for students and describing the knowledge, skills, and dispositions needed for effective leadership. This document will prompt leaders to review priorities and to use the best evidence to make informed decisions that will raise student achievement and well-being, thus beginning an iterative cycle of reflection and action.

NZEALS affirms the main message of the document: that school leaders can create the conditions for success. When leaders have a deeper understanding of the teaching and learning processes, they can lead and participate in discussions with teachers and other leaders, bring about necessary changes, and raise student outcomes.

NZEALS is comprised of early childhood, primary, secondary, and tertiary leaders. On behalf of the Council and our members, we endorse the message of this BES because we believe that student success is a necessity, not an option. We thank the Ministry of Education for its foresight in having such a valuable document created. The challenge for educational leaders now is to apply the evidence and transform their practice.

Dr D. Annie Henry, National President, New Zealand Educational Administration and Leadership Society
Peter Garelja, past National President and Principal of Tikipunga High School
John Taylor-Smith, National Vice-President and Principal of Miramar School
Dr Barry Brooker, Canterbury Branch President and Associate Dean of School of Education, University of Canterbury
Dr Paul Potaka, Council Member and Principal of Nelson Central School
Denis Slowley, Otago Branch President and Principal of Bayfield High School
Cheryl Stephens, Council Member and Academic Registrar at Te Whakahi Wananga o Awanuiarangi
Pip Wells, Nelson Branch President and Principal of Tasman School

National Education Monitoring Project

Given the unique organisational structure and leadership roles inherent in New Zealand schooling, it is surprising that anyone would agree to undertake an analysis of the relationship between that leadership and student learning outcomes. To have executed such an analysis with the insight, care, and thoroughness that Viviane Robinson, Margie Hohepa, and Claire Lloyd have is truly remarkable.

This *School Leadership and Student Outcomes BES* combines a thoughtful examination of the issues that shape the challenge of leadership in New Zealand's schools with a rigorous analysis of the multifaceted nature of the relationships that link leadership to learning. The authors take an inclusive view of seemingly disparate views of leadership, showing how these might be viewed as complementary rather than competitive. They blend quantitative and qualitative data intelligently and appropriately, drawing from each approach what might best be gleaned from it.

At the National Education Monitoring Project, we are always seeking ways to better understand how educational processes influence the bigger picture of progress at the national level that we see in our research. In this BES, Robinson, Hohepa, and Lloyd explore the critical linkages between leadership practices and student outcomes that are so essential to understanding this vital aspect of the educational enterprise. The leadership BES is an exemplary and accessible piece of scholarship, one that will benefit practitioners, policy analysts, and researchers, not only in New Zealand but around the world.

Professor Jeffrey Smith
Co-Director, National Education Monitoring Project
University of Otago

Education Review Office

The Education Review Office (ERO) welcomes the publication of this significant Best Evidence Synthesis and endorses the authors' focus on the influence that effective educational leadership has on improving student outcomes. ERO's whakataukī, *Ko te Tamaiti te Pūtake o te Kaupapa*, recognises that the interests of the child must be at the heart of all educational discourse if we are to make a real difference to student achievement in New Zealand. The *School Leadership and Student Outcomes BES* augments the series of best evidence syntheses by providing further insights into the complex relationships and practices that underpin an education system which seeks success for all New Zealand children.

Both in its school reviews and in its national education evaluations, ERO has found leadership to be one of the most frequently identified indicators of school effectiveness and student achievement. Whether investigating schools' relationships with parents and communities and how these enhance student achievement, assessing the impact of teachers' professional learning and development in terms of improved practice, or looking at how well schools respond to the diverse learning needs of groups of students, ERO consistently finds that the quality and nature of school leadership has a profound impact on positive student outcomes.

This BES emphasises that involvement in the core business of teaching and learning is essential for educational leaders if they are to achieve positive outcomes for their students. Leaders' promotion of and participation in professional learning and development is a key function of effective leadership. In recent studies, ERO found that where school leaders took an active role in leading and managing professional learning and development, this resulted in well-informed professional discussions based on shared understandings about new practice and

new knowledge. One of the most important determinants of schools' effectiveness in managing teaching and learning is the extent to which school leaders know that their investment in professional learning and development is necessary to change teacher practice and improve student outcomes.

The leadership BES recognises the challenges and competing demands for school leaders in a self-managing environment. For leaders in Māori education, these difficulties are often exacerbated by the roles that they are expected to take in the wider community and by expectations that may deflect them from their role as educational leaders. In our own work, ERO has found that effective educational leaders are those who are able to manage this complexity through being clear about their fundamental goals. These leaders make the necessary connections between school governance, management, and community while maintaining a strong focus on providing optimal conditions and support for their students. They have a single leadership purpose, which ensures that every student, no matter what their experiences outside the school gate, has opportunities to experience success while at school. Such leaders do not allow low expectations or organisational barriers to divert attention from reducing disparities and focusing on learning and achievement. They utilise their own knowledge, skills, and dispositions to work with and influence others, building educationally powerful connections inside and outside their school community. Effective and reflective leadership is present and is fostered, at all levels, in those schools that ERO recognises as performing well.

The leadership BES will be a valuable resource for all those who are working to lift the performance of our education system. It confirms that educational leadership matters, and it identifies many of the characteristics of leadership that support good outcomes for students. Nevertheless, New Zealand has not yet fully investigated the impact that high-quality educational leadership can have in reducing the recognised variance in national educational achievement and preparing all our children for the future.

This BES has implications for policy makers in relation to future leadership and professional development programmes, school improvement projects, and the development of approaches to assessment, national standards, and school reporting on student outcomes. For the wider education, evaluation, and research community, the BES provides an opportunity to reflect, not only upon the available evidence about the relationship between educational leadership and student outcomes, which Robinson, Hohepa, and Lloyd have set out for us, but also upon the BES team's identification of the paucity of evidence relevant to New Zealand educational settings. There are challenges and opportunities for all of us to build upon this valuable resource, through our own work, in order to extend the evidence base for future decision making.

Dr Graham Stoop
Chief Review Officer, Education Review Office

New Zealand Council for Educational Research

The *School Leadership and Student Outcomes BES* is a very powerful piece of work that provides an essential platform—one that is unavoidable, in the best sense of the word—for the enrichment of leadership practices in schools.

As researchers, we admire the intelligent methodology of this work. Viviane Robinson and her team use an interplay of backward and forward mapping, drawing on quantitative and qualitative research, international research, and research that takes account of the New Zealand context. They use this interplay carefully and thoughtfully to build an understanding of the kind of leadership practices that have a positive influence on student learning.

In building a theory of educational leadership, the authors move beyond a model of the single knowledgeable leader to propose a model of leadership that requires a team approach—a mixture of expertise from within and beyond the school gates, as well as purposeful support from outside the school.

The conclusions of this work raise a considerable challenge to the New Zealand self-managing school system. If we are to take these findings seriously, we need to find ways for all schools to benefit from the mix of leadership expertise and relationships that we now know is essential to improving learning, and we need to find ways to give all school leaders ongoing professional support.

The significance of the findings of this BES has already resonated with policy makers, leading practitioners, and the research community, who have been working together on a range of initiatives designed to support and build the identified leadership capabilities. One example is the Ministry of Education's *Kiwi Leadership for Principals* framework, which now underpins other policy work. Another example is the development of "smart tools" that can help school leaders in their quest to provide all students with the learning opportunities known to support achievement. With Ministry of Education funding, NZCER is working with Viviane Robinson on the development of a Leadership Practices tool. NZCER has also developed a student engagement scale in order to meet a rapidly growing demand from school leaders for meaningful ways to evaluate their programmes—and therefore the leadership practices behind those programmes.

The power of this BES, however, does not just lie in what it suggests for current practice. The authors are clear that the understanding they provide is built on existing research and that the research to come is likely to bring new insights. We heartily agree with them that a lack of cumulative knowledge-building is a problem in education. Future research will bring new insights by building from this well-formed platform.

We expect that many more positive influences on practice, support, and research will be linked to this Best Evidence Synthesis on educational leadership. In years to come, the leadership BES will be seen to have made a substantial contribution to the quality of education in New Zealand.

Robyn Baker, Director
Cathy Wylie, Chief Researcher, New Zealand Council for Educational Research

Leadership and Management Advisers

This important body of work underpins leadership at all levels of our education system and challenges leaders by presenting substantial amounts of authentic evidence. The leadership BES locates principals right at the centre of leading learning, and it strongly acknowledges the role of leaders in making a difference to student achievement outcomes. It identifies leadership dimensions, which reinforce the fact that the more leaders focus their influence, their learning, and their relationships with teachers on the core business of teaching and learning, the greater is their influence and impact in terms of improved student outcomes.

The *School Leadership and Student Outcomes BES* adds weight to a number of other publications that inform leadership development in New Zealand. The leadership dimensions it identifies fit well with the areas of practice and key activities set out in the educational leadership model provided by *Kiwi Leadership for Principals*. The leadership BES provides compelling research and theory to support these areas of practice.

The leadership practices required to successfully implement *The New Zealand Curriculum* are clearly evident within the dimensions, which provide powerful messages to leaders about the importance of their role. School leaders have the responsibility to lead, evaluate, and participate in professional learning and to use resources strategically in order to achieve the important goal of developing and sustaining their school's curriculum. Connections can also be made between this BES and *Ka Hikitia*. The findings in Chapter 7 (Creating educationally powerful connections with family, whānau, and communities) have clear links to the fourth focus area in *Ka Hikitia* (Increasing whānau and iwi authority and involvement in education).

The leadership dimensions identified in the BES emerged from the forward and backward mapping of a considerable number of international and national research studies. The dimensions will provide a focus for the work of leadership and management advisers working with leaders in the education sector. The case studies provide strong links between research and theory and leadership practice. "Leading teacher appraisal", for example, challenges leaders to align teacher appraisal with improved student achievement through inquiry, using a data-based approach. This case study identifies three leadership dimensions that are associated with the use of appraisal to improve teaching and learning: planning, co-ordinating, and evaluating teaching and the curriculum; establishing goals and expectations; and selecting, developing, and using smart tools.

On behalf of all leadership and management advisers and all those involved with attracting, developing, and retaining leaders for New Zealand schools, we applaud this comprehensive, coherent, and easy-to-read BES. It will provide valuable material for leading discussion in professional learning groups and will inform the work we do with all school leaders.

Leadership and Management Advisers National Committee:

Beth Dungey, School Support Services, School of Education, The University of Waikato
Neil Couch, School Support Services, School of Education, The University of Waikato
Stephanie Geddes, Centre for Educational Development, Massey University College of Education
Colleen Douglas, Centre for Educational Development, Massey University College of Education
Peter King, Education Support Services, University of Otago College of Education
Ian Stevens, Education Support Services, University of Otago College of Education
Neil Withington, School Support Services, Victoria Link Ltd, Victoria University of Wellington
Gayle Britten, Team Solutions, The University of Auckland
Martin Turner, Team Solutions, The University of Auckland
Craig McDowell, Education Plus, University of Canterbury.

Universities and Tertiary Institutes

Ahakoa he iti, he pounamu[2]

As national tertiary providers of educational leadership and management postgraduate programmes, we share a commitment to promoting leadership within the teaching profession across diverse contexts. We celebrate the grounding of this *School Leadership and Student Outcomes BES* in Aotearoa New Zealand and its respect for our unique bicultural heritage. We congratulate the writers for their significant achievement in synthesising, from the limited international literature, eight coherent leadership dimensions. The BES explains the power of these dimensions and identifies some of the knowledge, skills, and dispositions needed for effective school leadership.

[2] Though small, it is significant.

This BES has brought a number of aspects into sharper focus. The document invites school leaders to a fresh engagement with the leadership literature, builds links with previous BES iterations, and recognises the dialectic between theory and practice. The BES conceptualises educational leadership as practices to improve student outcomes. It recognises that leadership is positional and dispersed, highly fluid, and contextual. It takes an integrative approach to understanding the transformational and pedagogical dimensions of educational leadership and highlights the significance of pedagogical leadership. In each of these areas, the leadership BES provides practitioners with material for critical self-reflection and inquiry into leadership practices.

The BES signals important directions for educational leadership research. The authors highlight the value of the evidence emerging from qualitative studies. It is imperative that the frequency and quality of such research be increased. Further insight into the connections between leadership and student outcomes requires collaborative research partnerships and research that focuses on reducing disparities in student learning outcomes. The BES constitutes a valuable leadership development resource that is likely to excite both existing and potential school leaders. In the field of leadership education, it offers a useful platform for leadership learning. However, we suggest that more generous research and development funding is needed to support professional leadership and learning initiatives that have been shown to improve academic and social outcomes for students, particularly those with a history of systemic underachievement. Two examples are programmes that enable school leaders and teachers to gather, interpret, and use both quantitative and qualitative data for improving teaching and learning practices; and programmes that develop leadership knowledge, skills, and dispositions for building inclusive learning communities that are founded on respect and care for others.

Furthermore, we recommend that this document be made readily available to postgraduate students with an interest in school leadership. This is a unique opportunity for New Zealand to greatly increase school leaders' engagement in leadership education and research.

Above all, we vigorously endorse the call for a focus on sustained pedagogical leadership and the system support needed to enable this. It is critical that New Zealand education policy aligns with this aspiration.

Carol Cardno (Unitec Institute of Technology), Marian Court (Massey University), Jeremy Kedian (The University of Waikato), Darrell Latham (University of Otago), Susan Lovett (University of Canterbury), Michele Morrison (The University of Waikato), and Hine Waitere (Massey University)

Australian Council for Educational Leaders

Achieving a world-class education system requires new conceptualisations of school leadership. School leaders need to engage in discourse about purpose, structures, and priorities. They also need to understand that the idea of school leadership as an organisational quality is a recent idea, implying a view of leadership very different from that which prevailed in educational thinking during most of the twentieth century. Firstly, this fresh view centres attention on the core, moral purpose of school leadership—that is, to improve student outcomes—and secondly, it implies the existence of shared and collaborative leadership and positive and proactive relationships within the school. This view is consistent with the work of school leaders as schools enter a knowledge society in which the processes of learning are of paramount importance.

The Best Evidence Synthesis *School Leadership and Student Outcomes: Identifying What Works and Why* provides an evidence base for this discourse and emphasises the significant role of school leadership in achieving quality education.

This body of research evidence has been applauded internationally, and the Australian Council of Educational Leaders (ACEL) has, on behalf of its members, warmly invited Professor Viviane Robinson and her team to report regularly on the evidence as it has become available. ACEL was honoured that Professor Robinson was able to present interim findings when she gave the William Walker Oration in 2007 at the ACEL International Conference. Such is the status of this body of work that ACEL was also proud to award Viviane the Hedley Beare Award for Scholarly Writing, in the same year.

The importance of leadership cannot be overstated. Leadership is receiving more and more attention, in many countries and in various international organisations. The time is right for a best evidence synthesis iteration that provides the knowledge base on which to build a successful learning organisation.

ACEL continues to promote and report this seminal work, recognising the impact it will have on current and future research into "improving valued education outcomes … that make a bigger difference for the education of all our children and young people".

Jenny Lewis
Chief Executive Officer, Australian Council for Educational Leaders

Chief Education Advisor, BES

He aha te mea nui o tenei ao
Māku e kī atu
He tamariki, he tamariki, he rangatahi

The Ministry's overall mission is to raise educational achievement and reduce disparity. Our goal is to build a world-leading education system that equips all New Zealanders with the knowledge, skill, and values to be successful citizens in the twenty-first century.

The Iterative Best Evidence Synthesis (BES) Programme is an innovative and collaborative strategy for building and using knowledge. This work focuses on what makes a bigger difference to advancing valued outcomes for diverse learners in education.

It has been demonstrated across the BES iterations that education shapes our cultural identities, our communities, and our societies[3]. What happens in education matters for the well-being and success of our children and our society, and it can strengthen or undermine citizenship and social cohesion[4].

In the 2008 Distinguished Lecture of the American Educational Research Association[5], Professor Henry Levin revealed how improving educational justice improves other valued outcomes such as health and lower criminal activity, providing returns to taxpayers that exceed the costs.

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[3] Desjardine, R., & Schuller, T. (2007). *Understanding the social outcomes of learning*. Paris: Centre for Educational Research and Innovation, OECD. See also www.oecd.org/edu/socialoutcomes/symposium

[4] Aitken, G., & Sinnema, C. (2008). *Effective pedagogy in social sciences / tikanga ā iwi: Best evidence synthesis iteration*. Wellington: Ministry of Education. www.educationcounts.govt.nz/goto/BES

[5] Levin, H. (2008). The economic payoff to investing in educational justice. 2008 AERA Distinguished Lecture. *Educational Researcher, 38*(1), pp. 5–20.

As the world grapples with economic recession, it is timely to highlight the evidence that what happens in education can have powerful effects on economic growth[6]. A recent analysis of the economic cost of wide disparities in educational outcomes pointed out that such disparities impose an economic cost that is like a permanent national recession[7]. We urgently need to break the pattern of wide disparities in New Zealand's literacy outcomes and lift our performance in order to strengthen valued outcomes for Māori and Pasifika students in New Zealand schools.

Given the importance of these outcomes, it is surprising that relatively little of the large body of educational research from around the world has focused on the systematic study of educational influences on outcomes. Across the OECD, it has been noted that research in education has not been afforded the priority of research in other areas, such as medicine[8]. As examples across the BESs reveal, cycles of research and development that are focused on student learning and well-being can make a major, sustainable difference in education.

The BES approach is to search out research studies that focus on influences on student outcomes and to bring these together in a way that selectively transforms previous investment in research into a valuable resource for educational development. The leadership BES is not a synthesis of research that is alien to the work of leaders. Rather, it celebrates effective and often inspiring educational leadership that has impacted positively on student outcomes in diverse settings across schooling.

Within the Ministry of Education, we were initially concerned that creating an educational leadership BES would involve overcoming almost insuperable methodological difficulties. We nevertheless made it a priority—because it was so urgently needed. We are indebted to North American colleagues in the National Academy of Education Committee on Teacher Education for the inspiration to include backward mapping in our *Guidelines for Generating a Best Evidence Synthesis Iteration*. The backward mapping has enabled us to learn from New Zealand research even when it has not directly addressed the relationship between leadership and student outcomes.

To address the dearth of research, we commissioned a study of outstanding leadership in the context of a cost-effective school–home partnership. (This was the first time that we had done this as part of a BES development.) We chose this study because evidence suggests that, in the absence of such leadership, 'business as usual' can inadvertently do harm in education. Underpinning the Iterative BES Programme is the belief that in education, as in health, we need to follow the principle 'first do no harm'.

International comparisons reveal that, in our self-managing school system, New Zealand principals on average spend more time on administration than most of their overseas colleagues. This affects their ability to provide professional leadership of the kind that can make a much bigger difference in advancing valued student outcomes. The administrative demands of self-management are also likely to be felt by deputy and assistant principals and others with leadership roles in schools, but there are gaps in our knowledge here. During consultation for this BES development, a frequently expressed concern of school leaders has been the opportunity cost (in terms of professional leadership) of the time taken up in managing property.

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6 Hanushek, E., & Woessman, L. (2008). The role of cognitive skills in economic development. *Journal of Economic Literature, 46*(3), pp. 607–668.

7 McKinsey & Company (April, 2009). *The economic impact of the achievement gap in America's schools: Summary of findings*. www.mckinsey.com/clientservice/socialsector/achievement_gap_report.pdf

8 OECD (2003). *Knowledge management: New challenges for educational research*. Paris: OECD.
"At the same time New Zealand invests far less in research and development of any kind than other developed countries, and has far lower R & D personnel per million population than Australia or Western European countries … New Zealand is successful educationally, but is, by R & D standards, not becoming a knowledge economy." p. 89, OECD, ibid.

While the goal of BES is to advance knowledge about what makes a bigger difference for students, there is evidence from across the BESs that suggests leaders may find the information contained in this synthesis not only makes their work more effective, but also less onerous and more satisfying. In the early days of this BES development, stakeholders expressed the concern that a BES could not get to grips with the real-life problems faced every day by school leaders. So, partly in response to this concern and working in collaboration with the New Zealand School Trustees Association and the University of Auckland's Faculty of Law, we commissioned an analysis of New Zealand court cases involving schools. That analysis highlights the critical importance of leaders' skills in managing constructive problem talk, building relational trust, and ensuring that pedagogical purposes are integrated into administrative processes.

The writers of this BES have created a taonga for education in New Zealand and the wider world. Professor Viviane Robinson is a consummate scholar whose vision, clarity, intellectual and professional leadership, and deep personal commitment to making a bigger difference in education have turned an impossible task into a coup. Dr Margie Hohepa's intellectual leadership in New Zealand education has long been an influence on my own thinking, and we have been privileged to have her scholarship in the service of this BES. We are indebted to Dr Hohepa for her systematic approach to developing the synthesis in ways that enable leaders to learn from effective Māori leadership. Her own experience as a school trustee was invaluable in bridging the worlds of research and practice in BES development. And without Dr Claire Lloyd's systematic, careful work, the early stages of this BES development would have foundered.

The New Zealand Council for Educational Research's librarians, Beverley Thomson and Cathie Benson, have worked tirelessly to create a national database[9] with electronic access to New Zealand theses, to enable the wider profession to benefit from this knowledge. We are working towards a vision that, in the future, leaders and teachers in New Zealand schools will be able to access the source studies relating to the research in the BES electronically and come to understand in detail the lessons to be learned from the work of colleagues.

Thank you to the stakeholders across policy, research, and practice communities who have worked so hard as part of the Ministry of Education's BES Management Group: Alison Adlam, Judie Alison, Elizabeth Brady, Janice Campbell, Dr Carol Cardno, Dr Graham Collins, Joanna Curzon, Colin Davies, Alison Dow, Marion Fitchett, Brendon Henderson, Joanna Leaman, Mahinarangi Maika, Ati Mamoe, Liz Millar, Shane Ngatai, Stephanie Nichols, Bill Noble, Adrienne Plowright, Lesieli Tongati'o, Colin Tarr, Keriana Tawhiwhirangi, Leilani Unasa, Jenny Whatman, Graham Young, and Sarah Young. You have profoundly shaped the final synthesis. Particular thanks to the New Zealand Teachers' Council, and its representatives on this BES development, Director Dr Peter Lind, Cynthia Shaw, and Nola Hambleton, for helping us to fund the iterative process that made possible Chapter 8: The knowledge, skills and dispositions involved in effective leadership.

Dr Cathy Wylie brought her profound knowledge of school leadership in New Zealand when she assisted with critical aspects of the collaborative writing task, and Associate Professor Gavin Brown made Chapter 7 possible. Thanks to all the regional and national principals' organisations and others who facilitated the 'BES as a tool for leaders' workshops and discussions across the country. Thanks to the hundreds of stakeholders who assisted with the formative quality assurance. Within the Ministry of Education, special thanks go to Darren Gammie, Cathy Diggins, and Libby Drummond who made this work possible. Thanks are also due to Megan Chamberlain for valued quality assurance on Chapter 2. The commitment, capability, and profound understanding that Learning Media editor Ian Reid brings to the programme has also been essential to the quality of the production of this BES.

[9] New Zealand Education Theses Database: www.educationcounts.govt.nz/goto/BES

We have been fortunate and honoured to have the formative quality assurance and support for this work provided by Professors Ben Levin and Michael Fullan. The ongoing acknowledgment of the value of this BES development by the Australian Council for Educational Leaders, as well as their contribution to our work, has been significant in supporting this BES development. When Australians give an Australian award to a New Zealander, people who are neither Australians nor New Zealanders may not be aware of the significance of such an accolade! We are very proud that Viviane Robinson was awarded the Hedley Beare Award, "most recently for her tireless research and writings in regards to the *Iterative Best Evidence Synthesis on Educational Leadership*".

So many have contributed their time and expertise to support this BES development that it is not possible to do justice to each in the acknowledgments. Professor John Hattie has given considerable time (in his weekends) to provide technical expertise on meta-analyses and has offered invaluable advice throughout when we were finding the task too daunting. Dr Ken Rowe, formerly of the Australian Council for Educational Research, travelled across the Tasman repeatedly at short notice to provide expertise and unflagging enthusiastic support for this endeavour. With Viviane Robinson, he co-authored the first article on the impact of leadership on outcomes, which won the Davis Award for the best article in the *Education Administration Quarterly* in 2008. His tragic death in the Marysville bushfire in 2009 has left us with an irreparable sense of loss, but also with profound gratitude for his unwavering commitment to improving educational practice.

The BES approach is iterative. It recognises that knowledge is always changing but is also iterative in terms of the involvement of policy workers, researchers and practitioners (in this case educational leaders) in each stage of the BES development. The iterative process is extraordinarily challenging, but the scope, relevance, and quality of a BES is greatly enhanced by stakeholder involvement in its development. The available evidence[10] suggests that this kind of process is a prerequisite for real change.

In their forewords, leaders across New Zealand schooling have eloquently highlighted the important findings of this BES. From a policy perspective, it is vital that we attend to the new evidence about how much more difference the leadership of professional learning can make to the impact and success of schooling.

In a self-managing school system, this BES will only be useful if it is first and foremost a resource that is valued and owned by school and system leadership. The forewords are testimony to such ownership, and this provides a foundation for the work needed as we collaborate across policy, research, and practice to meet our shared challenge—to celebrate the diversity of our students and prepare *all* of our children for the future.

Adrienne Alton-Lee, PhD
Chief Education Advisor, BES
Strategy and System Performance
Ministry of Education
New Zealand

[10] Moore, P. (2006). *Evidence based policy report. Iterative Best Evidence Synthesis Programme*. Wellington: Ministry of Education. www.educationcounts.govt.nz/goto/BES
Alton-Lee, A. (2007). The Iterative Best Evidence Synthesis Programme: Collaborative knowledge building and use across research, policy and practice in education. In *CERI Evidence in education: Linking research and policy*. Paris: OECD. http://213.253.134.43/oecd/pdfs/browseit/9607081E.PDF

Executive summary

Tū rangatira—toi ākonga[11]

There is a widespread belief among politicians and members of the public that school leaders make a critical difference to the quality of schools and the education of young people. This synthesis confirms that school leaders can indeed make a difference to student achievement and well-being. It identifies, explains, and illustrates some of the specific ways in which they can do this. Its findings can be used by readers in their own contexts to support and develop the qualities of leadership that will enhance student success.

The work reported in this executive summary is part of the Ministry of Education's Iterative Best Evidence Synthesis (BES) Programme, a programme that seeks a greater understanding of the relationships that exist between selected aspects of the education system and a range of student outcomes. In this synthesis, the focus is on the complex relationship between educational leadership and student outcomes and on uncovering the particular leadership dimensions that are crucial for improving student outcomes in both English- and Māori-medium schools.

The literature on educational leadership is substantial, but only a small part of it focuses on the relationship between leadership and student outcomes. The synthesis draws evidence about this relationship from three broad sources: (a) assessments of the direct and indirect impacts of leadership on student outcomes, (b) descriptive accounts of the role played by leadership in effective interventions into teaching and learning, and (c) research on the links between leaders' knowledge, skills, and dispositions and student outcomes.

We begin this executive summary by introducing the key challenges that educational leaders in New Zealand face. This is followed by a brief review of the methods used to identify the links between school leadership and student outcomes. We then discuss the dimensions of leadership that we derived from our analyses of the evidence (both direct and indirect) linking school leadership with student outcomes. We provide a brief summary of the main findings of our meta-analysis of the evidence about the impacts on students of various school–home connections. We follow this with a discussion of the kinds of knowledge, skills, and dispositions implied by the dimensions of effective leadership. We conclude with some of the main messages of this BES.

Our shared challenges

A range of outcomes data is provided in Chapter 2. This includes data relating to achievement, student safety, and secondary school qualifications.

The chapter focuses on four challenges for school leaders and those who support their work.

A range of international surveys (for example, PISA, TIMSS, and PIRLS) shows that we can have some pride in our education system: the mean test scores of New Zealand 15-year-old students in reading, science, and mathematics are generally high.

Unfortunately, the data also reveal a disconcerting disparity between low and high achievers, particularly in reading literacy. Recent surveys also highlight challenges in relation to the achievement of students in mathematics, science, and reading literacy at primary level. The system is underperforming for some of our most rapidly growing youth populations, including Māori and Pasifika.

Since there is very wide variance of achievement in our schools, the fundamental challenge for educational leaders across the system is to raise achievement and reduce disparity in ways that prepare all of our students for the future.

[11] Leadership qualities—students with knowledge

A second challenge is to markedly improve educational provision for, and realise the potential of, Māori students. Recent national data suggest that Māori-medium schools are better serving Māori than English-medium in some subjects at senior secondary level despite the complex challenges of a language revitalisation context.

A third challenge is to strengthen valued social outcomes, including the ability of students to relate well to each other.

A fourth challenge is to adjust our self-managing school system to ensure we have sufficient effective leaders with the time and support they need to meet the first three challenges.

Methodology

Chapter 3, together with the introductory sections of chapters 4 and 5 and associated appendices, describe in more detail the methodology and strategies used to analyse the literature.

The methodology used in this BES defines leadership as a particular type of influence process. This influence can be direct, as when leaders interact with others, or indirect, as when they change the conditions in which people work. From this perspective, leadership is embedded within specific tasks and situations and distributed across people. As used in this BES, the term 'leadership' includes the influence of those with formally recognised positions (such as principal, senior or middle manager, school trustee, kaumātua/elder, or policy maker) and the influence of those who exercise leadership informally.

The findings relevant to question 1 are reported in chapters 4 and 5; those relevant to questions 2 and 3 are reported in chapters 6, 7, and 8.

The analysis of the evidence is structured around three key questions about the links between leadership and student outcomes:

1. What impacts do different types of leadership have on student outcomes?
2. What is the role of leadership in interventions and programmes that improve student learning in New Zealand contexts?
3. What knowledge, skills, and dispositions do school leaders need to engage in the practices identified in questions 1 and 2?

A search of New Zealand and international databases located the published evidence relevant to the above three questions. It comprises 134 studies, of which 61 are from New Zealand. While only 27 of the 134 quantified the relationship between leadership and student outcomes, a further 100 or so provided rich qualitative evidence about aspects of leadership. These include 31 New Zealand studies with a focus on the role of leadership in leading the improvement of teaching and learning (Chapter 6). In addition, Chapter 7 is based on 21 international and 16 New Zealand studies about the impact of various types of school–home connection on student academic and social outcomes. The remainder of the 134 studies comprise the 25 international and 13 New Zealand studies that provided the evidence base for Chapter 8. Two main strategies were used for analysing this evidence base.

A detailed description of the methods used to derive the dimensions and calculate effect sizes for the different measures of leadership is provided in Chapter 5 and associated appendices.

The *forward mapping strategy* depicted in the upper portion of Figure 1 was used to address question 1. The strategy is called 'forward mapping' because it involves starting with a measure of leadership and then tracing its links to student outcomes. This strategy was used with 27 studies that included measures of leadership and some type of student outcome. A meta-analysis of the studies was undertaken to estimate the impact of different types of leadership on academic and social outcomes.

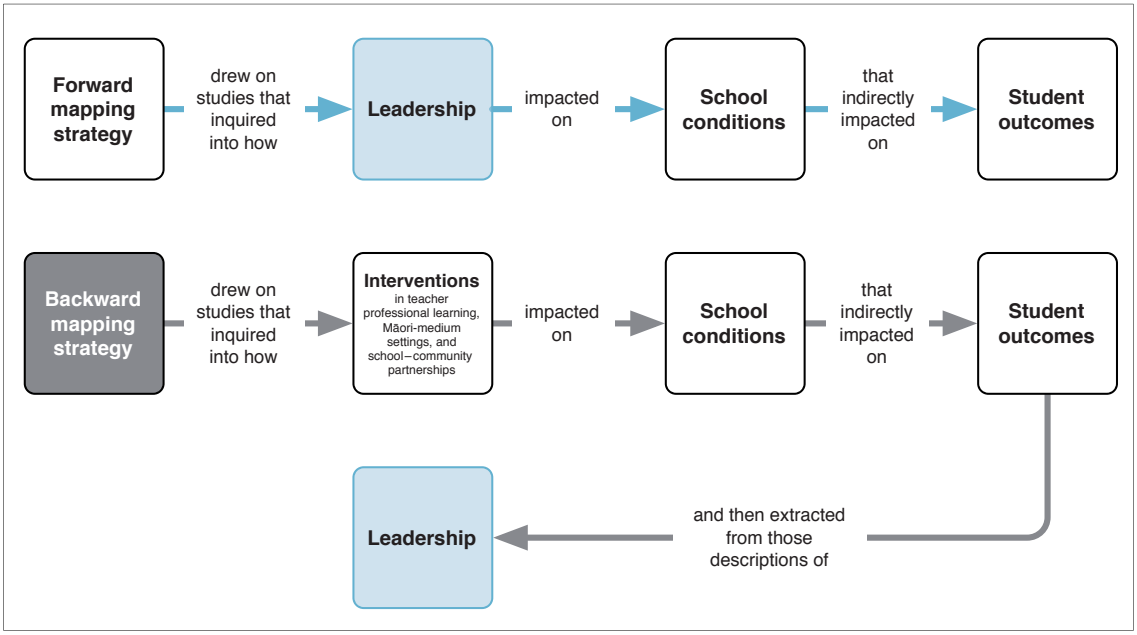

Figure 1. The two main strategies for detecting the impact of leadership on student outcomes

In one analysis, we compared the impact of two well-known theories of leadership: transformational and pedagogical. Transformational leadership has its origins in the business literature and emphasises such qualities as vision and the ability to motivate and inspire loyalty, commitment, and effort. Pedagogical leadership has a stronger focus on leader involvement in teaching and learning. In a second analysis, we sought to identify the impact of particular leadership dimensions on student outcomes. Five dimensions were derived from a methodologically strong body of evidence. We then calculated an estimate of the mean effect size for each of these dimensions.

There is little New Zealand research that directly links school leadership with student outcomes. This raises the question of whether we can be sure that the leadership dimensions that emerged from our forward mapping analyses are appropriate in the New Zealand context, including in Māori-medium schools. Given this lack of direct evidence, the indirect *backward mapping strategy* outlined in the lower part of Figure 1 was adopted to answer question 2. This strategy used as its starting point studies of interventions that had positive student outcomes. Inferences were then drawn from the descriptive evidence about the role played by leadership (often widely distributed) in creating the conditions that produced those outcomes. This systematic, qualitative analysis of leadership in New Zealand schools and classrooms produced six dimensions. Because the evidence was qualitative, we were unable to quantify the impacts of these dimensions on student outcomes.

A further meta-analysis of 37 studies, including 16 from New Zealand, was carried out to build upon the forward and backward mapping to identify for leaders what makes a bigger difference in school–home connections.

Impact of types of leadership

The important question is: 'What is the impact of various types of leadership on student outcomes?' This question was addressed through two meta-analyses of research on leadership.

In the first, we compared the impact of transformational and pedagogical leadership. This analysis showed the impact of pedagogical leadership to be nearly four times that of transformational leadership. Transformational leadership has traditionally emphasised vision and inspiration, while pedagogical leadership has emphasised the importance of establishing clear educational goals, planning the curriculum, and evaluating teachers and teaching.

Given transformational leadership's emphasis on relationships and pedagogical leadership's emphasis on educational purposes, one could argue that both theories are needed. It is certainly important not to set up an artificial opposition between the two. Indeed, transformational leadership is increasingly incorporating elements that are specifically educational, and pedagogical leadership is attending to relational matters such as consensus on school goals.

The second meta-analysis involved a more detailed examination of the impact on student outcomes of particular leadership dimensions. We derived five such dimensions from the same studies as were used in the first analysis. Importantly, relationship and organisational aspects were not treated as discrete—each dimension encompasses both.

A detailed description of the methods used to calculate effect sizes for the different measures of leadership and derive the dimensions can be found in Chapter 5 and associated appendices.

Figure 2 shows the relative impact of each of the five dimensions on student outcomes. The effect size[12] of dimension 4 (Promoting and participating in teacher learning and development) is twice that of any of the other dimensions. Dimensions 1 (Establishing goals and expectations) and 3 (Planning, coordinating, and evaluating teaching and the curriculum) have small-to-moderate effects. Dimensions 2 (Resourcing strategically) and 5 (Ensuring an orderly and supportive environment) have small effects.

Descriptions and vignettes illustrating the leadership practices captured by the backward mapping strategy are provided in Chapter 6.

Three of the five dimensions derived using the forward mapping strategy share similarities with those derived from our backward mapping analysis of studies containing indirect evidence of leadership impact. These three dimensions focus on leadership involvement in goal setting, resourcing, and teacher learning.

Three further dimensions were derived from the analysis of indirect evidence of leadership. These focus on the creation of educationally powerful connections; engagement in constructive problem talk; and the selection, development, and use of smart tools.

[12] An effect size is a standardised measure of the strength of relationship between two variables. In this BES, the variables are typically either categories of leadership practices or interventions and student achievement. The larger the effect size, the greater the influence of the practices or intervention on the desired outcome. Following Hattie (2009), we use the following lower boundaries as a guide when interpreting effect sizes: .2, small; .4, medium; .6, large. Based on his research, Hattie has found the average student gain to be .35 for a year of teaching in reading, mathematics, and writing. (See Chapter 5.)

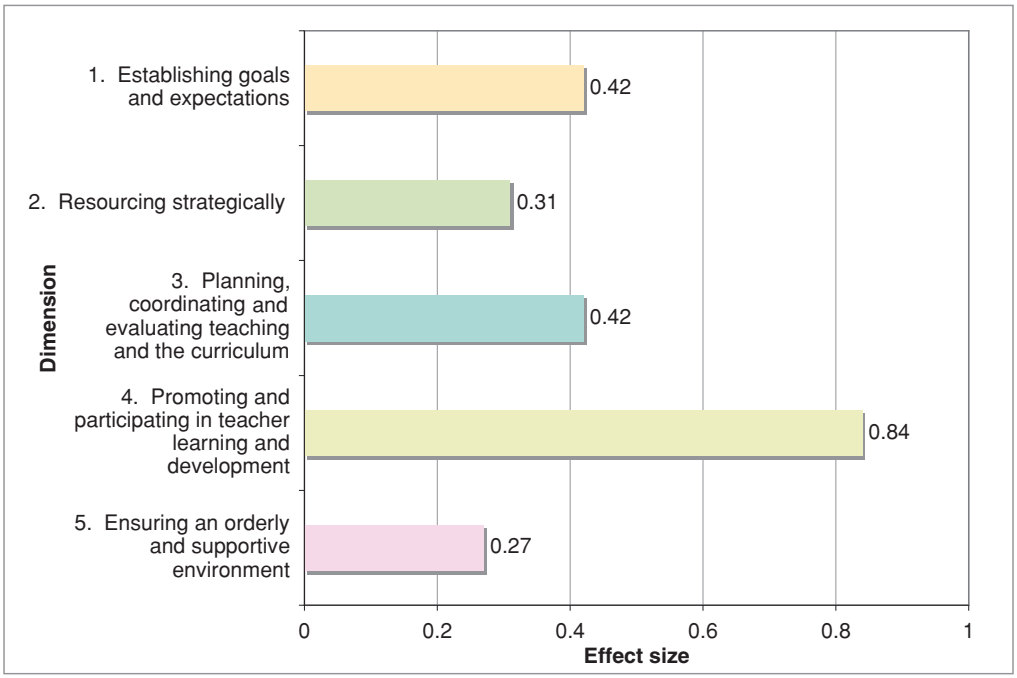

Figure 2. Relative impact of five leadership dimensions on student outcomes

Ahuatanga 1 **Whāia te iti kahurangi**	*Seek the treasure that is valued most dearly*	Dimension 1 **Establishing goals and expectations**
Ahuatanga 2 **Mā te huruhuru ka rere te manu**	*It is the feathers that enable the bird to fly*	Dimension 2 **Resourcing strategically**
Ahuatanga 3 **Kia pai te whakatere i te waka**	*Steer the waka well*	Dimension 3 **Planning, coordinating, and evaluating teaching and the curriculum**
Ahuatanga 4 **Ko te waka mātauranga, he waka eke noa**	*The waka of knowledge is the waka for everyone*	Dimension 4 **Promoting and participating in teacher learning and development**
Ahuatanga 5 **Ka tika ā muri, ka tika ā mua**	*If all is right at the back, all will be right at the front*	Dimension 5 **Ensuring an orderly and supportive environment**
Ahuatanga 6 **Ehara taku toa i te toa takitahi engari he toa takitini**	*My strength is not mine alone but that of the multitudes*	Dimension 6 **Creating educationally powerful connections**
Ahuatanga 7 **He kaha ki te whakahaere i ngā raruraru**	*Able to mediate, manage, and settle disputes*	Dimension 7 **Engaging in constructive problem talk**
Ahuatanga 8 **Ngā tapu ngaio. Whiria, mahia**	*Choose and use specialist tools*	Dimension 8 **Selecting, developing, and using smart tools**

Figure 3. Leadership dimensions

In Figure 3, the direct dimensions are numbered 1–5 and the indirect dimensions 6–8. Beside each is a saying in Māori, which is intended to capture its essence. The eight dimensions should not be viewed as a checklist but as aspects of the leadership landscape. All should be kept constantly in view though at any given time the focus is likely to be on particular dimensions as specific problems or conditions are encountered.

Our primary conclusion is that pedagogically focused leadership has a substantial impact on student outcomes. The more leaders focus their influence, their learning, and their relationships with teachers on the core business of teaching and learning, the greater their influence on student outcomes.

The leadership dimensions from direct evidence[13]

1. Establishing goals and expectations: *Whaia te iti kahurangi*

This dimension is about the exercise of leadership through the setting and communicating of goals for teacher and student learning. The mean effect size for this dimension (.42) was second-equal highest. An effect of this magnitude can be interpreted as moderate and educationally significant.

Effective goal setting requires that leaders:

- establish the importance of the goals;
- ensure that the goals are clear;
- develop staff commitment to the goals.

Leaders establish the importance of goals by communicating how they are linked to pedagogical, philosophical, and moral purposes. They gain agreement that the goals are realistic and win collective commitment to achieving them. Establishing goals came through as particularly pertinent to Māori-medium settings. This is because important goals have clear linkages to wider philosophical and cultural purposes, particularly to Māori language and cultural regeneration.

It is clear that relationships are an important aspect of this dimension because leaders in high-performing schools tend to give priority to communicating goals and expectations, informing the community of academic accomplishments, and recognising academic achievement. There is also evidence that suggests that the level of staff consensus on school goals is a significant discriminator between otherwise similar, high- and low-performing schools.

To implement leadership practices linked to this dimension, leaders need to have an understanding of why goal setting is important and some knowledge of how goal setting works. Figure 4 outlines the conditions required, processes involved, and consequences of effective goal setting.

[13] Robinson, V. M. J., Lloyd, C., & Rowe, K. (2008). The impact of leadership on student outcomes: An analysis of the differential effects of leadership types. *Educational Administration Quarterly (44)*5, pp. 635–674. [This article received the Davis Award for the outstanding article in the 2008 *Educational Administration Quarterly*.]
Robinson, V. M. J. (2007, 11 October). *School leadership and student outcomes: Identifying what works and why*. Prepared as the William Walker Oration. Paper presented at the Joint Conference of the Australian Council of Educational Leaders and the Association for Supervision and Curriculum Development, Sydney. www.educationcounts.govt.nz/publications/series/2515/13723

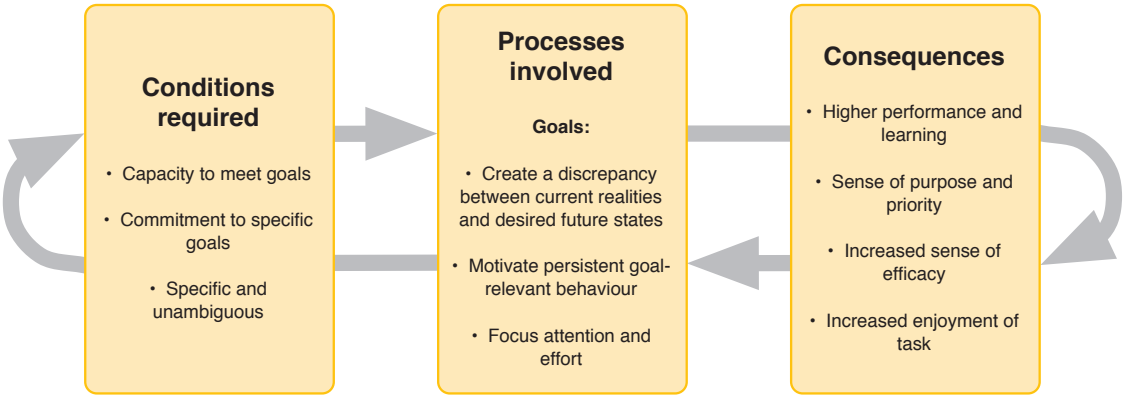

Figure 4. How does goal setting work?

There is evidence that the content of goals may be as important as the process of goal setting: leaders need to know *what* goals to set as well as how to set them. In high-performing schools, there was a stronger emphasis on academic goals, though this was not incompatible with a further emphasis on social goals.

2. Resourcing strategically: *Mā te huruhuru ka rere te manu*

Leadership is also exercised through obtaining and allocating material, intellectual, and human resources. As the word 'strategically' signals, this dimension is not about securing resources per se but about securing and allocating resources *that are aligned to pedagogical purposes*. At all levels of the education system, leaders play a vital role in working with teachers to identify and develop appropriate teaching and learning resources and in ensuring that these are readily available. The mean effect size for this dimension indicates that it has a small indirect impact on student outcomes. Identifying and obtaining assessment resources that are pedagogically and philosophically aligned to valued goals is a particular challenge for leadership in Māori-medium schools. For example, there are relatively few standardised assessment procedures available in te reo Māori and limited access to professional learning opportunities focused on Māori-medium assessment.

When identifying and obtaining resources, leaders in high-performing schools:

- use clear criteria that are aligned to pedagogical and philosophical purposes;
- ensure sustained funding for pedagogical priorities.

Leaders use clear criteria to identify and obtain resources that are aligned to pedagogical and philosophical purposes. They also strive to ensure sustained funding for pedagogical purposes by, for example, prioritising or rationalising expenditure. Alignment of resources extends to recruiting appropriate staff and developing the kinds of expertise needed to achieve important goals.

3. Planning, coordinating, and evaluating teaching and the curriculum: *Kia pai te whakatere i te waka*

This dimension is about leaders' emphasis on improving the quality of teaching and the curriculum. The mean effect size obtained was the same as for Dimension 1, which should be interpreted as meaning that this set of leadership practices has a moderate and educationally significant impact on student outcomes. Leaders in high-performing schools are distinguished from their counterparts in otherwise similar, low-performing schools by their personal involvement in planning, coordinating, and evaluating teaching and teachers.

When planning, coordinating, and evaluating teaching and the curriculum, leaders in high-performing schools:

- promote collegial discussions of teaching and how it impacts on student achievement;
- provide active oversight and coordination of the teaching programme;
- observe in classrooms and provide feedback that teachers describe as useful;
- ensure systematic monitoring of student progress and use of assessment results for programme improvement.

4. Promoting and participating in teacher learning and development: *Ko te waka mātauranga, he waka eke noa*

Of all the dimensions derived from the meta-analysis, this dimension produced the largest estimated effect size. This means that this set of leadership practices has a large, very educationally significant effect on student outcomes. The practices involved in this dimension include participation in, as well as promotion of, formal and informal opportunities for teacher learning and development. Leaders can participate in teacher professional learning as leaders, as learners, or as both.

There are important differences on this dimension between the practices of leaders in otherwise similar, high- and low-performing schools. For instance, staff in high-performing schools report that their leaders work directly with teachers or departmental heads to plan, coordinate, and evaluate teachers and teaching. Such leaders are also more likely to provide evaluations that teachers find useful—and to ensure that student progress is monitored and assessment results used to improve teaching. Leaders who are actively involved in professional learning have a deeper appreciation of the conditions required to achieve and sustain improvements in student learning. This means they can discuss necessary changes with teachers and support them by making appropriate adjustments to class organisation, resourcing, and assessment procedures.

Leadership promotes teacher learning via communities that are focused on improving student success. To establish such communities, leaders may need to challenge or change cultures that are not focused on collegial discussion of the relationship between what is taught and what is learned.

Associated with effective professional communities is a strong sense of collective responsibility and accountability for student achievement and well-being. Improved student outcomes strengthen teachers' sense of efficacy and collective responsibility and this, in turn, encourages them to greater effort and persistence. The result is a virtuous circle, in which teacher confidence and competence and student success are mutually enhancing.

When promoting and participating in teacher learning and development, leaders in high-performing schools:

- ensure an intensive focus on the teaching–learning relationship;
- promote collective responsibility and accountability for student achievement and well-being;
- provide useful advice about how to solve teaching problems.

5. Ensuring an orderly and supportive environment: *Ka tika ā muri, ka tika ā mua*

Leadership can facilitate the achievement of important academic and social goals by creating an environment that is conducive to success. An orderly environment makes it possible for teachers to focus on teaching and students to focus on learning. This dimension, derived from forward mapping studies, has a small mean effect size. The indicators for this dimension

include a focus on cultural understanding and a respect for difference; provision of a safe, orderly environment and a clear discipline code; and minimal interruption to teaching time. Other indicators include protection of staff from unreasonable parental and official pressures and early and effective conflict resolution.

The findings suggest that leaders of effective schools succeed in establishing a safe and supportive environment by means of clear and consistently enforced social expectations and discipline codes.

In such an environment, staff conflict is quickly and effectively addressed. One study found that the principal's ability to identify and resolve conflict—rather than allow it to fester—was strongly associated with student achievement in mathematics. Differences in teacher and principal perceptions of the latter's ability to identify and resolve conflict was also a significant discriminator of high- and low-performing schools.

When ensuring an orderly and supportive environment, leaders in high-performing schools:

- protect teaching time;
- ensure consistent discipline routines;
- identify and resolve conflicts quickly and effectively.

The dimensions from indirect evidence

6. Creating educationally powerful connections: *Ehara taku toa i te toa takitahi engari he toa takitini*

This dimension is about creating connections—between individuals, organisations, and cultures—that have an explicit focus on student learning.

Leaders can encourage such connections by ensuring closer pedagogical and philosophical matches between what students bring to school and what happens to them in the classroom. This might involve finding out more about diverse students' experiences in the school as a first step to improving teaching and learning. It might involve making changes to the school's collective culture to connect more effectively with families/whānau and the community.

Pedagogical matches are facilitated when students experience continuity of content and practice as they move between programmes and classes. Leaders can also play a role in ensuring that students experience continuity as they move from one educational setting to another.

While relationships are embedded in every dimension, they are particularly significant when it comes to creating connections. Relationships can be a key to developing knowledge of, and respect for, individual and cultural identities. Relationships between adults need to be developed in ways that promote the achievement and well-being of students.

Leaders can create educationally powerful connections by:

- establishing continuities between student identities and school practices;
- developing continuities and coherence across teaching programmes;
- ensuring effective transitions from one educational setting to another.

7. Engaging in constructive problem talk: *He kaha ki te whakahaere i ngā raruraru*

This dimension is about the ability to name, describe, and analyse problems in ways that reveal possibilities for school-based change. Leaders who engage in constructive problem talk describe problems in ways that invite ownership and commitment and can respectfully

examine how they and others might be contributing to a problem. A prerequisite for engaging is the ability to inquire into the theory that underpins the practice that needs changing.

Theories of action are powerful both because they explain teachers' actions and because they shape how change messages are interpreted. By engaging teachers' theories of action, leaders help teachers make their beliefs explicit and help them evaluate those beliefs in relation to the proposed alternative theory. Successful theory engagement requires a deep understanding of the factors that sustain current practice and, therefore, of the challenges involved in changing it. The New Zealand research literature that we reviewed provides strong evidence of the positive consequences of theory engagement for both adult relationships and student outcomes.

Leaders who engage in constructive problem talk:

- discover the reasons why teachers do the things they seek to change (engage teachers' theories of action);
- lead discussions of the relative merits of current and alternative practice.

8. Selecting, developing, and using smart tools: *Ngā tapu ngaio. Whiria, mahia*

This dimension is about the ways that leadership shapes the teaching and learning environment by selecting, developing, and using tools and by establishing the routines for their use. By tool, we mean everything from whiteboards to classroom furniture, to software for tracking attendance and assessment data, to policy documents, to report forms. It is the role of leadership not only to select or develop tools but to ensure that the tools and associated procedures actually help the users achieve the intended purposes.

Tools are smart if they promote teacher learning about how to promote student learning. Such tools are based on valid theories concerning the activity they are intended to support and are designed to be easy to understand and use. A good report form is different from a good policy on reporting. But although they are quite different tools, they should share two common characteristics: they should be based on a valid theory and they should be well designed.

A smart tool used for the teaching of one group of students may not turn out to be smart when used with a different group. For example, the theory of language progression used in English-medium classrooms for teaching reading may not be valid in Māori- or Pasifika-medium classrooms.

Some tools are deemed fit for purpose only after considerable investment in research and development. Other tools, purpose-built by a particular school, warrant a far less formal research-and-development process, but leaders still need to ask and answer questions about the validity of the theories on which they are based.

Leaders select and design smart tools by:

- ensuring they are based on valid theories;
- ensuring they are well designed.

Creating educationally powerful connections

Chapter 7 further investigates the importance of Dimension 7 by analysing the New Zealand and international literature on the effects on student outcomes of various types of school–home connection. The results of this meta-analysis are summarised in Figure 5. It shows that different types of parental involvement can have large, small, or even negative influences on student achievement.

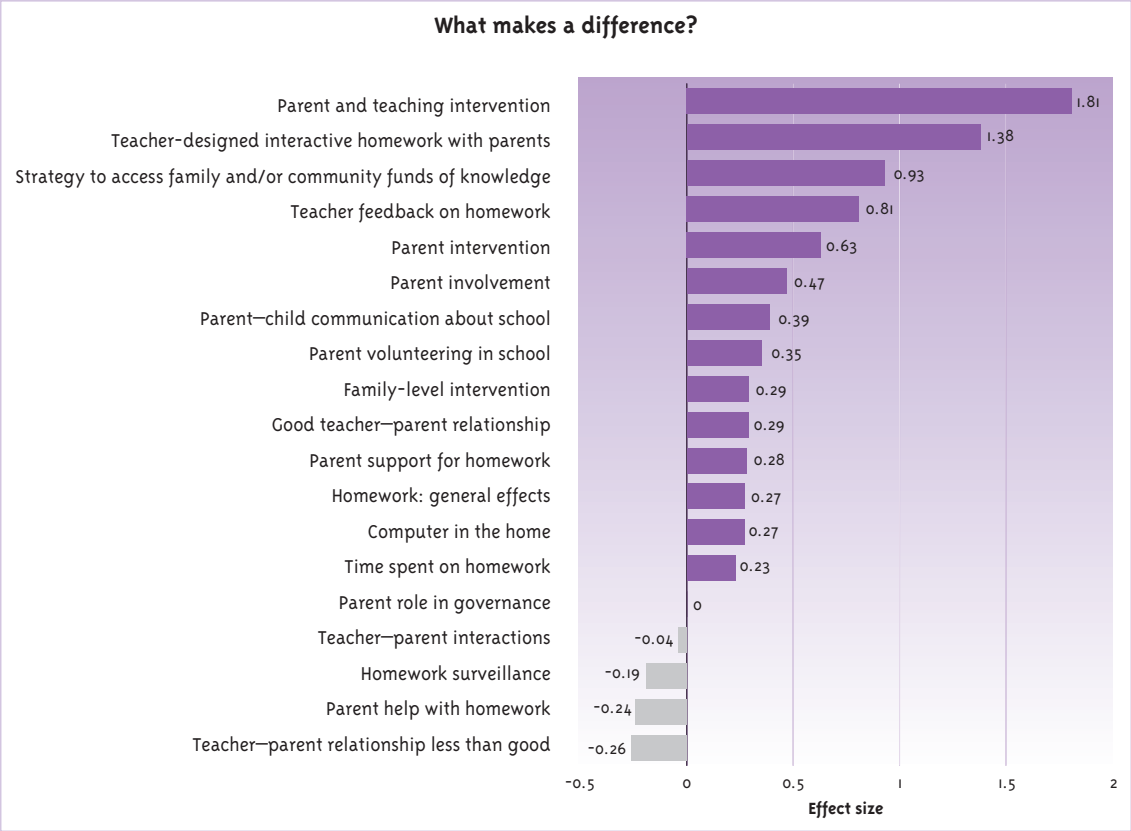

Figure 5. Findings of a meta-analysis of research on the educational impact of making connections between schools, families/whānau, and communities

School leaders can build educationally powerful connections with families, whānau, and communities through teaching, through homework, and through school–home relationships. The role of leadership in making such connections is most important where the gap between the educational culture of the school and the home is wide. Particular kinds of school–family connections can have large positive effects on the academic and social outcomes of students, especially those who have been under-served or who are at risk. For example, positive effects are associated with curriculum units that access relevant community and cultural expertise and resources. Leaders can use educationally powerful connections and the diversity of the school community to resource the work of the school. Certain kinds of school–home partnerships can help to effectively address antisocial behaviour.

It is also possible for schools to invest considerable time, energy, and resources in engaging with families and communities in ways that have little—or even negative—impacts on student outcomes. For example, homework can support or undermine student achievement depending on how it is designed. Similarly, while most parents attempt to help their young children with reading, this can be a frustrating and negative experience for both parent and child. Positive effects are more likely to be associated with programmes that support parents with strategies for effective help.

Given that school–home connections can have anything from large positive to small negative effects, it is important that research and development inform the efforts of school, community, and policy leaders as they try to build connections that are educationally powerful.

The knowledge, skills, and dispositions involved in effective educational leadership

Appendix 8.1 integrates the two sets of leadership dimensions and describes the kinds of knowledge, skills, and dispositions embedded in them.

There is very little research evidence available that directly explores the relationship between educational leaders' knowledge, skills, and dispositions (KSDs) and student outcomes. Nevertheless, once we had established the links between the leadership dimensions and student outcomes, we were able to identify some research about the knowledge and skills that leaders require to engage in the dimensions. Through this two-step process, we established indirect connections between the four KSDs (see Figure 6) and student outcomes.

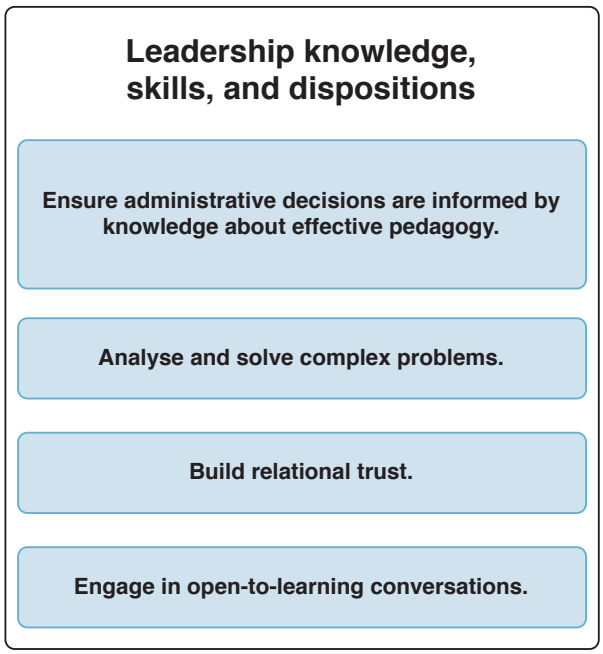

Figure 6. Leadership knowledge, skills, and dispositions

Ensure administrative decisions are informed by knowledge about effective pedagogy

Effective leaders have a deep understanding of theories and evidence about effective teaching and use this knowledge to inform their administrative problem solving in such matters as student grouping, teacher appraisal, resource selection, and teacher supervision.

Analyse and solve complex problems

Effective leaders are able to uncover and understand all the requirements surrounding a particular task or issue and integrate them to identify the best solution for that particular time and place.

Build relational trust

No matter how sound a leader's pedagogical knowledge and problem-solving ability may be, their impact will be limited if relationships within the school are characterised by an absence of trust. In everyday, practical situations, effective leaders develop trust relationships by establishing norms of respect; showing personal regard for staff, parents, and students; demonstrating competence and integrity by modelling appropriate behaviour; following through when expectations are not met; acting in ways that are consistent with their talk; and challenging dysfunctional attitudes and behaviours.

Engage in open-to-learning conversations

Crucial to all the leadership dimensions are the interpersonal skills and values that enable leaders to identify and check their own and others' taken-for-granted assumptions about themselves, other people, and the situation. To engage in open-to-learning conversations, leaders need the skills and values that will make it possible for them to respectfully give and receive the tough messages that are an inevitable part of the process of improving teaching and learning.

Some key messages

- Educational leadership is important. The big message from this BES is that the closer educational leaders get to the core business of teaching and learning, the more likely they are to have a positive impact on students. The dimensions provide a guide to the kinds of leadership that are linked to positive student outcomes. By explaining how and why each dimension contributes to such outcomes, we aim to put educational leaders in the position where they are able to use them effectively in their own settings. The BES describes some of the leadership knowledge, skills, and dispositions that underpin the identified leadership dimensions.
- Effective educational leadership requires in-depth knowledge of the core business of teaching and learning. It also requires detailed knowledge of the importance of effective school–home connections and how to foster them when the educational cultures of school and home are different.
- While educational expertise is a necessary condition for effective leadership, it is not sufficient; leaders must also build trust relationships if they are to engender and sustain improvements in teaching and learning. Leaders who show regard for others and treat them with respect, and are seen by them as competent and having integrity, are trusted. Such leaders can foster the levels of inquiry, risk-taking, and collaborative effort that school improvement requires.
- Leadership rather than leaders is what is needed. This is because it is unrealistic to expect any one leader to possess all the KSDs to a high level. What is reasonable to expect is that all New Zealand schools can access these capabilities either from inside or outside their school. This has implications for leadership development and assessment and for the development of tools to support leaders in this challenging work.
- Research on educational leadership has been more concerned with relationships between the adults in a school community than with the impact of leadership on student outcomes. This impact could be increased by more closely integrating leadership theories and practice with the evidence concerning effective teaching and learning.

1. A guide to this Best Evidence Synthesis Iteration

1.1 Purpose and audience

The central purpose of this BES is to "identify and explain characteristics of leadership in schooling that are linked to improving a range of desired outcomes for diverse learners in English- and Māori-medium schooling[14]." The term 'leadership' in this statement is inclusive of principals, other senior managers, middle managers, teacher leaders, and school trustees.

The relationship between school leadership and student outcomes is particularly important in the New Zealand context because schools here operate much more autonomously than in most other educational jurisdictions. There is perhaps no other national education system that puts the governance of individual schools, including the employment of principals, in the hands of bodies that are largely parent elected[15]. Also unusual is the extent to which schools operate as separate entities within a framework of legal requirements and accountability, funded at arm's length, and not under the umbrella of an education district or a local body. When these administrative arrangements were established in 1989[16], responsibility for financial, human resources, and property management was added to the principal's educational responsibilities. New Zealand demands a lot of its principals and their boards.

Given these system characteristics, it is particularly important for New Zealand to find out how school leaders influence student outcomes. It is also important to find out how the regulatory, policy, and community contexts in which our school leaders work influence the priority they give to engaging in the particular leadership practices that have greatest impact on student outcomes.

To anticipate what is to come, the big message of this BES is that leadership matters. Figure 7 summarises the types of leadership that can make a difference to outcomes for students. In the BES, we describe how we identified these types of leadership and illustrate how they work in practice. We go on to explain *why* they work by discussing the underlying principles, and we discuss and illustrate the leadership knowledge, skills, and dispositions that impact substantially on students, whether directly or indirectly.

The first audience for this BES is educational practitioners with leadership responsibilities and others with an interest in educational leadership. This means trustees, principals, other senior managers, middle managers, teacher leaders, facilitators and professional developers, and educational policy makers and analysts. As all teachers exercise leadership in various ways in the course of their daily work, this BES also has relevance for teachers who do not yet have official leadership responsibilities. Numerous leaders have had input into the content of this BES through the selection of writers, feedback on draft chapters, and participation in presentations of the in-progress findings.

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[14] Request for Proposal, Ministry of Education, January 2005.

[15] Each board consists of five or more elected trustees; the principal; a staff trustee, elected by staff; and, in secondary schools, a student trustee, elected by students. State-integrated schools—mostly Catholic and other, originally church-administered schools, as well as some special character schools (such as Steiner schools)—also have proprietor-appointed trustees. Boards can co-opt members, and many do, particularly when they lack particular expertise. Non-parents have been eligible for election since 1992, but few have offered themselves. Non-parents are usually members of boards through co-option or appointment.

[16] The 1989 reforms were known as Tomorrow's Schools, from the title of the publication that outlined the government's response to the report of a taskforce charged with investigating the quality of school administration.
Department of Education (1988). *Tomorrow's Schools: The reform of education administration in New Zealand*. Wellington: Government Printer.
Taskforce to Review Education Administration (1988). *Administering for excellence*. Wellington: Government Printer.

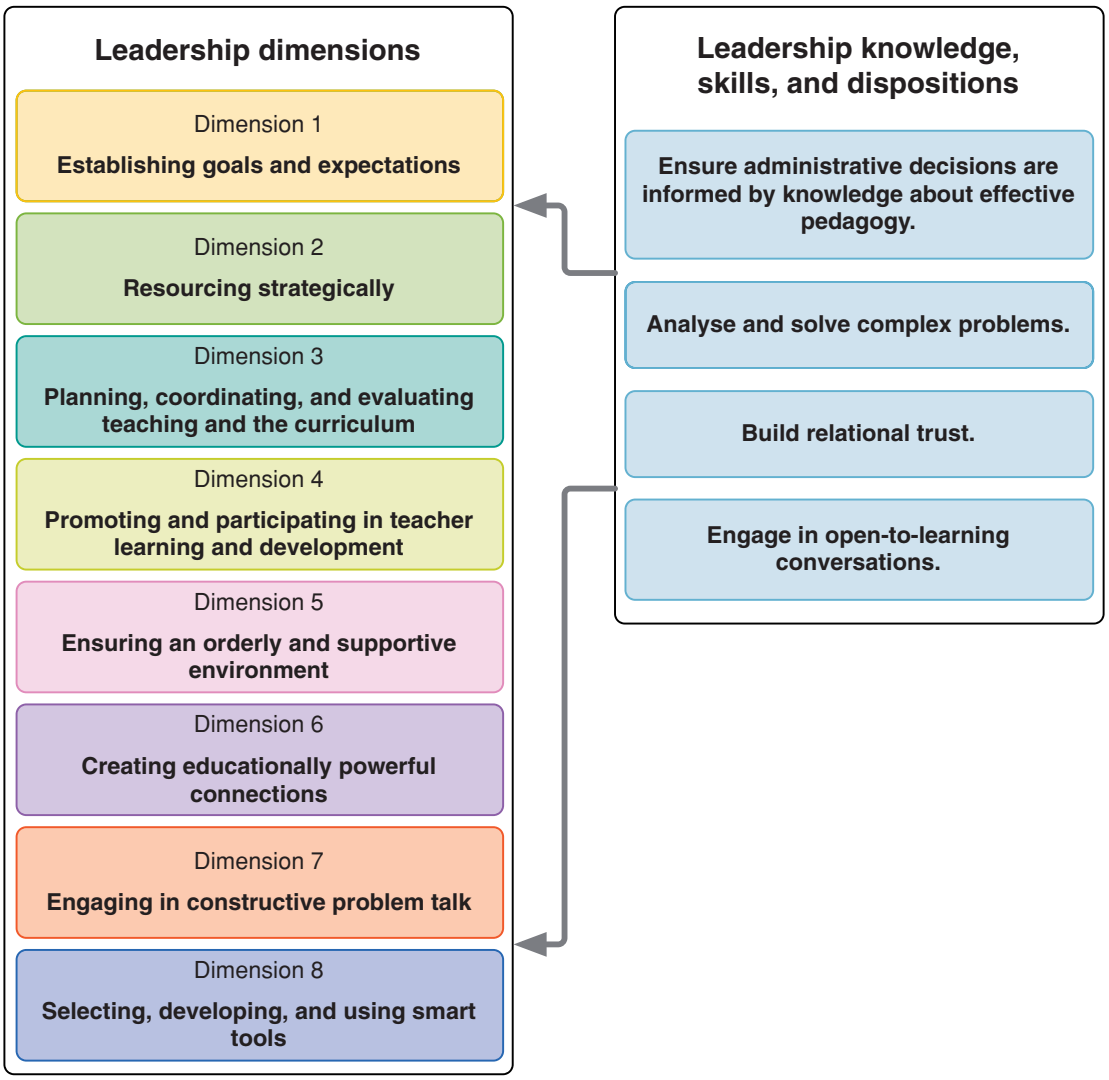

Figure 7. The dimensions of effective leadership, together with the associated knowledge, skills, and dispositions

A second, very important audience is national and international scholars working in the area of educational leadership. There are numerous messages in this BES about how research can make a greater contribution to our knowledge of how leadership impacts on student outcomes. Feedback from members of the national and international research communities has ensured that this work meets the highest standards of scholarship. This will give practitioners assurance that the content is trustworthy.

1.2 Readers' questions and comments

We encountered six recurring questions (or comments that implied questions) as we talked with educators throughout New Zealand. In this section, we list these questions and answer them. This gives us an opportunity to explain what a BES can and cannot offer and to signal some of the particular qualities of this BES.

Is this BES about best practice?

The BESs are about best evidence not best practice. Like any resource, they must be understood and interpreted before they can be used wisely in a particular situation. It is a mistake to think that this BES dictates or recommends best practice. There is no rule about what is best practice

in any given situation. Knowledge of best evidence, however, is an excellent starting point for figuring out what might be good practice in a particular context. We say might because ideas about good practice always have to be tested. This BES should be understood as a resource—a resource that distils an enormous amount of complex information about how school leadership makes a difference to students. It is not a guidebook about how to run a school.

Why is it called best evidence? How is it best? Who says it is best?

This BES is a carefully compiled resource of what is currently known about links between school leadership and student outcomes. The term 'best evidence' should not be understood as a commendation of individual studies. Indeed, the studies we synthesised varied greatly in their quality. Furthermore, we have identified large gaps in the evidence needed to address particular questions about school leadership. 'Best' refers to evidence of what makes a bigger difference for diverse students and to the conclusions drawn from a synthesis of all the available research studies. The goal was to understand how these studies differed and to take those differences into account when drawing conclusions from all the available evidence. One should not judge the validity of a knowledge claim on the basis of who said it, but by interrogating the process by which it was arrived at. This includes examining the methods used to derive the findings.

What is best evidence today will not be best tomorrow.

Since all knowledge is cumulative and subject to change in the light of new research findings, today's best evidence may be challenged tomorrow. This is why the BES programme is described as iterative. People would not find it acceptable if doctors ignored relevant research findings because they might change in future. Nor should they find it acceptable for educators to ignore current research. The dismissal of current educational research findings in anticipation of future findings may reflect education's vulnerability to fads and fashions. The more that educational professionals and policy makers engage with the educational leadership knowledge base, the more they will be able to discriminate between innovations destined to be passing fads and those that are well grounded in evidence. Part of the problem in education is that there is so little cumulative knowledge building. In the absence of an appreciable body of knowledge, an individual study or new finding can assume unwarranted importance.

Schools are supposed to be future focused—this evidence is from what worked in the past.

The concern here is different from that expressed in the previous question. It is that the educational environment will be so radically different in future-focused schools that past evidence will no longer be relevant. While there is an element of truth in this, that element should not be exaggerated. The historical record shows that schooling is extraordinarily resistant to radical change[17]. And while some aspects of schooling—such as the interests that students pursue—may change quite radically, such changes will not, in themselves, make the BES irrelevant. Research that *describes* student interests will quickly date; research that provides a deep, theoretical, and empirical *explanation* of the role that interests and prior experience play in student learning is likely to have much more enduring value.

Is this BES only about the leadership of principals?

Our brief for this BES was to consider both the role of the principal and a more inclusive leadership concept: distributed leadership. Distributed leadership is inclusive of all acts of leadership, regardless of whether those who exercise it have formally designated leadership

[17] Sarason, S. B. (1990). *The predictable failure of educational reform.* San Francisco: Jossey-Bass. Cuban, L. (1990). Reforming again, again and again. *Educational Researcher*, 19, pp. 3–13.

roles. The task-specific leadership of teachers who do not have formal leadership roles in their schools is as much part of distributed leadership as the leadership of those in middle and senior management positions. While much of the research used in this BES refers only to principals, the insights it brings are often applicable to department and faculty heads and members of senior management. The focus in the research literature on principals reflects a traditional and limiting association of leadership with the person who heads an organisation[18].

How can this BES be useful when there is so little New Zealand research?

While there is very little New Zealand evidence that directly addresses the impact of school leadership on student outcomes, there is substantial and very useful evidence that indirectly addresses the subject. An overseas origin does not mean that research is necessarily of no use to New Zealand educators. Its usefulness will depend on the type of study and the variables involved. BES readers will be able to test their assumptions about the worth of the overseas evidence by comparing the findings from chapters that draw on (mostly direct) international evidence with the findings in the chapters that synthesise the (mostly indirect) New Zealand evidence.

1.3 A reader's guide to the chapters of this BES

The evidence relevant to this BES was extraordinarily diverse. Some of it involved complex, multivariate studies that tested models of the paths by which school leaders make a difference to student outcomes. Some was focused on just a few leadership variables. A large group of studies reported on interventions to improve teaching and learning, detailing the processes involved and the outcomes achieved. To fill gaps in the literature, we have also drawn from theory and research relating to student and teacher learning. Research from the fields of social and organisational psychology has deepened our understanding of exactly how the leadership dimensions work.

Given the methodological diversity of the field, we decided to conduct several different analyses and then synthesise the various findings. This strategy enabled us to conduct analyses that were appropriate to the different types of study and to be transparent about whether the different bodies of evidence yielded similar conclusions. In the following overview, we explain what we are trying to achieve in each chapter and what evidence we used. This should help readers to decide which chapters they want to focus on and in which order. The references and appendices can be used as stand-alone resources.

Chapter 1 describes the purpose of the BES, foreshadows its main findings, and provides an overview for each chapter. The responses to readers' questions and comments in the preceding section are intended to clarify what a BES is and is not. They could be used as a basis for staff discussion.

Chapter 2 explains that the overarching purpose of this BES is to help educational leaders and policy makers address the disparities in social and academic achievement that exist between different groups of students and prepare all of our children for the future. After a brief overview of student achievement in New Zealand, we discuss the need for leadership to attend to cultural identity and to social as well as academic outcomes. This chapter also highlights pressures on New Zealand principals and school trustees working within a self-managing school system. The chapter is titled 'Our shared challenges' to make it clear that success in meeting these challenges depends on systemic support for the work of educational leaders.

[18] Gronn, P. (2000). Distributed properties: A new architecture for leadership. *Educational Management and Administration*, *28*(3), pp. 317–338.

Chapter 3 introduces the methods used to uncover the links between school leadership and student outcomes. It also defines the concepts of leadership and student outcomes as we see them applying to Māori- and English-medium educational environments. Readers who have questions about the trustworthiness of this BES should find some answers in this chapter. More detail will be found in the methods sections and appendices associated with the different chapters.

Chapters 4 and **5** present an analysis of the evidence from research that directly investigates the impact of leadership on student outcomes. Chapter 4 reports a meta-analysis of the relative impact of two broad types of leadership: transformational and instructional/pedagogical leadership. This chapter should be of immediate interest to readers who are familiar with these two leadership theories. The evidence for the impact of transformational leadership is, on the whole, far less compelling than that for instructional/pedagogical leadership. Chapter 5 reports a much more finely grained analysis of the same evidence. It identifies the relative impact on student outcomes of five different leadership dimensions.

Chapter 6 draws on indirect evidence about the links between leadership and student outcomes. The evidence comprises New Zealand research on the impact of interventions intended to improve teaching and learning in both Māori- and English-medium environments. While not designed as studies of leadership, these studies provide some rich descriptions of the roles that leaders—from both inside and outside the participating schools—played in these successful projects. The New Zealand evidence is mostly derived from interventions in low-decile primary schools with high proportions of Māori and Pasifika students. Unfortunately, little research is available on interventions in secondary schools. Readers will find that there is considerable overlap between the leadership dimensions that emerged from this New Zealand evidence and those that emerged from the predominantly international studies reported in chapters 4 and 5.

Chapter 7 reports a meta-analysis of international and New Zealand evidence that shows the relative impact of various kinds of school–home connections. The chapter highlights the role of school leadership in building educationally powerful links with students' familes and whānau, focused particularly on teaching and homework. This chapter shows how leaders can avoid counterproductive practices and dramatically lift achievement for educationally under-served students.

Chapter 8 reflects on the evidence presented in chapters 4 to 7, asking what knowledge, skills, and dispositions (KSDs) leaders need to engage in those practices that have been identified as making the greatest difference to student outcomes. Vignettes and examples illustrate these KSDs in action. Appendix 8.1 integrates the two sets of dimensions and describes the knowledge, skills, and dispositions implied by them.

Chapter 9 examines the extent to which the New Zealand education system is structured in ways that enable, require, and support school leaders to engage in the kinds of practice that are linked to positive outcomes for students. The chapter also reflects on the state of New Zealand research on educational leadership, on the many gaps in the evidence, and on the crucial role of research and development in improving New Zealand schools and classrooms.

School leadership cases for professional learning. This section presents six cases that show leadership in action across a range of different school and policy contexts. Each case is explicitly linked to particular leadership dimensions and shows how they work in combination with relevant knowledge, skills, and dispositions in the accomplishment of important leadership tasks. The cases are designed as professional learning resources and can be used for either individual or group development purposes. They provide easy access into the main points and implications of the research studies on which they are based. Each concludes with questions and suggestions for further reading.

Appendices. Five of the eight appendices are methodological, providing detail about particular sources of evidence or statistical analyses. The last three have been designed as resources for school leaders. Appendix 8.1 outlines the KSDs that underpin each of the leadership dimensions and could appropriately be used as a leadership development curriculum. Because in-depth knowledge of teaching and learning is central to pedagogical leadership, Appendix 8.2 provides a summary (based on the *Quality Teaching for Diverse Students in Schooling BES*[19]) of evidence about what constitutes quality teaching. Appendix 8.3 reports similar evidence for quality teaching in the specific curriculum areas of mathematics and social sciences.

A **glossary of Māori terms** is provided on page 287.

[19] Alton-Lee, A. (2003). *Quality teaching for diverse students in schooling: Best evidence synthesis iteration*. Wellington: Ministry of Education.

2. Our shared challenges[20]

In Plato's myth, it was the function of education to sort students into successes and failures[21]. When many of today's leaders were students, this was still a function of schooling. A silent revolution, however, has been going on in education policy, and much more is being asked of today's school leaders. Knowledge is increasingly seen as an economic and social resource, with the result that societies everywhere are expecting their schools to help all students to learn, succeed, and develop the capabilities needed for lifelong learning.

Individuals benefit from education in terms of enhanced well-being and life opportunities; societies also benefit from education—in terms of increased social capital[22], social cohesion, and economic growth. Using data from 50 countries, Hanushek and Woessman[23] analysed the relationship between economic growth and educational performance as judged by students' results in international surveys. They concluded:

> Cognitive skills have powerful effects on individual earnings, on the distribution of income and on economic growth (p. 657).

This analysis found that the extent to which all students get basic skills and the proportion of high achievers in a school system are both indicators of economic growth.

In this chapter, we highlight four compelling challenges[24] for school leadership, policy makers, educational researchers, tertiary faculty, and others who support the work of schools in New Zealand. These challenges are to (i) raise achievement and reduce disparity in ways that prepare all of our children for the future, (ii) improve educational provision for and responsiveness to Māori students, (iii) improve students' social outcomes, and (iv) adjust our self-managing school system so that it better supports leaders to do this work.

2.1 Student achievement in New Zealand

Before discussing these challenges, it is important to acknowledge that international comparative surveys reveal a pattern of high mean achievement on the part of New Zealand senior secondary students. These surveys suggest that, for a country that spends around 24% less per primary student and 20% less per secondary student than the OECD mean[25], many New Zealand students perform well.

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[20] This chapter has been informed by work done by Adrienne Alton-Lee, Viviane Robinson, Cathy Wylie, Margie Hohepa, and Claire Lloyd, and by a range of analyses commissioned to inform this BES, including contributions from Doug Wilms, Richard Harker, and Ken Rowe. For local contextual information on governance and leadership in New Zealand, see:
Ministry of Education (2007). *New Zealand country report on improving school leadership. OECD country background report for New Zealand.* www.oecd.org/dataoecd/37/43/38740175.pdf
Wylie, C. (2007). *School governance in New Zealand: How is it working?* Wellington: New Zealand Council for Educational Research.

[21] Jowett, B. (Trans.). (1968). *Plato: The republic, book III*. New York: Airmont. In Plato's 'myth of the metals', those born 'gold' are afforded the greatest honour and power and given much greater opportunities to learn than those born 'brass' or 'iron' (p. 141). In this way, Plato argued that an unequal society can be maintained by education rather than military might.

[22] Desjardine, R., & Schuller, T. (2007). *Understanding the social outcomes of learning*. Paris: Centre for Educational Research and Innovation, OECD. See also www.oecd.org/edu/socialoutcomes/symposium

[23] Hanushek, E., & Woessman, L. (2008). The role of cognitive skills in economic development. *Journal of Economic Literature*, *46*(3), pp. 607–668.

[24] In this chapter, we have highlighted significant, persistent patterns revealed in New Zealand monitoring and assessment data. For further information on national strengths and weaknesses across the curriculum, see the National Education Monitoring Project (NEMP) at http://nemp.otago.ac.nz and Education Counts at www.educationcounts.govt.nz

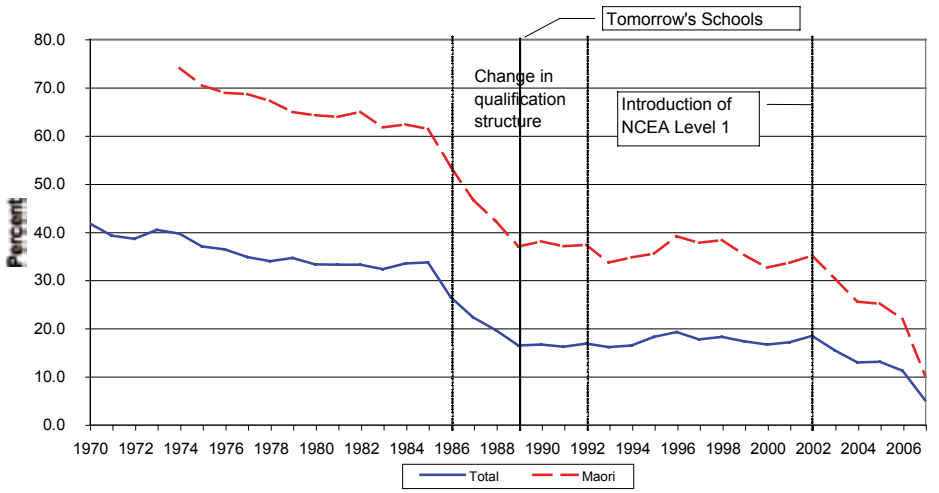
[25] OECD (2008). *Education at a glance: OECD indicators 2008*. Paris: OECD. 2005 data (the most recent available for international comparisons) show that New Zealand spent $4,780 (US dollar equivalent, based on purchasing parity) per primary student, compared with the OECD mean of $6,252. For secondary students, the figure was $6,278 (OECD mean, $7,804). www.educationcounts.govt.nz/indicators/resources/2043.
New Zealand's expenditure on education as a percentage of GDP is higher than the OECD mean, reflecting its relatively large youth population.

2.1.1 Secondary schools

The reading, mathematics, science, and problem-solving proficiencies of 15-year-olds put New Zealand in the second-highest-performing group of countries in the PISA[26] surveys, reflecting the cumulative impact of schooling. This outcome for mathematics should, however, be interpreted in the light of a less favourable outcome in the TIMSS[27] survey, which included more countries than the PISA.

While these international surveys reveal a pattern of mid-to-high average achievement, they also reveal wide disparities. In the 2006 PISA survey, for example, 15.9% of 15-year-old New Zealand students were achieving at level 5 (the highest level) for reading literacy while 14.5% were achieving at level 1 or below. The corresponding OECD means were 8.6% and 12.7%[28].

The introduction of a senior secondary standards-based national qualifications system (NCEA) in 2002 has resulted in a decreasing percentage of students leaving school with few or no formal qualifications (see Figure 8).



Prior to 1986 includes school leavers who did not attain at least one school certificate subject. From 1986 - 2002 includes school leavers who did not sit any school certificate subject. From 2002 onwards includes school leavers who attained less than 14 credits.

Figure 8. Percentage of school leavers with few or no formal qualifications[29]

2.1.2 Primary schools

The data from international surveys suggest a need for stronger pedagogical leadership in New Zealand primary schools[30]. Recent surveys of mathematics[31] show that the performance of our year 5 students is significantly lower on average than the international scale mean. Nineteen

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[26] Reports on the achievement of New Zealand students on international surveys including PISA (Programme for International Student Assessment) and TIMSS (Trends in International Mathematics and Science Study) can be found at www.educationcounts.govt.nz/publications

[27] More countries participated in the 2002/03 TIMSS survey than the 2003 PISA. In the TIMSS year 9 survey, seven groups of countries scored significantly above the mean; New Zealand was in the sixth-highest-scoring group, together with Australia, US, Lithuania, Sweden, Scotland, Israel, Slovenia, and Italy. New Zealand was, however, below the international scale mean. New Zealand year 9 students were not included in the 2006/07 TIMSS survey.

[28] Marshall, N., Caygill, R., & May, S. (2008). PISA 2006 reading literacy: How ready are our 15-year-olds for tomorrow's world? www.educationcounts.govt.nz/publications/series/2543
OECD (2007). www.oecd.org/dataoecd/30/17/39703267.pdf, pp. 293–295.

[29] Tomorrow's Schools was the policy name given to the introduction of school-based management in New Zealand schools. See Taskforce to Review Education Administration (1988). *Administering for excellence. Effective administration in education. Report of the Taskforce to Review Education Administration*. Wellington. This report is often referred to as The Picot Report.

[30] See note 24.

[31] www.educationcounts.govt.nz/publications

out of 37 countries, including Singapore, England, the US, and Australia, recorded significantly higher mean achievement. While the data show significant improvement from the mid-1990s through to the early 2000s, there was no change over the period 2002–06. Māori and Pasifika students typically achieved significantly below the international mean.

The science achievement of our students is around the international scale mean. Achievement increased in the 1990s, but, for middle-primary students, decreased significantly between 2002 and 2006[32], returning to the levels of the mid-1990s. Again, Māori and Pasifika students typically achieved significantly below the international mean.

According to the 2005 PIRLS survey, the mean reading literacy achievement of our year 5 students was above the international scale mean[33] but significantly lower than in 17 out of 40 participating countries, including England, the US, Hong Kong, and Singapore[34]. The data show no significant change in New Zealand's middle-primary reading literacy performance between 2001 and 2005. Indeed, New Zealand's reading literacy levels have remained much the same for over two decades[35], while other countries, including Singapore, Hong Kong, the Russian Federation, Italy, and Germany, have significantly raised reading literacy achievement, particularly since 2000[36].

The 2005 data[37] for year 5 students revealed continuing wide disparities in male–female reading literacy achievement (although, as a group, boys performed above the international mean), and between students from different socio-economic groups. Māori and Pasifika students typically achieved significantly below the international mean: comparative effect sizes for the achievement of Pākehā/European and Māori (ES = –0.84) and Pākehā/European and Pasifika (ES = –0.91)[38] are large.

2.1.3 Socio-economic status and student achievement

All the international data for New Zealand show a strong link between socio-economic status and achievement, especially at primary level. As a generalisation, it is the students from the homes with fewest books and other educational resources, and the schools that serve families of the lowest socio-economic status, that show the lowest achievement[39].

At secondary level, there is a large variation in the percentage of students from different socio-economic groups gaining level 2 NCEA qualifications. In 2007, only 48% of students from decile 1–2 schools achieved this level of qualification, compared with over 80% of students from decile 9–10 schools[40].

The *Community and Family Influences BES*[41] provides evidence about the ways in which poverty is linked to educational outcomes. Like Chapter 7 of this BES, it also identifies strategies that

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[32] Caygill, R. (2008). *Science: Trends in year 5 science achievement 1994 to 2006*. Wellington: New Zealand Government. Available at www.educationcounts.govt.nz/publications.

[33] Mullis, I. V. S., Martin, M. O., Kennedy, A. M., & Foy, P. (2007). *PIRLS 2006 International Report: IAE's Progress in International Reading Literacy Study in primary schools in 40 countries.* Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Boston College. Findings are available at www.educationcounts.govt.nz/publications

[34] Chamberlain, M. (2007). *Reading literacy in New Zealand.* Wellington: Ministry of Education. Available at www.educationcounts.govt.nz/publications

[35] Elley, W. (2005). On the remarkable stability of student achievement standards over time. *New Zealand Journal of Educational Studies, 40*(1), pp. 3–24. Elley referred to this pattern as "remarkable stability".

[36] Mullis, Martin, Kennedy, & Foy (2007), op. cit.

[37] Chamberlain (2007), op. cit.

[38] Chamberlain, M. (2008). *PIRLS 2005/2006 in New Zealand.* Wellington: Ministry of Education. Available at www.educationcounts.govt.nz/publications.

[39] www.educationcounts.govt.nz

[40] www.educationcounts.govt.nz/indicators/education_and_learning_outcomes/qualifications/178

[41] Biddulph, F., Biddulph, J., & Biddulph, C. (2003). *The complexity of community and family influences on children's achievement in New Zealand: Best evidence synthesis iteration.* Wellington: Ministry of Education. Available at www.educationcounts.govt.nz/goto/BES

can be used by schools and social agencies to make a bigger educational difference for children from low-socio-economic-status families.

While socio-economic status is clearly a factor in between-school variance, Chapter 6 of this synthesis presents evidence that such variance is also linked to leadership. For example, an evaluation of the Literacy Professional Development (LPDP) intervention in almost 300 schools[42] found that the school attended by students was an important indicator of achievement, over and above school background characteristics such as decile. The evaluators identified school leadership, school culture, the capability of distributed literacy leadership, and the extent to which schools operated as professional learning communities as the significant factors involved. Chapter 6 and Case 2 describe the practices used by leaders to bring about big shifts in student achievement in this intervention.

International surveys also reveal that some schooling systems do better than others at lifting the achievement of students from low-socio-economic-status families[43].

2.2 Raising achievement and reducing disparities

> If most of the variation in performance in a country is within schools, as it is in New Zealand, then reform efforts need to focus on low performing students within schools (p. 4)[44].

While New Zealand has *between*-school differences in student performance, it has far greater *within*-school disparities—greater than many other countries, as Figure 9 shows. Only a little of this very high within-school variance in student achievement can be explained by the index of economic, social, and cultural status of students and schools.

This within-school variance is even more marked (the highest of 54 countries) in the PISA science results of 2006[45]. Similar evidence comes from the NZCER, which found that, based on the data from a sample of 187 schools, almost 80%[46] of the variance in year 4 mathematics scores on the Progressive Achievement Tests (PATs) is accounted for by within-school differences.

This variance of achievement within schools suggests that the findings of this BES have relevance for the leaders of all schools. Effective pedagogical leadership creates the conditions that can ensure quality teaching in every classroom and, by doing so, reduce within-school variance in student achievement.

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42 McDowell, S., Cameron, M., & Dingle, R. with Gilmore, A. & MacGibbon, L. (2007). *Evaluation of the Literacy Professional Development Programme.* Wellington: Ministry of Education.

43 Haahr, J., Nielsen, T., Hansen, M., & Jackobsen, S. (2005). *Explaining student performance: Evidence from the international PISA, TIMSS and PIRLS surveys.* Report prepared for the European Commission's Directorate-General for Education and Culture. Århus: Danish Technological Institute.
Programme for International Student Assessment (2009). *Top of the class: High performers in science in PISA 2006*. Paris: OECD.

44 Wilms, D. (2007). *Variance within and among classrooms and schools: The case of New Zealand.* Report prepared to inform the Educational Leadership BES. University of New Brunswick, Canada: Canadian Research Institute for Social Policy (CRISP).

45 OECD (2007). *PISA 2006 Science competencies for tomorrow's world. Volume 1 Analysis.* Programme for International Student Assessment. Paris: OECD (p. 171).

46 An analysis undertaken by Hilary Ferral of NZCER's Assessment, Design & Reporting service found that socio-economic decile accounted for a further 14%, and other school factors, 6% of variance. This analysis involved a sub-sample of March 2007 PAT marking service data that was representative of the national proportions of schools in each quintile. PAT mathematics assessments use RASCH scaling and allow students from years 3 to 10 to be placed on a single scale.

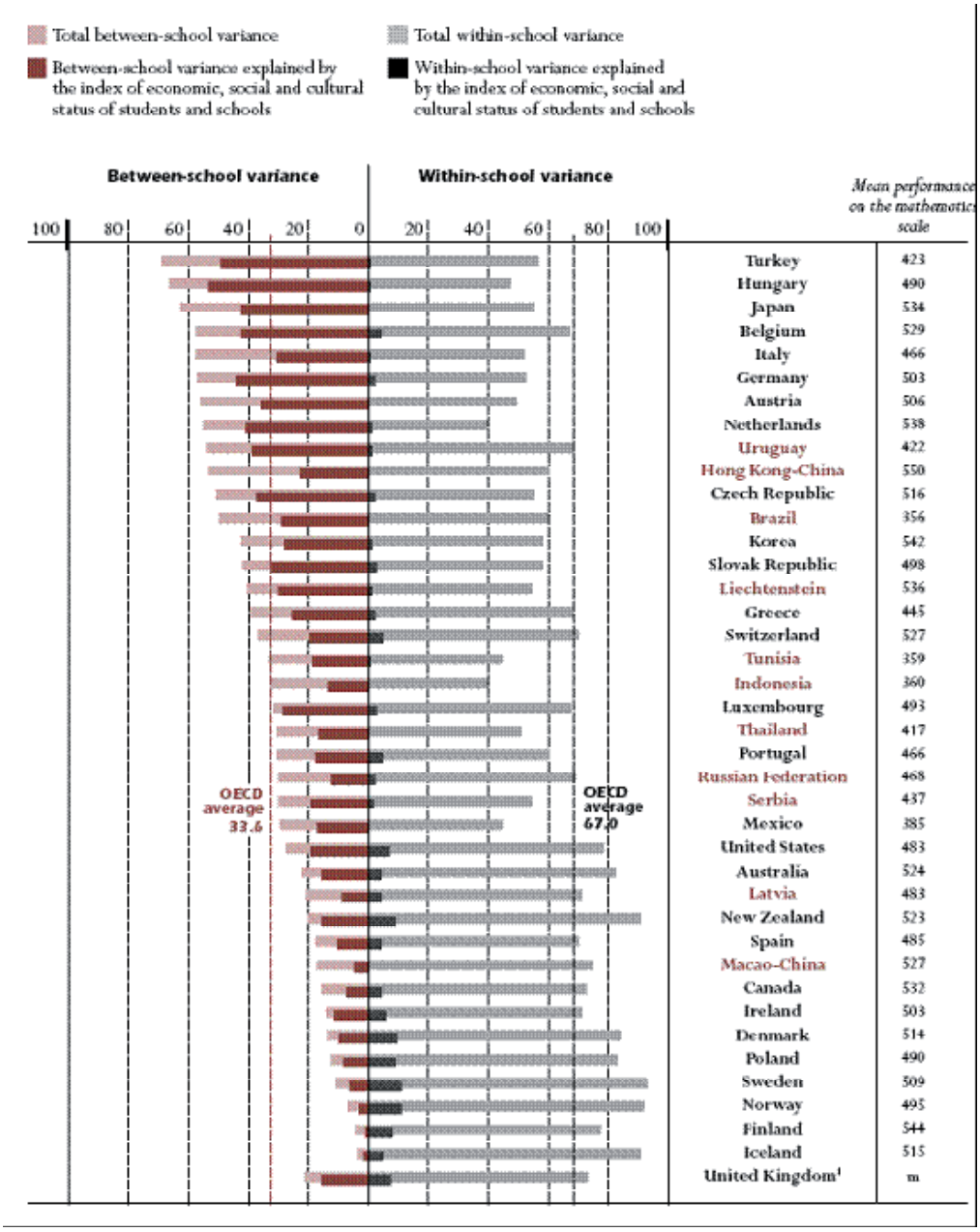

Figure 9. Variance in student performance between schools and within schools on the OECD's PISA 2003 mathematics scale[47]

2.3 Ka Hikitia[48]: *Supporting Māori students to succeed as Māori*

The second challenge is to realise the achievement potential of Māori students. This will involve breaking free of an entrenched pattern of systemic underperformance and will require a 'stepping up' of the educational opportunities available to young Māori.

[47] This figure is a reproduction of Figure 4.1 of OECD (2003) *Learning for tomorrow's world: First results from PISA 2003*, p. 162.

[48] Ministry of Education (2008). *Ka Hikitia—Managing for success / Māori Education Strategy 2008–2012*. 'Ka hikitia' means 'to step up'.

Senior secondary school qualifications are critical for students, not only for the knowledge and skills they represent but also because they serve as gateways to higher education and employment. Since New Zealand put the standards-based NCEA in place, more students have left school with at least some formal qualifications, but relative disparities have persisted; for example, fewer than 44% of Māori gained NCEA Level 2 in 2007 (Figure 10).

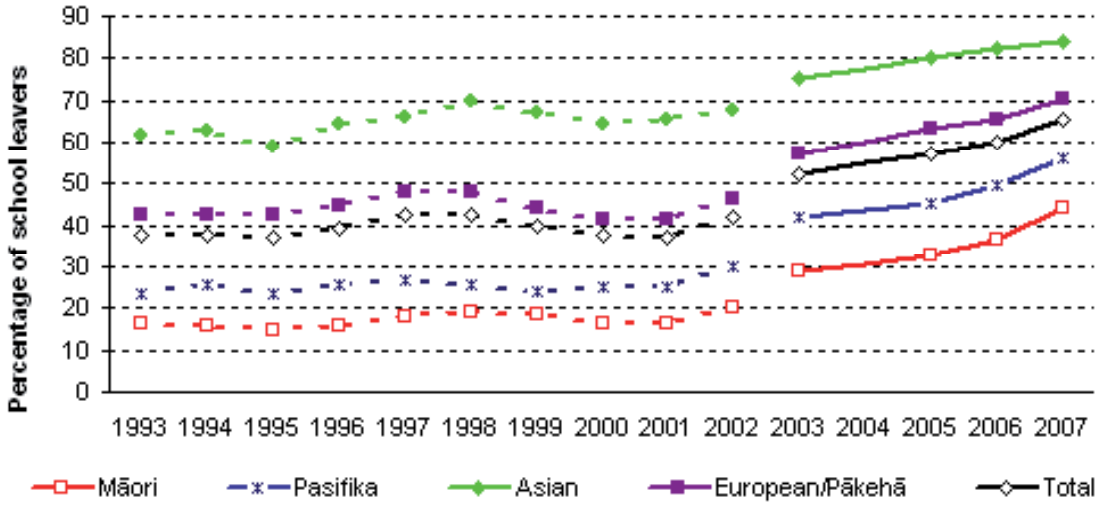

Figure 10. Percentage of school leavers with an NCEA level 2 qualification or above, by ethnic group (1993–2007)[48b]

An analysis of data from two large studies of New Zealand secondary schools[49] found that the lower achievement of Māori students was linked not only to socio-economic status. After the socio-economic status of the students' family and the decile rating of the school had been accounted for, there remained an additional, negative effect arising from the interaction between schools and Māori ethnicity.

It is significant that Māori in Māori-medium schools are more likely than Māori in English-medium schools to meet the literacy and numeracy requirements for Level 1 NCEA by the end of year 11 and to gain age-typical senior school qualifications (for example, Level 1 NCEA in year 11)[50]. This is despite the relatively recent provision of Māori-medium education and the extraordinary challenges[51] that Māori leadership has had to overcome to resource schooling in a language revitalisation context. As explained in Chapter 3, Māori-medium schools pursue a complex agenda that embraces academic achievement and language and cultural regeneration. Into this mix add a shortage of qualified teachers competent in te reo Māori and relatively fewer curriculum and assessment resources. It then becomes clear why it is so difficult to develop high-quality Māori-medium educational pathways and make them more widely available to young people.

[48b] Ministry of Education (2008). School leavers with NCEA Level 2 or above. www.educationcounts.govt.nz/indicators/education_and_learning_outcomes/qualifications/1781

[49] Harker, R. (July, 2006). *Ethnicity and school achievement in New Zealand: Some data to supplement the Biddulph et al. (2003) Best Evidence Synthesis.* Report prepared for the Iterative Best Evidence Synthesis Programme. Wellington: Ministry of Education.

[50] Wang, H., & Harkess, C. (2007). *Senior secondary students' achievement at Māori-medium schools: 2004–2006 fact sheets.* Available at www.educationcounts.govt.nz/publications/maori_education/14593

[51] Rau, C. (2008). Assessment in indigenous language programmes. In E. Shohamy & H. Hornberger (Eds.), *Encyclopedia of Language and Education,* (2nd ed., Vol. 7), Language Testing and Assessment. (pp. 319–330). New York: Springer Science+Business Media LLC.
Hohepa, M. K. (2000). Issues in the production of written Māori text. In J. Soler & J. Smith (Eds) *Literacy Practices: Yesterday and Today.* Auckland: Pearson International (formerly Addison-Wesley Longman Paul), pp. 58–72.

The corresponding challenge for educational leaders in English-medium schools is to support Māori students to achieve as Māori[52]. Research[53] over at least three decades shows, for example, that mainstream teachers frequently mispronounce the names of Māori students, have inappropriately low expectations for Māori young people, assess their achievement inappropriately, and give them less praise. In these ways and others, teachers can unwittingly contribute to inequitable opportunities and exacerbate the racism that Māori students all too often encounter in English-medium classrooms. Such practices are difficult to change[54], but it is imperative that New Zealand develop a school system that values cultural distinctiveness and supports the aspirations of Māori young people to participate successfully in te ao Māori, in New Zealand, and in the global community.

The groups that experience least success in English-medium schools also happen to be the fastest growing groups in our population. Statistics New Zealand projections[55] indicate that Māori will comprise about 29% of the youth population in 2026, up from 24% in 2006. Pasifika are projected to comprise about 18% in 2026, up from 12% in 2006. These trends make the equity issue all the more urgent for school leadership.

The government's Māori Education Strategy *Ka Hikitia—Managing for Success*[56] emphasises how crucial organisational change is to realising Māori potential in education. The Te Kotahitanga professional development intervention demonstrates that, despite the difficulties, transformative change is possible when effective professional development is linked to a process of continuous improvement and underpinned by reseach and development. An independent analysis shows, for example, that nearly half the Māori students of teachers who participated in this project have gone on to get NCEA Level 1 compared with fewer than a third prior to the professional learning[57]. There have also been dramatic gains for the Pasifika students of participating teachers.

While the focus of the section above has been indigenous students, the government's *Pasifika Education Plan 2008–2012*[58] has been developed specifically to help ensure that all Pasifika young people get a high-quality education and achieve good outcomes.

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[52] Durie, M. (2001, February). *Hui Taumata Mātauranga: A framework for considering Māori educational advancement.* Opening address to the Hui Taumata Mātauranga. Turangi/Taupo.

[53] Aitken, G., & Sinnema, C. (2008). *Effective pedagogy in the social sciences / tikanga ā iwi: Best evidence synthesis iteration.* Wellington: Ministry of Education. Available at www.educationcounts.govt.nz/goto/BES
Alton-Lee, A. G., Nuthall, G. A., & Patrick, J. (1999). Reframing classroom research: A lesson from the private world of children. In Ethan Mintz & John T. Yun (Eds.), *The Complex World of Teaching: Perspectives from Theory and Practice.* Massachusetts Cambridge, MA: Harvard Educational Review.
Alton-Lee, A. (2001). Making a difference? A role/requiem for classroom research. *Unterrichts Wissenschaft, 3*, pp. 197–212.
Benton, R. (1986). Now fades the glimmering: Research in classrooms in New Zealand. *SET: Research Information for Teachers, 2*(12).
Bishop, R., & Berryman, M. (2006). *Culture speaks: Cultural relationships and classroom learning.* Wellington: Huia Publishers.
Bishop, R., Berryman, M., Cavanagh, T., Teddy, L., & O'Sullivan, D. (2007). *The experiences of year 4 and 5 Māori students in primary school classrooms.* Report to the Ministry of Education, Maori Education Research, University of Waikato and Poutama Pounamu Research and Development Centre, Ministry of Education.
Carkeek, L., Davies, L., & Irwin, K. (1994). *What happens to Māori girls at school?* Final Report. Wellington: Ministry of Education.
Clay, M. (1985). Engaging with the school system: A study of interactions in New Zealand classrooms. *New Zealand Journal of Educational Studies, 20*(1), pp. 20–38.
St. George, A. (1983). Teacher expectations and perceptions of Polynesian and Pakeha pupils and the relation of classroom behaviour and school achievement. *British Journal of Educational Psychology, 53*, pp. 48–59.
Thomas, D. (1984). (Ed.). Patterns of social behaviour: New Zealand and the South Pacific. *Psychology Research Series, No. 17*. Hamilton: University of Waikato.

[54] Cazden, C. (1990). Differential treatment in New Zealand: Reflections on research in minority education. *Teaching and Teacher Education, 6*(4), pp. 291–303.

[55] Statistics New Zealand (2008). *National ethnic population projections: 2006–2026*. Wellington: Author. www.stats.govt.nz

[56] Ministry of Education (2008). *Ka Hikitia—Managing for success / Māori Education Strategy 2008–2012*. Wellington: Author. http://kahikitia.minedu.govt.nz

[57] Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best evidence synthesis iteration.* Wellington: Ministry of Education. www.educationcounts.govt.nz/goto/BES. See Case 7, p. 263.

[58] Ministry of Education (2008). *Pasifika Education Plan 2008–2012*. Wellington: Author. www.minedu.govt.nz/educationSectors/PasifikaEducation/PolicyAndStrategy/PasifikaEducationPlan.aspx

2.4 Strengthening valued social outcomes

The third challenge is to strengthen valued social outcomes, including the ability of students to relate well to each other[59]. Of the 35 countries participating in the recent TIMSS study[60], New Zealand ranked second-lowest in terms of the percentage of middle-primary students who felt safe at school. This ranking was based on students' answers to questions about whether, over the previous month, they had (i) been shoved, hit, or kicked by other students, (ii) made to do things they didn't want to by other students, (iii) made fun of or left out of peer activities, or (iv) had something stolen. Only 25% of students had not had all of these experiences in the previous month. The international mean was 42%.

Various international comparisons over the past 15 years[61] have found that New Zealand students—both primary and secondary—find interactions with peers more intimidating and less safe than students in many other countries. New Zealand's comparatively high youth suicide rate reinforces the importance of attending to this finding.

Suicide is one indicator of the mental health and social well-being of a society. A 2005 comparison[62] of 13 OECD countries found that New Zealand had the second-highest suicide death rate (after Finland) for males aged 15–24 years and the third-highest suicide death rate (after Finland and Japan) for females aged 15–24. New Zealand is one of a small number of countries where suicide death rates are higher for young people than for older people.

It is important that school leaders, along with families and communities, address issues of student safety[63]. This is reinforced by the finding in Chapter 4 that there is a link between achievement and the effectiveness of school leadership in ensuring an orderly and supportive environment. Safety is important for student well-being and is linked to higher achievement but, over and above these considerations, our children have the right to feel safe at school.

Other best evidence syntheses[64] highlight how effective pedagogy can counter bullying and intimidation at the same time as it advances academic, self-regulatory, and social outcomes such as the ability to collaborate and to resolve conflict. For example, the *Social Sciences / Tikanga ā Iwi BES*[65] describes how supportive learning communities have been built in schools through social studies. The same BES also explains how, in teaching, business-as-usual can inadvertently exacerbate negative peer relationships. With strong pedagogical leadership, schools can develop student learning communities and responsible citizens. They are also able to strengthen valued social outcomes generally, to the benefit of everyone: young people, teachers, and the community.

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[59] Note the key competencies, principles, and values of *The New Zealand Curriculum*. http://nzcurriculum.tki.org.nz/

[60] Martin, M. O., Mullis, I. V. S., & Foy, P. (2008). *TIMSS 2007 international science report: Findings from IEA's Trends in International Mathematics and Science Study at the fourth and eighth grades*. Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Boston College. http://timssandpirls.bc.edu

[61] Garden, R. (Ed.). (1997). *Mathematics and science performance in middle primary school. Results from New Zealand's participation in the Third International Mathematics and Science Study*. Wellington: Ministry of Education.
Mullis, I. V. S., Martin, M. O., Gonzalez, E. J., & Chrostowski, S. J. (2004). *International science report: Findings from IEA's Trends in International Mathematics and Science Study at the fourth and eighth grades*. Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Boston College.
Chamberlain, M. (2007). *Reading literacy in New Zealand*. Wellington: Ministry of Education. Available at www.educationcounts.govt.nz/publications

[62] Ministry of Social Development (2008). *The social report: Te pūrongo oranga tangata 2008*. Wellington: Ministry of Social Development. www.socialreport.msd.govt.nz/health/suicide.html

[63] National Administration Guideline 5 of the Education Act (1989) reads: "Each Board of Trustees is also required to (i) provide a safe physical and emotional environment for students; (ii) comply in full with any legislation currently in force or that may be developed to ensure the safety of students and employees."

[64] http://educationcounts.govt.nz/goto/BES

[65] Aitken, G., and Sinnema, C. (2008). *Effective pedagogy in the social sciences / tikanga ā iwi: Best evidence synthesis iteration*. Wellington: Ministry of Education. www.educationcounts.govt.nz/goto/BES

2.5 Supporting leaders within a self-managing system

In New Zealand schools, most decisions relating to teaching, use of resources, personnel, and planning have been made at the school level since the introduction of school-based management in 1989[66]. Like the Netherlands and England, New Zealand has one of the most decentralised schooling systems in the OECD. Its predominantly lay boards of trustees play a much greater role in school governance than do school boards in other countries[67]. An analysis of evidence from the PISA, TIMSS, and PIRLS surveys has found that, in general, greater school autonomy is correlated with greater student achievement[68]. However, the increased autonomy that followed the 1989 Tomorrow's Schools reforms in New Zealand was not associated with a sustained lift in student performance as envisaged by the Taskforce to Review Education Administration[69] (see Figure 8).

The OECD's recent New Zealand report[70] on improving school leadership gives a comprehensive overview of the same context-related issues that were highlighted by stakeholders during the consultation phase of the development of this BES. These issues include the size of the principal's role, lack of a systems approach to leadership development and support, and difficulties in ensuring that all schools have effective leadership. We conclude this section by briefly surveying contextual issues that have particular bearing on the leadership and governance roles in our schools.

New Zealand principals report high satisfaction with their jobs but also high workloads and stress levels[71]. Balancing the educational leadership and management aspects of the role is reported to be a major source of stress. In mid-2006, only 17% of secondary principals thought they had enough time for professional leadership[72]. A year later, only 20% of primary principals felt this was true of them. The tension between the leadership and management aspects of their role is a recurring theme in New Zealand research on the work of principals. It is also an issue for middle managers, such as heads of department in secondary schools, but there has been little research into their roles[73].

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66 OECD (2008). *Education at a glance: OECD Indicators 2008*. Paris: OECD. Note: the policy name for the introduction of school-based management was Tomorrow's Schools.

67 Section 79 of the 1989 Education Act states that "Except to the extent that any enactment or the general law of New Zealand provides otherwise, a school's Board has complete discretion to control the management of the school as it sees fit." New Zealand Government (1989). Education Act, No. 80.

68 Haahr, J., Nielsen, T., Hansen, M., & Jackobsen, S. (2005). *Explaining student performance: Evidence from the international PISA, TIMSS and PIRLS surveys*. Report prepared for the European Commission's Directorate-General for Education and Culture. Århus: Danish Technological Institute.

69 Taskforce to Review Education Administration (1988). *Administering for excellence: Effective administration in education. Report of the Taskforce to Review Education Administration*. Wellington: Government Printer. See p. 98 "[W]e believe that the standard of education outcomes will be improved under the new structure … We are convinced that our proposals will encourage commitment, initiative, drive, energy and enthusiasm and that these will inevitably lead to improved performance."

70 Ministry of Education (2007). *New Zealand country report on improving school leadership. OECD country background report for New Zealand.* www.oecd.org/dataoecd/37/43/38740175.pdf For New Zealand principals, the report is also available at www.leadspace.govt.nz/leadership/oecdreport.php

71 See the New Zealand Council for Educational Research's periodic national surveys and Hodgen, E., & Wylie, C. (2005). *Stress and wellbeing among New Zealand principals*. Wellington, New Zealand Council for Educational Research. This report analysed data from the Principals' Hauora online survey carried out by the New Zealand Principals' Federation. This survey gained responses from 1,523 principals (61% of the total); there was some under-representation of secondary school and kura kaupapa Māori principals.

72 Schagen, S., & Wylie, C. (2008). *School resources, culture and connections*. Wellington: New Zealand Council for Educational Research.

73 Suggestive evidence about the implications for heads of department is found in Wright, N. (2002). *Stories from the inside: A narrative analysis investigating the professional lives of three New Zealand secondary heads of English departments*. Unpublished doctoral thesis, University of Waikato, Hamilton.
O'Neill, J. (2001). *Shards of teacher and curriculum development in four New Zealand secondary schools*. Unpublished doctoral thesis, Massey University, Palmerston North. http://nzcer.org.nz/NZETbasic.php

International comparisons over the past decade have shown that the amount of time New Zealand principals spend on administration is above the international mean[74]. This is true of both primary and secondary principals. In recent comparisons[75], primary principals have reported spending 47% of their time on administration. This is the second highest percentage of the 36 countries surveyed and compares with an international mean of 32%. An earlier analysis found marked differences in the administrative loads reported by principals of secondary urban and secondary rural schools; the former reported spending 79 hours per month on administration and the latter, 100 hours[76]. The burdens of property management and administrative paperwork (including that required by government agencies) are recurrent themes in the research. Comparative surveys indicate that time spent on administration comes at the expense of time spent on professional leadership activities.

In chapters 4–6 of this BES, we show that the types of leadership that make a positive difference to student achievement and well-being are those that are focused on monitoring and improving teaching and learning. In the two categories used in the international surveys that describe this type of leadership, *instructional and supervising* and *developing and evaluating staff*, the time spent by New Zealand principals has typically been below, or just on, the international mean. In the 2006 TIMSS survey, primary principals reported spending 11% of their time supervising and evaluating teachers—the international mean for this category was 19%[77].

In the most recent PIRLS survey of reading literacy in primary schools, New Zealand principals reported spending 15% of their time on instructional leadership—just below the international mean. The time they were spending on administration amounted to 32%, much higher than the international mean of 22%, while the proportions of time spent on staff development, instructional leadership, and parent and community relations were all lower than the international means. In the same survey, principals reported spending a mean of 57 hours per week on their work. This was the highest total of the 40 countries involved and compares with an international mean of just 39 hours[78]. These data, together with principals' own reports on sources of stress, suggest that few achieve the workload balance that will best serve their students and that they themselves wish for. This issue is addressed further in Chapter 9.

New Zealand schools do not perform uniformly well against the indicators used by the Education Review Office (ERO), the government agency charged with assessing school performance. Over a 5-year period, the agency found that between 13 and 17% of schools reviewed were not performing satisfactorily[79]. According to ERO's 2007–08 annual report, 44% of the schools that underwent a supplementary review were still not meeting the criteria at the time of the follow-up review. Some of this variation between schools is linked to leadership and governance. ERO

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[74] Martin, M. O., Mullis, I. V. S., Gonzalez, E. J., Smith, T. A., & Kelly, D. L. (1999). *School contexts for learning and instruction: IEA's Third International Mathematics and Science Study.* Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Boston College.
Mullis, I. V. S., Martin, M. O., Gonzalez, E. J., Gregory, K. D., Garden, R. A., O'Connor, K. M., Chrostowski, S. J., & Smith, T. A. (2000). *TIMSS 1999 International Mathematics Report: Findings from IAE's repeat of the Third International Mathematics and Science Study at the eighth grade.* Boston College: International Association for the Evaluation of Educational Achievement.
Mullis, I. V. S., Martin, M. O., Gonzalez, E. J., & Kennedy, A. M. (2003). *PIRLS 2001 international report: IEA's study of reading literacy achievement in primary schools.* Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Boston College. Only Norwegian principals spent more time on administration (36%); English and Scottish principals spent the same time as New Zealand principals.
Mullis, I. V. S., Martin, M. O., & Foy, P. (2008). *TIMSS 2007 international science report: Findings from IEA's Trends in International Mathematics and Science Study at the fourth and eighth grades.* Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Boston College. http://timssandpirls.bc.edu

[75] Martin, Mullis, & Foy (2008), op. cit.

[76] See Chamberlain, M., & Caygill, R. (2002). *The school and classroom context for year 9 students' mathematics and science achievement.* Wellington: Ministry of Education. (p. 45)

[77] Martin, Mullis, & Foy (2008), op. cit.

[78] Chamberlain, M. (2007). *Reading literacy in New Zealand.* Wellington: Ministry of Education. www.educationcounts.govt.nz/publications

[79] Education Review Office (2008). *Annual report for year ending 30 June 2008.* Wellington: Government Printer. Note the schools scheduled for supplementary reviews.

found boards to be governing well in only 60% of the 673 schools reviewed between January 2005 and March 2007[80].

In her study of school governance in New Zealand, Wylie[81] concluded that there are some persistent issues with the current system of parent-elected boards, and that if school leadership is to have the strengthening of valued student outcomes as its primary focus, the governance system needs better support and some reframing. Over the 20 years of their existence, predominantly lay boards of trustees have been given increasingly wide-ranging responsibilities and have become subject to increasingly greater accountabilities. One indicator that the system is under stress is that, in 2006, 61% of secondary school trustees thought their overall level of responsibility was too great; the comparable figure for 2003 was 36%[82].

The persistent issues identified by Wylie include lack of time to fulfil the requirements of the role (trustees are volunteers); gaps in trustee expertise, particularly when it comes to strategic management and understanding educational issues[83]; and too much time being spent on administration—most notably finance and property matters—instead of strategic management, which is what trustees say they would prefer to be spending their time on. Low-decile schools find it much harder to attract onto their boards the same level of expertise as mid- and high-decile schools, and there is some evidence that fewer trustees in low-decile schools have a proper grasp of their governance role[84]. Defining where the boundary between governance and management lies can be a source of tension in any school but is more likely to be so in rural schools. Rural school trustees must sometimes also face additional challenges, such as a shortage of trustee candidates or a falling roll[85].

A study of school governance in the US[86] compared the views of board members in schools with relatively high student achievement and in schools with relatively low student achievement. Board members in high-achieving schools typically had high expectations in terms of student achievement, an orientation towards improvement (generally one that valued the systematic use of data), and an emphasis on supporting teaching and learning. A study of governance in the Welsh school system, which has close parallels to New Zealand's, concluded that school improvement is fostered by governance practices that involve scrutiny and accountability in a climate of mutual respect and shared responsibility[87]. Chapter 8 of this BES highlights the crucially important role of relational trust in all leadership of school improvement.

2.6 Our shared challenges

School improvement evidence tells us that persistent and widespread disparities in achievement are best tackled through partnerships between leaders in schools and external expertise. The *Teacher Professional Learning and Development BES*[88] found that school-based change supported by capable external expertise was a pattern found in many highly effective interventions.

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[80] Education Review Office (2007). *School governance: An overview.* Wellington: Education Review Office. www.ero.govt.nz

[81] Wylie, C. (2007). *School governance in New Zealand: How is it working?* Wellington: New Zealand Council for Educational Research.

[82] ibid.

[83] Robinson, V. M. J., & Ward, L. (2005). Lay governance of New Zealand's schools: An educational, democratic or managerialist activity? *Journal of Educational Administration, 43*(2), pp. 170–186.

[84] Robinson, V. M. J., Ward, L., & Timperley, H. (2003). The difficulties of school governance: A layperson's job? *Educational Management & Administration, 31*, pp. 263–281.

[85] Martin, J. (2001). *Talking to the chair: An exploration of the role of the board of trustees chairperson in small rural schools.* Unpublished doctoral dissertation, University of Waikato.

[86] Rice, D., Delagrardelle, M., Buckton, M., Jons, C., Lueders, W., Vens, M., Joyce, B., Wolf, J., & Weatherby, J. (2000). *The Lighthouse Inquiry: School board/superintendent team behaviours in school districts with extreme behaviours in student achievement.* (ERIC Document Reproduction Service No. ED453172)

[87] Ranson, S., Farrell, C., Peim, N., & Smith, P. (2005). Does governance matter for school improvement? *School Effectiveness and School Improvement*, *16*(3), pp. 305–325.

[88] Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best evidence synthesis iteration.* Wellington: Ministry of Education. http://educationcounts.govt.nz/goto/BES

A recent analysis of successful school reform programmes—'successful' in terms of improved student outcomes—showed, in fact, that all these successful programmes involved partnerships between school leaders and external leaders. The latter were usually researchers or education officials (district, state, or national)[89]. This means that those in professional education and advisory roles in the tertiary sector, policy makers, and educational researchers also have crucial leadership responsibilities.

By focusing on effective leadership practices, it is the writers' aim that this BES will support policy makers, researchers, and school leaders, together with those who provide their professional learning and support, to work together to meet our shared challenges in ways that lead to long-term, sustainable improvement in student outcomes—particularly for those groups of students that have not been well served by the system in the past.

[89] Annan, B. (2006). *A theory of schooling improvement: Connectivity and consistency to improve instructional practice.* Unpublished doctoral thesis, University of Auckland.

3. The framework for analysis and synthesis

> A synthesis is not a neutral process of data collation—it is a sense making and interpretive exercise and as such the reader deserves a full account of the methodological decisions that have shaped it[90].

The purpose of this chapter is to orient the reader to the broad conceptual and methodological frameworks that determined how we went about the task of describing and explaining the links between educational leadership and student outcomes. The strategies we used were shaped by an extensive set of guidelines that are applicable to all the syntheses commissioned as part of this Ministry of Education programme[91]. These generic guidelines were adapted to fit the body of evidence relevant to this BES.

In the following sections, we begin by defining the concept of leadership and, more particularly, educational leadership, from both Māori and non-Māori perspectives. These definitions did not drive our analysis, as our brief required us to be inclusive of the many different approaches to leadership found in the research. The definitions were important, however, in that they framed our thinking as we read and informed our critique of the contribution leadership research makes to improved educational outcomes.

The sections in this chapter explain:

- the importance of context and how we take it into account;
- the role of theory in this synthesis;
- what we mean by 'a range of valued outcomes';
- the analytic strategies used to make links between leadership and student outcomes;
- the role of academic and professional advisors.

3.1 What is leadership?

For methodological reasons, this BES requires a conception of leadership that is explicit but inclusive—one that delimits the field without privileging a theoretically or culturally specific view. We needed a concept of leadership that would act as our touchstone as we encountered the widely varying concepts implicit or explicit in the research.

The concept of leadership that has guided our analyses has three particularly important features:

- It includes both positional and distributed leadership.
- It views leadership as highly fluid.
- It sees leadership as embedded in specific tasks and situations.

An example may help clarify what we mean. This scenario is an entirely hypothetical but nevertheless fairly typical example of how staff go about accomplishing tasks together[92]:

> Mere, the Head of Science, is chairing a meeting in which her staff are reviewing assessment results for the last unit of work. She circulated the results in advance, with notes about how to interpret them, and asked the team to think about their implications for the teaching of the unit next year. The team identifies common misunderstandings and agrees that they need to develop resources that will help students to overcome them. Julian, a second year teacher, was pretty unhappy with the assessment protocol used this

[90] Pawson, R. (2002). Evidence-based policy: The promise of realist synthesis. *Evaluation, 8*(3), pp. 340–358.

[91] Alton-Lee, A. (2004). *Guidelines for generating a best evidence synthesis iteration 2004*. Wellington: Ministry of Education. www.educationcounts.govt.nz/goto/BES

[92] The following section is based on Robinson, V. M. J. (2001). Embedding leadership in task performance. In K. Wong and C. Evers (Eds.), *Leadership for quality schooling: International perspectives* (pp. 90–102). London: Falmer Press.

year and suggests revisions that he thinks will give more recognition to students who have made an extra effort. Most of his suggestions are adopted. Lee, who teaches information technology as well as science, shows the group how the results have been processed on the computer so that they can be combined with other assessments and used in reports to parents and the board. Several team members express nervousness about reporting to the board, so they decide to review a draft report at the next meeting.

In terms of some popular conceptions, this scenario has little to do with leadership. Mere is not in the driver's seat articulating a vision, motivating the troops, or satisfying needs. But she is changing how the task is done by providing structure and resources, as are Julian and Lee with their ideas about how the assessment protocol and reporting processes can be improved.

Our scenario illustrates how leadership can be exercised by those without positional authority. Mere is the only member of the group with a formal leadership position, but two other participants also make leadership contributions. It is important that distributed as well as positional leadership is included within our overall definition, for while our primary focus is principals, we recognise that—especially in larger schools—formal leadership responsibilities are held by all those in senior and middle management roles. By including distributed leadership, we also recognise how leadership may be exercised by anyone whose ideas or actions are influential in the context of specific tasks and activities. For example, Māori parents, whānau, and other community members have typically played crucial leadership roles in the setting-up of Māori-medium educational institutions, such as kōhanga reo and kura kaupapa Māori[93]. In recognising both positional and distributed leadership, we in no way diminish the importance of the principal's role, because one of the latter's key tasks is to build and sustain the leadership of others. This is true also of principals in very small schools, where leadership functions may need to be distributed to a network of helpers, parents, and community leaders not actually employed by the school.

The scenario also illustrates the second distinguishing characteristic of our concept of leadership: it is highly fluid. The participants in the scenario move seamlessly between exercising influence over their colleagues and being influenced by them. Such fluidity is dependent on group members' willingness to influence others and be influenced by them as they recognise their task-relevant contributions.

Further, the scenario illustrates the linkage between leadership and task-relevant expertise. Leadership is not a decontextualised influence process. The people in our scenario were influential because their ideas, actions, and tools were recognised by others as useful for progressing the goal of better science assessment and reporting. If the same three teachers were working on a different task, the distribution of influence might be quite different—the exercise of leadership shifts according to the expertise and skills required by the task at hand.

Most conceptions of leadership view it as an influence process that causes others to think or act differently with respect to some task or situation (different, that is, from how they would have thought or acted in the absence of the influence)[94]. This is not a sufficient account, however, as there are many ways of exercising influence or power that we would not want to call leadership. In cases where leadership is exercised, others are influenced because they judge that the leaders "occupy a position which gives them the right to command a course of action, or that they possess the requisite personal characteristics of leaders, or that they

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[93] Smith, G. (1995). Whakaoho whānau: New formations of whānau as an innovative intervention into Māori cultural and educational crises. *He Pukenga Kōrero: A Journal of Māori Studies*, *1*(1), pp. 18–36.

[94] See, for example:
Leithwood, K., Seashore Louis, K., Anderson, S., & Wahlstrom, K. (2004). *How leadership influences student learning*. Retrieved June, 2005, from www.wallacefoundation.org/NR/rdonlyres/E3BCCFA5-A88B-45D3-8E27-973732283C9/0/ReviewofResearchLearningFromLeadership.pdf and
Yukl, G. (1994). *Leadership in Organizations* (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall.

seek an action that is correct or justifiable"[95]. These three reasons differentiate between the influence exercised by leadership and the influence wielded in other forms of power relations, such as force, coercion, and manipulation.

It needs to be noted that these three sources of leadership influence are very direct and person focused. While leadership of this kind is of crucial importance, educational leaders also contribute to teaching and learning in other, more indirect ways by creating the conditions that enable others to do things that they would not have otherwise had the resources or the will to do. Behind the scenario discussed above, we can imagine a principal and senior management team who worked with heads of department to establish the importance of analysing and using student data, changed the timetable so that staff could meet, and provided heads of departments with professional development in which they learned how to lead meetings in ways that were likely to impact positively on valued student outcomes. In a word, this type of leadership is empowerment. Given that leaders have an important *indirect* impact on student outcomes[96], we include empowerment in our concept of leadership[97].

Our conception of leadership highlights its role in bringing about change: leadership involves influencing people to think and act differently, either directly (through face-to-face encounters) or indirectly (by creating the relevant conditions). In addition to challenging others to change particular practices, a leader may need to challenge them to reconsider their views about what does and does not need changing. Based on this association between leadership and change, we can draw a distinction between leading and managing. Managing is about maintaining operations and routines; leadership is about garnering support for their reconsideration and possible change. This distinction should not be drawn too sharply, however, for managers need leadership skills (to be influential) and leaders need management skills (to understand how routines and systems inhibit or support possible change).

It is imperative that cultural and ethnic considerations are reflected in the leadership dimensions found to be effective in enhancing the outcomes for diverse students. The BES programme puts particular stress on the needs of Māori and Pasifika students. To this end, we have looked for and examined evidence of Māori and Pasifika educational leadership. Our aim has been to provide a conception of leadership that is inclusive of Māori and Pasifika, not to make Māori and Pasifika leadership fit a Pākehā/Palangi conception. We have, therefore, examined critically our account of leadership to discern whether it is inclusive of and resonates with Māori and Pasifika perspectives. This will be true if it embraces the sources of leadership influence and the leadership purposes that are important to these groups. We would argue that it does.

Our account is sufficiently inclusive to embrace, for example, the work of Sanga and Walker[98] on leadership in the Solomon Islands. These two authors see leadership as primarily concerned with relationships of influence. In their view, leaders need to be skilled in the exercise of influence that is ethical. They emphasise leadership purposes that are grounded in particular challenges currently facing the Solomon Islands: political stability, conflict resolution, and community building. Commentary indicates that a significant challenge for Pasifika leaders is how to value traditions that provide a sense of security, identity, and well-being while recognising the changes taking place in Pasifika societies[99] and in Pasifika communities in New Zealand[100].

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[95] Fay, B. (1987). *Critical social science: Liberation and its limits*. Cambridge, MA: Polity, p. 121.

[96] Witziers, B., Bosker, R. J., & Krüger, M. L. (2003). Educational leadership and student achievement: The elusive search for an association. *Educational Administration Quarterly, 39*(3), pp. 398–425.

[97] This discussion of empowerment is based on a personal communication with Brian Fay (10 December, 2006). He sees empowerment as a positive way of exercising influence but does not include it as a form of leadership.

[98] Sanga, K., & Walker, K. (2005). *Apem Moa: Solomon Islands leadership*. Wellington: Institute for Research and Development in Māori and Pacific Education, Victoria University.

[99] Madraiwiwi, J. (2005, July). Remarks to the Pacific Regional Workshop on Leadership Development dinner, Tradewinds Convention Centre, Lami.

[100] Sua-Hawkins, A., & Mafile'o, T. (2004). What is cultural leadership? *Social Work Now, 29*, pp. 10–16.

3.1.1 Māori leadership

It is imperative that our account resonate with Māori conceptions of leadership[101]. Traditionally, the authority of Māori leaders was derived from their chiefly mana[102]. As mana was linked to ancestry, a leader would generally inherit a relationship with their group: their role was to maintain that relationship and secure the identity of the group. But mana was also closely related to power, prestige, and achievement[103]. As the achieving of group goals or aspirations depended heavily on the abilities of a leader, leadership responsibility could be acquired by exhibiting superior knowledge, skill, and courage. Mana could be taken away—or simply lost—as a consequence of poor leadership. For a person to retain a leadership position, success for the group, whether whānau, hapū, or iwi, was a requisite. So, in the first instance, the authority attached to a position depended on a leader's mana being validated by the group. This authority could be maintained only as long as it was effectively used to achieve group objectives.

Today, authority to lead is still dependent on mana, which can be derived from either institutional position (power and prestige) or a track record of serving the Māori community (achievement). Māori leadership continues to have a focus on success for the group. According to Walker[104], the leadership purposes that are particularly important to Māori are those that serve emancipatory ends—that improve the status of Māori in New Zealand society. Strong Māori leadership implies a strong focus on Māori issues. This can be seen in the insistence of many Māori principals that they serve the wider Māori community, as well as the school and the school community. See also the section Māori educational leadership, page 70.

3.2 What is educational leadership?

One way of answering this question would be to say that leadership exercised by those in educational institutions is, by definition, educational leadership. We think this is unsatisfactory because it ignores the possibility that some leadership activities in schools may not be directed towards educational ends. Indeed, many New Zealand principals are concerned that too much of their work is, in their view, not educationally relevant[105].

A better approach to defining educational leadership involves starting with educational purpose because by doing this we come back to what it is that actually motivates leaders. We have already seen that the social, cultural, and economic advancement of Māori communities is a key purpose of Māori leadership. Another key purpose, across the education system, is improving valued social and educational outcomes for all students, with a particular emphasis on lifting the achievement of Māori and Pasifika students. It is these purposes that distinguish educational leadership from other sorts of leadership. Elmore[106] puts this plainly when he defines educational leadership as the "guidance and direction of instructional improvement". This definition sets an ambitious agenda for school leaders and for leadership training programmes. It declares that the purpose of educational leadership is not only (for example) to develop a cohesive culture, have good communication channels with staff and students, and monitor and evaluate instruction—it is to do all these things in a manner that improves teaching and learning.

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[101] Hohepa, M., & Robinson, V. (2008). Māori and educational leadership: Tū rangatira. *AlterNative: An International Journal of Indigenous Scholarship, 4*(2), pp. 20–38.

[102] Walker, R. (2006). Māori conceptions of leadership and self determination. In R. Miller & M. Mintrom (Eds.), *Political leadership in New Zealand*. Auckland: Auckland University Press.

[103] Hohepa, P. (1999). My musket, my missionary, and my mana. In A. Calder, J. Lamb, & B. Orr (Eds.), *Voyages and beaches: Pacific encounters, 1769–1840.* Honolulu: University of Hawai'i Press. pp. 180–201.

[104] Walker (2006), op. cit.

[105] Hodgen, E., & Wylie, C. (2005). *Stress and wellbeing among New Zealand principals: Report to the New Zealand Principals' Federation*. Wellington: New Zealand Council for Educational Research.

[106] Elmore, R. F. (2004). *School reform from the inside out: Policy, practice, and performance*. Cambridge, MA: Harvard Education Press, p. 13.

In summary, we argue that educational leadership is leadership that causes others to do things that can be expected to improve educational outcomes for students. Discovering what those things are is the work of this BES. Our aim is to arrive at a theory of educational leadership that identifies where leaders should direct their energies in order to gain the greatest leverage for enhancing student outcomes.

3.2.1 Māori educational leadership

We have already noted that today's Māori educational leaders are often expected to work as change agents. This might mean challenging existing power structures in their organisations or advocating for Māori young people or organising the cultural and community aspects of their schools[107]. We are aware that many non-Māori leaders also take on such roles, but our point is that, given the push to revitalise Māori language and culture, the Māori community *expects* Māori leaders to do so. Their sphere, therefore, includes not only leadership within the classroom and the community but extends "into the wider corridors of Māori development"[108]. Māori educational leaders are expected to establish positive relationships with a variety of institutions, communities, sectors, and iwi and to move easily between past, present, and future systems of knowledge. Durie sees effective Māori leadership as that which is "expert in navigating within te ao Māori" "and exploring te ao whānui" (wider society)[109]. Māori educational leadership has a significant role to play both in ensuring that Māori students acquire universal knowledge and skills and in supporting them to realise the aspirations held by Māori. There is an opportunity cost in trying to meet such expectations and demands. Māori teachers find that the expectation that they participate in Māori cultural affairs in the school community as well as in the school inevitably increases their workload[110]. The workloads of Māori educational leaders are likely to be affected in the same way.

3.2.2 Māori-medium educational leadership

The parents of kōhanga reo students, whānau, Māori community members, kaumātua, and Māori educationalists have been instrumental in the establishment of kura kaupapa Māori[111]. Exercising political leadership, they lobbied the government for legislation that would recognise kura as a category of school[112]. During the developmental phase, they focused on setting up kura, developing curricula[113], staffing programmes[114], and supporting and strengthening whānau. Today, leadership is focused on improving teacher effectiveness and student achievement while remaining true to the kaupapa or vision.

Māori-medium communities see their tumuaki as a vehicle through which community aspirations can be met. Indeed, it could be argued that *every* principal is accountable to the school community for the educational well-being and achievement of its young people. In most cases, parents exercise influence primarily by electing the board of trustees and, via the board, selecting the principal. In Māori-medium schools, collective influence may be expressed through the kura whānau as well as through the board and may come with the expectation

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[107] Fitzgerald, T. (2003). Interrogating orthodox voices: Gender ethnicity and educational leadership. *School Leadership and Management, 23*(4), pp. 431–444.

[108] Durie, M. (2001). *The hui taumata mātauranga: Progress, and platforms for Māori advancement*. Address to Hui Taumata Tuarua, Turangi/Taupo, p. 11.

[109] Durie, M. (2006) Māori Education 2026. Paper presented at Post Primary Teachers Association conference, 20 April, Wellington.

[110] Te Tāhuhu o te Mātauranga/Ministry of Education. (1999). *A report of workload issues for Māori secondary school teachers.* Wellington: Author.

[111] Sharples, P. (1989). Kura kaupapa Māori: Recommendations for policy proposals for the establishment of kura kaupapa Māori. *Access, 8(*1), pp. 28–36.

[112] Smith, G. H. (1997). *The development of kaupapa Māori: Theory and praxis.* Unpublished doctoral thesis, University of Auckland.

[113] Mead, L. T. (1996). *Ngā aho o te kākahu mātauranga: The multiple layers of struggle by Māori in education.* Unpublished doctoral thesis, University of Auckland.

[114] Nepe, T. M. (1991). *E hao nei e tēnei reanga te Toi Huarewa Tupuna: Kaupapa Māori, An educational intervention system.* Unpublished masters thesis, University of Auckland.

that the principal will take a collaborative approach to leadership. This can involve kaumātua and other members of the whānau being actively involved in decisions that relate to student learning and, more generally, in the running of the school.

Tumuaki of kura have additional duties and accountabilities that embrace the widest possible definition of student achievement and well-being. Whānau generally have aspirations for the development and well-being of the kura community, so the tumuaki may be expected to champion wider community interests in addition to the particular educational interests of the students currently enrolled. This means engaging with and responding to a wider range of stakeholders on a wider range of issues than is often the case for principals of English-medium schools.

The principal, parents, community, and staff of a Māori-medium school will most likely have expectations for student achievement and well-being that are driven by a passion for the regeneration of Māori language and culture. Because loss of language is loss of culture, Māori-medium teaching is vested with enormous cultural significance. Māori-medium leaders, therefore, can find themselves pursuing multiple agendas as:

- leaders of a kura responsible for raising the standard of teaching and learning;
- leaders of teaching and learning in te reo Māori, developing and using Māori pedagogical practices;
- leaders in the regeneration of te reo Māori me ōna tikanga.

Māori-medium principals pursue the second and third parts of this agenda as much because they feel a philosophical and moral imperative as for strategic reasons. These two agendas are also fundamental to the vision and expectations of all kura whānau.

3.3 Taking account of context

BES authors are expected to pay careful attention to the context of research. This includes clearly reporting the characteristics of those involved in any particular study. Was it conducted in New Zealand? Was it situated in a primary or secondary school? What were the age and ethnicity of the students? We provide such information wherever possible. There remains, however, a larger question, and that is how to make research findings relevant to leaders in their own specific contexts.

Some researchers try to address the issue of context by specifying all the conditions under which a generalisation should hold. Applying contingency theories of leadership, they attempt to specify how school characteristics such as type and size, staff characteristics such as age and experience, and task characteristics such as complexity moderate leader–outcome relationships. The generalisations that emerge from such studies provide complex prescriptions about what to do: in situation X do Y if conditions a, b, c, etc. obtain; do Z if conditions d, e, f, etc. obtain. But even if particular contingent relationships can be identified, no theory of leadership and no leadership generalisation can take into account the sheer number of contingencies at work in most leadership situations. "The more complete and complex a contingency model of leadership, the less conceptually elegant and practically useful it is[115]."

An alternative approach recognises that the exercise of leadership involves discerning and integrating the relevant factors in any problem situation—and that the relevant factors, taken together, constitute context. Context must, therefore, be discerned in situ rather than specified by means of a complex set of generalisations. This does not limit the value of research, because what is relevant in one situation will often overlap with what is relevant in another. Research findings are able to alert leaders to factors they may need to consider in their particular contexts and help them understand and integrate those factors in fruitful ways. What research findings

[115] Hackman, J. R., & Wageman, R. (2007). Asking the right questions about leadership: Discussion and conclusions. *American Psychologist, 62*(1), pp. 43–47. Quote from page 44.

cannot do is provide situation-specific solutions for particular leadership problems, precisely because there will always be something unique about the contextual factors and their interplay. The context-specific nature of leadership means that there are no rules that guarantee positive impacts, even if faithfully followed. That is why there are no rules in this BES. What the reader will find instead are clear guidelines backed by sound theoretical explanations—guidelines concerning what leaders should try to influence and how to do this in ways that will increase the likelihood of success. The BES also details the skills involved in discerning and responding to the important contextual factors. (See Chapter 8, section 8.3.2 on problem solving.)

3.4 The role of leadership theory

The BES guidelines ask writers to create a synthesis that integrates theory across the various sources of evidence. Writers would normally do this by employing the theoretical resources used by the authors of the synthesised studies. This strategy was not going to prove a workable one for this BES. Educational leadership theories are, for the most part, concerned with the relationships between leaders and their staff rather than with the impact of leaders on students. They tend to be generic and adult-focused and they say surprisingly little about how to improve teaching and learning. Given this disconnection between leadership theory on the one hand and teaching and learning on the other, a synthesis based on educational leadership alone would not have provided sufficient guidance about how to make a difference to students.

For our synthesis to explain as well as identify the leadership dimensions that make a difference to students, we had to discover the particular qualities of each dimension that were responsible for the impact. To illustrate this point, we learned from the empirical leadership literature that high levels of leadership involvement in teacher professional learning were associated with moderate-to-strong impacts on student outcomes. What we did not learn from this literature were the particular qualities of teacher professional learning that were responsible for this difference. It is important to identify these qualities because the research evidence on teacher professional learning shows that only some kinds of professional learning benefit students. If leaders are to use our findings, we need to not only identify the importance of this leadership dimension but also to explain the qualities of professional learning that are responsible for these impacts. The evidence that helps us discriminate these qualities is found not in the educational leadership literature but in the literature on professional development[116].

This foregoing point is applicable to all the leadership dimensions: we had to move beyond the evidence about leadership in order to identify the particular qualities that were responsible for the leadership impacts. Most often, the theoretical resources we used came from research on teaching and learning rather than research on leadership. Theoretical resources from organisational studies and social psychology were also used to help explain the leadership skills described in Chapter 8. This approach to identifying and explaining the dimensions of leadership results in a theory of educational leadership that is embedded in evidence about how to improve teaching and learning.

3.5 Valued student outcomes

The BES guidelines make it clear that writers are to have a broad view of what counts as valued student outcomes. We have taken *The New Zealand Curriculum* and *Ka Hikitia* (the Māori Education Strategy) as our primary guides to educational outcomes that have widespread and strong support from the community. We recognise that after year 10, secondary students are able to specialise in particular learning areas or take courses across or outside these areas[117]. In *The New Zealand Curriculum*, the desired outcomes include selected values, key

[116] Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best Evidence Synthesis Iteration*. Wellington: Ministry of Education.
[117] Ministry of Education (2007a). *The New Zealand curriculum*. Wellington: Author.

competencies, and achievement objectives in the eight learning areas[118]. In *Ka Hikitia*, Māori enjoying education success as Māori is the overarching strategic outcome[119]. This means Māori learners working with others to determine successful educational pathways, realising their cultural distinctiveness and potential, successfully participating in and contributing to te ao Māori, and successfully participating in and contributing to Aotearoa New Zealand and the world. Fortunately, given the prolific and contested nature of the educational leadership literature, the focus of this BES on student outcomes allows us to bypass the debates about the relative merits of different theories of leadership that often contain little reference to evidence about their consequences for students.

3.6 Analytic strategies for connecting leadership and outcomes

Unless they are teaching principals, there is likely to be a long causal chain between the actions of principals and student outcomes. By and large, they impact indirectly on student outcomes by creating conditions under which teachers—who have a much more direct influence—are able to be effective[120]. For example, if principals develop a budget which includes the purchase of reading materials that they believe will help year 9 boys enjoy reading, they create a condition—better resources—that may indirectly impact on student learning. The larger the school, the more indirect the influence of top leadership is likely to be. This indirectness makes it very difficult to trace causal connections between leadership and student outcomes.

When people ask about the relationship between leadership and student outcomes, they assume that the direction of any influence is from leadership to outcomes. It is likely, however, that the influence goes both ways. For example, a school with a high-achieving culture tends to attract quality teachers—and if there is quality teaching, leaders can focus on pedagogy in a way that is often not possible in a school where there is a culture of low achievement. So the students shape the leadership and the leaders shape the students by the ways that they respond to low achievement. In short, the influence is reciprocal. This means that in a school with a weak academic culture, the job of leaders is to resist that culture and reshape it so that it supports serious intellectual activity. The weaker the academic culture, the more difficult this task. We need studies of leadership that trace these reciprocal processes.

The following quote captures the dynamic interaction between leadership, school conditions, and student outcomes. It comes from a discussion of the causal models used in leadership research.

> By way of illustration a principal might enter a low performing school that has severe problems of discipline and order. In response, the principal might take highly directive measures to establish control. Once the school has achieved a level of stability, the principal may adopt a quite different way of thinking about both goals and actions for school development. To the extent that leadership is viewed as an adaptive process rather than as a unitary independent force, the reciprocal-effects perspective takes on increased salience. When employing this type of model, the researcher further entertains the possibility that causal relationships may be multi-directional, change over time, and even be nonlinear[121].

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[118] ibid.

[119] Ministry of Education (2008). *Ka hikitia—Managing for success / Māori education strategy.* Wellington: Author. These outcomes are adapted from p. 15.

[120] Hallinger, P., & Heck, R. H. (1998). Exploring the principal's contribution to school effectiveness: 1980–1995. *School Effectiveness and School Improvement, 9*(2), pp. 157–191.
Witziers, B., Bosker, R. J., & Krüger, M. L. (2003). Educational leadership and student achievement: The elusive search for an association. *Educational Administration Quarterly, 39*(3), pp. 398–425.

[121] ibid., p. 168.

Unfortunately, the quantitative research that gives us the clearest evidence about the links between leadership and outcomes does not capture these dynamic and reciprocal qualities. They are more often found in the qualitative research used in Chapter 6 and the case studies.

Another major challenge faced by the writers was the scarcity of evidence directly addressing the links between leadership and student outcomes. This was equally true of the New Zealand research and the international research. The authors overcame this limitation by using the two strategies outlined in Figure 11.

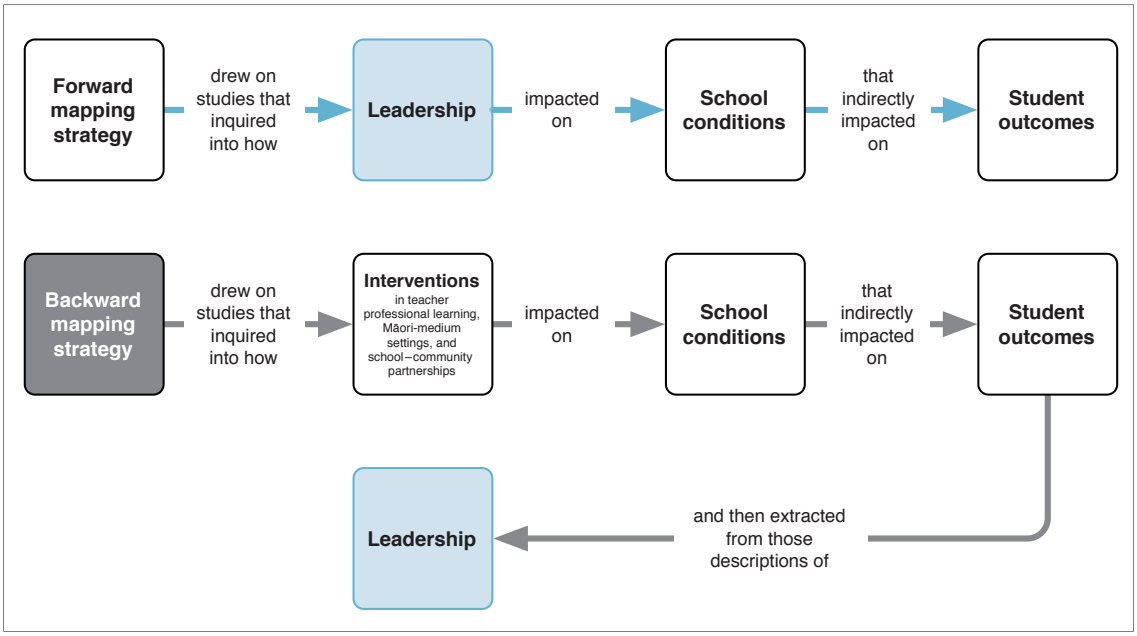

Figure 11. The two main strategies for detecting the impact of leadership on student outcomes

3.6.1 Forward mapping strategy

Where evidence was available about the impact of leadership on student outcomes, we used the forward mapping strategy depicted in the upper portion of Figure 11. There was only one New Zealand study in this category. To carry out a study of this kind, researchers need to be able to link measures of school leadership with student outcomes that are identifiable by school.

The strategy is called forward mapping because it involves starting with a measure of leadership and then tracing its links to student outcomes. Researchers often try to trace these links by measuring the relationships between leadership and selected school conditions (such as professional community or organisational learning) and the subsequent impact of these conditions on student outcomes. In addition to measures of leadership, school conditions, and student outcomes, these studies often include student and community background variables. This makes it possible to separate the effects of leadership on student outcomes from the effects of between-school differences that stem from the students' backgrounds.

The forward mapping strategy was used to address the first question in Table 1. It involved two different meta-analyses of the evidence in order to identify the relative impact of different types of leadership on student outcomes. The findings relevant to this first question are found in chapters 4 and 5.

Table 1. Strategies used to address the major research questions

	Research Question	Strategy
1.	What is the impact of type of leadership on student outcomes? • type as theory; • type as leadership dimension.	Forward mapping including two meta-analyses
2.	What is the role of leadership in interventions that improve student learning in New Zealand contexts? • teacher professional learning; • interventions in Māori-medium settings; • educational partnerships with parents and whānau.	Backward mapping
3.	What is the role of leadership in creating educationally powerful connections between families, whānau, and communities?	Backward mapping analysis of New Zealand research, supplemented by a meta-analysis of the impact of various types of school–home connections on student outcomes
4.	What knowledge, skills, and dispositions (KSDs) are needed to engage in the practices identified in questions 1 and 2?	Analysis of research that links KSDs to leadership dimensions and/or student outcomes

3.6.2 Backward mapping strategy

Since there was no direct New Zealand evidence about the impact of leadership on student outcomes, further strategies had to be employed to answer the second and third research questions in Table 1. An indirect, backward mapping strategy[122] was adopted to identify the role of leadership in improving the academic and social learning of students through teacher professional learning and in Māori-medium contexts. The strategy is called backward mapping because its starting point was evidence about student outcomes, from which implications for school leadership were derived or inferred.

In the case of teacher professional learning, the majority of studies used in this backward mapping analysis had been included in the recently published *Teacher Professional Learning and Development BES*[123]. This meant that claims made for the impact of interventions on students had already been subject to rigorous scrutiny. This prior analysis gave us confidence that the studies selected for this synthesis had made a positive difference for students. Inferences were then drawn from the descriptive evidence about the role played by leaders in creating the conditions that produced those positive student outcomes[124]. It should be noted that, in many of these studies, leadership was widely distributed, both within and beyond the school. We also included studies of interventions in kura to ensure that our leadership dimensions were equally relevant to both Māori- and English-medium schools.

Given the inferential nature of the backward mapping strategy, it was important that we cross-check our findings carefully. We did this by comparing the dimensions derived from the backward mapping analysis of the New Zealand research with the dimensions derived from the forward mapping analysis of the international research. There was considerable similarity in the results. See Chapter 5 for the international research and Chapter 6 for the New Zealand research.

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[122] Alton-Lee, A. (2004). *Guidelines for generating a best evidence synthesis iteration 2004*. Wellington: Ministry of Education. www.educationcounts.govt.nz/goto/BES Section 6.2, p. 40.

[123] Timperley, Wilson, Barrar, & Fung (2007), op. cit.

[124] Backward mapping has also been discussed in the context of strategic planning. See Dimmock, C., & Walker, A. (2005). *Educational leadership: Culture and diversity*. Thousand Oaks, CA: Sage Foundation Publications. pp. 98–100.

3.6.3 The meta-analysis of school–home connections

The research into leadership effects on student outcomes has rarely paid attention to parent involvement or other school–home factors. As a result, this dimension of leadership practice did not feature in the forward mapping analyses in Chapter 5. The failure to include this aspect of influence in most studies of leadership reflects a weakness in the literature rather than the unimportance of the issue. Indeed, leadership practices in school–home and school–whānau connections can be instrumental in addressing achievement disparities and ensuring effective educational provision for diverse students. The importance of this aspect of leadership was also suggested by the backward mapping analysis of the New Zealand evidence used to answer question 2 in Table 1.

Given the scarcity of leadership research literature on the impact of school–home connections, we turned to the broader literature to generate the meta-analysis that informs Chapter 7, building on the work of the *Community and Family Influences BES*[125]. The purpose of this meta-anlysis is to provide leaders with an indicative guide as to where effort invested in school–home connections will be more (or less) productive. A qualitative analysis of the key source studies in the meta-analysis focuses on the ways in which leaders facilitated powerful connections. Further information about the methodology and source studies is provided in Chapter 7 and Appendices 7.1 and 7.2.

3.6.4 Strategies to identify leadership capabilites.

There is very little research evidence that directly explores the relationship between educational leaders' knowledge, skills, and dispositions (KSDs) and student outcomes. Nevertheless, once we had identified the impact of various leadership dimensions on student outcomes using the forward mapping strategy, we were able to locate studies that linked those leadership dimensions to specific skills and knowledge. Through this two-step process, we established indirect connections between four KSDs and student outcomes. These findings are reported in Chapter 8.

3.6.5 Supplementary strategies

Once the leadership dimensions were derived, additional strategies were used to more fully describe them and more strongly connect them to the New Zealand context. Over 200 New Zealand theses related to policy, leadership, and administration were reviewed in a search for illustrations of the dimensions in action.[126]

3.7 Quality assurance and collaboration with professional groups

An advisory group comprising a diverse range of school leaders and academics provided methodological and theoretical advice to the writers. These New Zealand advisors were supplemented by international advisors who commented on and contributed to specific pieces of work and who quality assured the final draft of the synthesis.

The Ministry of Education, in managing this project, collaborated with the various associations of educational leaders. A BES management group comprising approximately 25 members drawn from principal groups, unions, boards of trustees, and regulatory bodies together with Ministry representatives selected the authors and oversaw progress. This group provided feedback on draft chapters and presentations and suggested how the document could be

[125] Biddulph, F, Biddulph, J., & Biddulph, C. (2003). *The complexity of community and family influences on children's achievement in New Zealand: Best evidence synthesis iteration.* Wellington: Ministry of Education.
[126] New Zealand Education Theses Database. www.educationcounts.govt.nz/goto/BES

made more useful for school leaders in both English- and Māori-medium settings. Many other educational leaders also contributed to the development of this BES through the discussions that followed numerous presentations to professional associations and conferences.

The above advisory processes increased the accuracy, accessibility, and potential usefulness of the final document.

3.8 Summary

In this chapter, we have outlined the purpose of this BES and the approach we took to its development. We have introduced a concept of leadership that is cognisant of the bicultural nature of our schools, our location in the Pacific region, and the fact that we are home to some of the largest populations of Pasifika peoples found anywhere. Our concept is inclusive of both positional and distributed leadership. It views leadership as highly fluid and deeply embedded in educational tasks and knowledge.

Several different analytic strategies were used to identify and explain a number of key dimensions of leadership that are linked to improved student outcomes. A forward mapping strategy was used to analyse studies that quantified the relationship between measures of leadership and student outcomes. These studies were analysed both qualitatively and quantitatively, with the latter involving two detailed meta-analyses. For the studies that did not provide direct measures of leadership, a backward mapping strategy was used. This involved analysing evaluations of (i) New Zealand interventions that had demonstrated positive effects on a range of student outcomes and (ii) New Zealand studies of effective educational engagement with communities. The purpose of the analysis was to identify the leadership practices that may have contributed to the success or otherwise of these interventions. The backward mapping strategy included studies from both English- and Māori-medium contexts. A further meta-analysis was conducted on studies of school–home connections in order to supplement our findings about the role of leaders in promoting connections that are educationally powerful.

The methodology also involved a collaborative process of checking and revision with national and international quality assurers and professional representatives. Further details of the methods used are found in the relevant chapters and appendices.

4. The impact of school leadership on students

There is unprecedented international interest in how educational leaders influence student outcomes. A major reason for this is the desire of policy makers to reduce persistent disparities in the educational outcomes of different social and ethnic groups coupled with a belief that school leaders have a vital role to play in achieving this end[127].

The public—and politicians—believe that school leaders make a substantial difference to student outcomes. This belief is validated by qualitative research. Case studies of 'turn-around' schools and of teaching and learning interventions invariably give much of the credit to school and district leadership[128]. A very different picture emerges, however, from quantitative analyses of the effects of leadership on students' academic and social outcomes. The typical conclusion drawn by quantitative researchers is that school leaders have small and indirect effects on student outcomes—effects that are essentially mediated by teachers[129]. So, do the public and politicians have a romantic, heroic view of the capacity of leaders to make a difference or do researchers persistently underestimate their influence?[130]

We propose that both views are partly correct. It may be that the overall impact of leadership on student outcomes is indirect and small. But we would also suggest that debates about overall impact are not that useful because impact is a function of what leaders do. If we accept this, then the challenge for researchers is to discover what practices actually matter; for leaders, it is to engage in more of those practices more of the time; and for policy makers, it is to help create the conditions that allow leaders to do this.

Chapter 3 explained that we took two different approaches to analysing the impact of leadership. In this chapter, leadership theory provides the basis for a systematic comparison of the impacts of two particular types of leadership: transformational and pedagogical[131] leadership. These types were chosen because they dominate the empirical research on educational leadership and because their research programmes are mature enough to have yielded sufficient evidence for analysis. Transformational leadership theories, in particular, are also very popular with many of those who provide leadership training for educators. In our second approach to the analysis of leadership impact (see Chapter 5), we set aside broad theoretical categories and identify the relative impact of particular leadership practices, regardless of how those practices are theorised.

Before presenting our findings on the relative impact of transformational and pedagogical leadership, we provide a brief report on five already published reviews of the literature on the impact of leadership on student outcomes. This serves to introduce readers to the international evidence and to some of the methodological issues that are central to its understanding. The following section presents the findings of our theoretical comparison. We conclude the chapter

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[127] Organisation for Economic Co-operation and Development (2001). *Knowledge and skills for life: First results from the OECD Programme for International Student Assessment (PISA) 2000*. Paris: Author.

[128] Edmonds, R. (1979). Effective schools for the urban poor. *Educational Leadership*, *37*, pp. 15–24.
Maden, M. (Ed.) (2001). *Success against the odds, five years on: Revisiting effective schools in disadvantaged areas*. London: Routledge Falmer.
Scheurich, J. J. (1998). Highly successful and loving, public elementary schools populated mainly by low-SES children of color: Core beliefs and cultural characteristics. *Urban Education, 33*(4), pp. 451–491.

[129] Hallinger, P., & Heck, R. H. (1998). Exploring the principal's contribution to school effectiveness: 1980–1995. *School Effectiveness and School Improvement, 9*(2), pp. 157–191.

[130] Meindl, J. R. (1998). The romance of leadership as follower centric theory. In F. Dansereau & F. Yammarino (Eds.), *Leadership: The multiple-level approaches* (pp. 285–298). Stamford, CT: JAI Press.

[131] When discussing how leaders develop, support, monitor, and improve teaching programmes, we refer to 'pedagogical' rather than 'instructional' leadership because, in New Zealand, 'instructional' connotes directive teaching. When referring to individual studies, however, we retain the term 'instructional' if used by the authors, to stay true to their conceptualisation of leadership.

by proposing an explanation for the very different impacts of pedagogical and transformational leadership.

4.1 Five international reviews: A starting point for examining the impact of leadership on students

Table 2 summarises the relevant points from five different literature reviews. Two of these were meta-analyses[132]. In this kind of analysis, a quantitative measure of impact (an effect size) is calculated for each study. These individual effect sizes are then averaged to get an overall estimate of impact. Two of the studies are more traditional literature reviews[133]. The fifth compilation is a synthesis based on a very limited pool of studies.

[132] Marzano, R. J., Waters, T., & McNulty, B. (2005). *School leadership that works: From research to results*. Auroroa, CO: ASCD and McREL.
Witziers, B., Bosker, R. J., & Krüger, M. L. (2003). Educational leadership and student achievement: The elusive search for an association. *Educational Administration Quarterly, 39*(3), pp. 398–425.

[133] Hallinger & Heck (1998), op. cit.
Leithwood, K., Seashore Louis, K., Anderson, S., & Wahlstrom, K. (2004, September). *How leadership influences student learning*. Retrieved June, 2005, from www.wallacefoundation.org/NR/rdonlyres/E3BCCFA5-A88B-45D3-8E27-B973732283C9/0/ReviewofResearchLearningFromLeadership.pdf

Table 2. Reviews of empirical research on leadership and student outcomes

Reference	Research question	Evidence base	Criteria for inclusion	Main findings	Comments
Marzano, Waters, & McNulty (2005)[134]	1. What is the impact of leadership on student academic achievement? 2. What leadership dimensions are influential? 3. What factors underlie the 21 dimensions?	70 studies were included in the quantitative analysis. 60 are unpublished dissertations or conference papers that have undergone little peer review.	US studies only Published in last 30 years Quantitative achievement data Use of standardised tests of achievement Teacher perceptions of leadership as the independent variable	Average correlation between leadership effects and achievement was .25. Higher-quality studies showed higher correlations. Although the effect is lower in secondary, it is not significantly different from primary. 21 leadership responsibilities with biggest effects on achievement were identified. The top 11 are: situational awareness; acting as change agent; knowledge of curriculum, instruction and assessment; shared culture; protection of instructional time; flexibility and comfort with dissent; teacher input into decision making; monitoring impact on student learning; orderly procedures; provision of resources; and outreach to stakeholders.	The leadership impact finding is substantially greater than that found by Witziers. The reasons for this are: • calculated total (direct and indirect) effects of leadership; • data were adjusted for unreliability of measures of leadership. Only US studies were used. (International studies used by Witziers showed far less leadership impact than US studies.) Studies with extreme correlations (outliers) were excluded.
Leithwood, Seashore Louis, Anderson, & Wahlstrom (2004)[135]	What effects does successful leadership have on student learning? Is there a common set of leadership practices used by successful leaders in most circumstances? How does successful leadership exercise its influence on the learning of students?	Includes little information about methodology. Brings a multivariate, conceptual framework to the literature review; this includes antecedents of leadership, mediating variables, and student learning outcomes.	Studies provide evidence relating to one or more of the variables included in the conceptual framework.	1. Policy conditions: • School-based management was not associated with improved outcomes in the absence of state and district pressure and support. 2. Leadership practices: • setting direction via goals; • developing and motivating people through relationships and intellectual stimulation; • redesigning organisational procedures and structures; • building collaborative processes.	A literature review based on a theoretical model of how leadership affects outcomes

[134] Marzano, Waters, & McNulty (2005), op. cit.
[135] Leithwood, Seashore Louis, Anderson, & Wahlstrom (2004, September), op. cit.

Reference	Research question	Evidence base	Criteria for inclusion	Main findings	Comments
Bell, Bolam, & Cubillo (2003)[136]	What is the effect of head teachers on student outcomes?	A scoping phase produced 4987 citations. Eight studies met the criteria for inclusion. These provided a combined sample of 1288 primary, 334 secondary, and two special schools.	Focus on leadership Evidence of student outcomes Published since 1988	Suggests small indirect effects of leadership	A very limited pool of evidence
Hallinger & Heck (1998)[137]	What does research on principalship conducted between 1980 and 1995 tell us about principal effects?	40 published articles or peer-reviewed conference papers These 40 articles provided a combined sample of 872 primary, 52 middle, 149 secondary, and 682 cross-sector schools. 12 studies did not report sample size.	Published between 1980 and 1995 Measured principal leadership as independent variable Measured school performance (e.g., school effectiveness, attendance, student self-concept) as dependent variable	Principals have a small indirect effect on achievement. The dimensions of leadership that had most effect were: • establishes clear shared goals and an academic focus; • builds social networks and structures that enable goal achievement; • is directly involved in instructional supervision and support; • builds teacher capacity and provides high-quality opportunities for teacher learning; • cares for staff as individuals; • is skilled in problem solving and conflict resolution.	Literature review – no calculation of effect size

[136] Bell, L., Bolam, R., & Cubillo, L. (2003). *A systematic review of the impact of school headteachers and principals on student outcomes.* London: EPPI-Centre, Social Science Research Unit, Institute of Education.

[137] Hallinger & Heck (1998), op. cit.

Reference	Research question	Evidence base	Criteria for inclusion	Main findings	Comments
Witziers, Bosker, & Kruger (2003)[138]	1. To what extent does school leadership directly effect student academic achievement? 2. What dimensions of leadership had the most effect?	37 multinational research reports	Published 1986–96 Clear and valid measures of educational leadership Outcomes measured by standardised assessment tools Study design is of direct effects of leadership	1. No significant direct effects of leadership in general. 2. Some small effects in primary schools, but none in secondary schools. 3. Dimensions of leadership that had most effect – but all were very small: • defining and communicating mission; • monitoring student progress; • visibility; • supervising and evaluating of the curriculum.	A high-quality analysis with transparent evidence base

[138] Witziers, Bosker, & Krüger (2003), op. cit.

The findings in Table 2 show that the authors of these five reports draw very different conclusions about the overall impact of leadership on student outcomes. Witziers et al.[139], for example, conclude that the impact is minimal; Hallinger and Heck[140] and Leithwood et al.[141] conclude that it is modest but important; and Marzano et al.[142] conclude that it is quite substantial. The discrepancy between these conclusions is well illustrated by the meta-analyses of Marzano et al. and Witziers et al. The former finds a substantially greater impact of leadership on student outcomes than does the latter. The final column of Table 2 provides clues as to why their findings are so different. Perhaps most importantly, Witziers et al. measure only the *direct* effects of leadership on outcomes while Marzano et al. add together the direct and indirect effects. This means that calculations by Marzano et al. include the impact of leadership on school conditions *and* the impact of those conditions—such as teacher culture—on student outcomes.

The Marzano et al. approach makes sense because it is the role of leadership to establish school and classroom conditions that facilitate student learning. These conditions are, at least in part, a function of leadership efforts; to drop them out of the leadership equation is to ignore what has already been accomplished. Leaders influence others by establishing school systems, routines, and resources that make a difference to how teachers teach and how students learn. Once these are established, leaders shift their focus to new targets, but the results of their earlier efforts as well as their present focus should be recognised.

The work of Hallinger and Heck[143] confirms the importance of using an indirect effects model of leadership. Table 3 summarises the results of the 22 studies that used a direct effects model and the 18 studies that used an indirect effects model[144]. It shows that while 27% of the studies that measured direct effects reported a significant relationship between leadership and school effectiveness, 72% of the studies that measured indirect effects found such a relationship.

Table 3. Studies in Hallinger and Heck showing evidence of leadership impacts on school effectiveness

	Evidence of Impact			Total
	Yes	Mixed	None	
Direct Effects	6	7	9	22
Indirect Effects	13	3	2	18

Hallinger and Heck[145] conclude:

> The general pattern of results drawn from this review supports the belief that principals exercise a measurable, though indirect effect on school effectiveness and student achievement.

They go on to say:

> [The] studies do not resolve the most important theoretical and practical issues entailed in understanding the principal's role in contributing to school effectiveness. These concern the means by which principals achieve an impact on school outcomes as well as the interplay with contextual forces that influence the exercise of school leadership. (p. 186)

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[139] Witziers, Bosker, & Krüger (2003), op. cit.
[140] Hallinger & Heck (1998), op. cit.
[141] Leithwood, Seashore Louis, Anderson, & Wahlstrom (2004, September), op. cit.
[142] Marzano, Waters, & McNulty (2005), op. cit.
[143] Hallinger & Heck (1998), op. cit.
[144] Unlike the work of Witziers et al. and Marzano et al., the Hallinger and Heck review notes only whether there was a statistically significant relationship between leadership and aspects of school effectiveness. It does not tell us the size of the effect.
[145] Hallinger & Heck (1998), op. cit.

Studies that measure specified dimensions of leadership rather than some all-embracing concept tell us more about which aspects of leadership make a difference. While the comments in the 'Main findings' column of Table 2 are necessarily abstract and variable, there is enough overlap to give us a sense of some of the ways in which leaders make a difference. These include engaging with instruction, setting direction and goals, increasing teacher capacity, creating systems that support teaching, and building relationships in which people feel valued and supported.

4.2 Individual studies of the impact of leadership on students

We turn now to our synthesis of individual studies that examine the links between leadership and any type of student outcome. We located 27 studies, published between 1978 and 2006, that examined the relationship between leadership and student outcomes. This is fewer than in the Marzano et al.[146] meta-analysis because we excluded unpublished theses and conference papers. Figure 12 provides a statistical breakdown of the studies. See Appendix 4.1 for a complete list of studies and brief information about each.

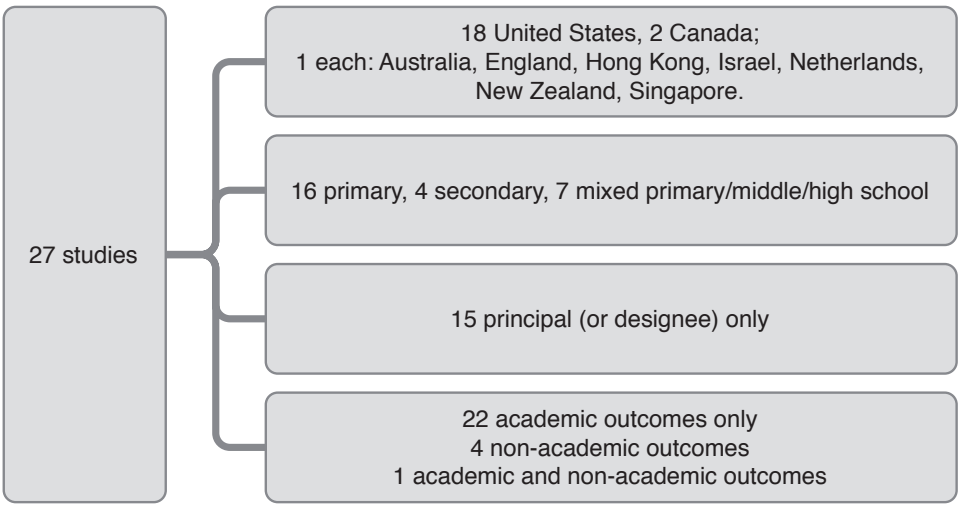

Figure 12. Characteristics of 27 studies linking leadership to student outcomes

Only one New Zealand study met the criteria for inclusion. While there is a rich New Zealand literature on leadership, it involves narratives of leaders' lives, descriptions of their attitudes, reports of their practices, and critiques of the policy context in which they work—not analyses of leadership impact on student outcomes. Insights into this impact are available, however, from New Zealand studies of interventions into teaching and learning. These are analysed in Chapter 6.

While the 27 studies examined the impact of leadership on a range of student outcomes, mathematics, reading, and language skills predominated. In the absence of a close inspection of the actual assessment items in the various standardised tests used, it is difficult to be certain of the intellectual depth of the skills and knowledge assessed. Critical thinking, intellectual challenge, and problem solving were features of at least some of the assessments. The five studies that examined the impact of leadership on non-academic outcomes measured attitudes to school, to teachers, and to learning, academic self-concept, and participation with and engagement in schooling.

[146] Marzano, Waters, & McNulty (2005), op. cit.

In nearly every case, the measures used involved teacher responses to survey items. Some surveys focused on leadership practices, asking teachers to respond to statements such as 'the principal reviews and interprets test scores with staff'. Other surveys focused on leaders' personal and interpersonal qualities, with items such as 'is aware of my unique needs and expertise'. When analysing these studies, we paid particular attention to the wording of the survey items because it was these that contained the detail we were looking for, rather than the theoretical ideas on which the items were based.

We begin our comparison of transformational and pedagogical leadership by briefly introducing the theories that underpin each of these types of leadership.

4.2.1 Transformational leadership

Many New Zealand principals will be familiar with transformational leadership theory, having come across it in postgraduate courses in educational administration and management. Transformational leadership theory has its origins in James McGregor Burns' 1978 publication, *Leadership*[147]. The focus of his work was leader–follower relations in different types of organisation. Burns was interested in how some leaders were able to motivate followers to move beyond self-interest and to pursue the larger goals of the group or organisation. Transformational leaders are able to inspire their people with a vision that energises them and encourages them to work collaboratively towards a common good.

Burns's theory was developed further in the 1980s by Bass and his colleagues[148]. In their view, transformational leadership theory built on (rather than competed with) transactional leadership theory. In transactional leadership, the leader specifies what is expected and provides consequences for meeting or not meeting those expectations.

Transformational leaders are thought to employ four influence processes:

- individualised consideration: giving personal attention to individual staff so that they feel uniquely valued;
- intellectual stimulation: encouraging creativity and new ways of thinking about old issues;
- inspirational motivation: communicating optimism and high expectations;
- idealised influence: providing a vision and a sense of purpose that elicit trust and respect from followers.

Transformational leadership theory has been adapted for educational settings by Leithwood and his colleagues in Canada and Australia[149]. Table 4 provides a guide to how the original elements of transformational leadership have been revised and elaborated to capture leadership activity that is specifically educational.

[147] Burns, J. M. (1978). *Leadership*. New York: Harper & Row.

[148] Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York, NY: Free Press.

[149] For a brief introduction to the history of research on transformational leadership in education, see Leithwood, K., Tomlinson, D., & Genge, M. (1996). Transformational school leadership. In K. Leithwood, J. Chapman, D. Corson, P. Hallinger, & A. Hart (Eds.), *International handbook of educational leadership and administration* (pp. 785–840). Dordrecht: Kluwer Academic.

Table 4. The elaboration of transformational leadership theory in educational research and associated survey items

Original transformational leadership elements	Elements in educational research on transformational leadership[150]	Examples of survey items[151]
Idealised influence Inspirational motivation Individualised consideration Intellectual stimulation	**Setting direction**	*The principal …*
	Vision	*Gives us a sense of overall purpose*
	Group goals	*Works towards whole-staff consensus in establishing priorities for school goals*
	High-performance expectations	*Has high expectations for us as professionals*
	Helping people	*The principal …*
	Individualised consideration and support	*Is aware of my unique needs and expertise*
	Intellectual stimulation	*Is a source of new ideas for my professional learning*
	Modelling key values and practices	*Shows respect for staff by treating us as professionals*
	Redesigning the organisation	*The principal …*
	Helping to build collaborative cultures	*Delegates leadership for activities critical to achieving goals*
	Creating structures to foster collaboration	*Ensures we have adequate involvement in decision making*
	Building productive relations with parents and community	*Is sensitive to the community's aspirations and requests*
	Transactional and managerial	*The principal …*
	Contingent reward	
	Management by exception	
	Management of staffing Instructional support Monitoring school activity Buffering staff from external demands	*Ensures that staffing is fair and equitable* *Regularly observes classroom activities* *Is easily accessible to students and staff* *Has secured a high degree of autonomy for the school*

The original transformational leadership elements are still evident in the adaptation, with its emphasis on vision and helping people. The relationship element is also behind the creation of structures for participation and collaboration. The final group of elements in the centre column consists of activities that are more specifically related to education. These have been

[150] These elements were taken from Leithwood, K., & Jantzi, D. (2005). A review of transformational school leadership research 1996–2005. *Leadership and Policy in Schools, 4*(3), pp. 177–199.

[151] These items are found in the surveys used in both the Canadian and the Australian research programmes. See:
Leithwood, K., & Jantzi, D. (1999). Transformational school leadership effects: A replication. *School Effectiveness and School Improvement, 10*(4), pp. 451–479.
Mulford, W., Silins, H., & Leithwood, K. (2004). *Educational leadership for organisational learning and improved student outcomes*. Dordrecht: Kluwer Academic.

added by more recent studies in response to criticism that transformational leadership lacked educational focus[152].

Leithwood and Jantzi recently reviewed 32 empirical studies of the consequences of transformational leadership for academic and non-academic student outcomes[153]. The nine studies that examined achievement outcomes reported very mixed results, with about half showing a small relationship between leadership and outcomes. Results from studies of the impact of transformational leadership on social outcomes are more consistent, but in terms of how students feel about school, relationships with peers and teachers, and the usefulness of schoolwork, the effect is still small. It should be noted that these conclusions were drawn from a review of the evidence, not a meta-analysis.

4.2.2 A meta-analysis of studies of transformational leadership and student outcomes

We turn now to our own meta-analysis of the effects of transformational leadership on student outcomes. Appendix 4.1 includes six published studies where leadership has been assessed on the basis of transformational leadership theory. These studies included primary, secondary, and mixed school samples; one was not included in the meta-analysis because it lacked the necessary statistical data[154]. Since several studies included multiple measures of the relationship between transformational leadership and student outcomes, we were able to calculate 13 effect sizes from the remaining five studies. Most of the student outcomes were social, for example, engagement and participation.

The effect sizes varied widely, indicating both positive and negative effects on student outcomes. Six of the effects fell within the 0–.19 range, which we interpret as no-or-weak impact; another six fell within the .2–.39 range, which we take to indicate a small impact. Two negative effects of this magnitude indicate that it is possible for transformational leadership to have negative indirect impacts on student outcomes. One outlier study had a large effect size of .68[155]. This study, which examined principal leadership in 117 US primary schools, showed that principals had a large indirect effect on residual school test scores (scores in which student background factors have been controlled for) through their ability to influence staff satisfaction. It is hard to explain why this study came up with such different findings. The explanation may lie in the low response rate: perhaps the 38% of eligible staff who completed the survey were those with higher morale and greater satisfaction in their leadership.

The mean of the 13 effect sizes was .11, indicating a very weak relationship between transformational leadership and student outcomes.

Most of the transformational leadership studies embed their analysis of leadership effects in a complex model that includes the influence of other variables. This makes it possible for the effects of leadership to be separated out from the effects of other variables, such as student perceptions of their teaching. In a large-scale study of the links between leadership, organisational learning, and student outcomes in Australian high schools, this latter variable turned out to be the best school predictor of student engagement[156]. Students who reported that they were in well-organised classes, constantly challenged, given a variety of activities, and subject to high expectations were more engaged than peers who reported less favourably on these variables. This confirms the importance of teachers and teaching and raises the question of how transformational leadership influences teachers' work. The only internal, organisational

[152] Leithwood & Jantzi (2005), op. cit.

[153] ibid.

[154] Leithwood, K., & Jantzi, D. (2006). Transformational school leadership for large-scale reform: Effects on students, teachers, and their classroom practices. *School Effectiveness and School Improvement, 17*(2), pp. 201–227.

[155] Griffith, J. (2004). Relation of principal transformational leadership to school staff job satisfaction, staff turnover, and school performance. *Journal of Educational Administration, 42*(3), pp. 333–356.

[156] Silins, H., & Mulford, B. (2002). Leadership and school results. In K. Leithwood & P. Hallinger (Eds.), *The second international handbook of educational leadership and administration* (pp. 561–612). Norwell, MA: Kluwer Academic.

factor that had an impact on teachers' work was organisational learning[157]. Schools where the teachers reported higher levels of organisational learning were more successful in creating classroom conditions that students experienced positively. Organisational learning was itself responsive to a cluster of leadership variables including transformational leadership and teacher leadership[158].

In the second part of the same study, Silins and Mulford[159] tested the relationship between the non-academic outcomes they had assessed (participation, retention in school, academic self-concept, and engagement) and achievement, as measured by the proportion of final-year students who gained a school leaving certificate. The relationship was weak.

In summary, these five studies yield an even smaller estimate of the impact of transformational leadership than emerged from earlier, qualitative reviews. The power of transformational leadership lies more in the creation of a collaborative staff culture than in higher social and academic outcomes for students. It may be that the concepts and measures of transformational leadership theory do not capture what is involved in improving these outcomes. We discuss this possibility further after reviewing the evidence on pedagogical leadership.

4.2.3 Pedagogical leadership

In the search for links between school leadership and student outcomes, the notion of pedagogical leadership has undergone more scrutiny than most. While there are variations in the concept, the common core is close involvement by leadership in establishing an academic mission, monitoring and providing feedback on teaching and learning, and promoting professional development[160].

Pedagogical leadership theory has its origins in the early 1980s in studies of successful schools in poor urban communities. Bossert et al.[161] reported that these schools usually had strong pedagogical leadership, reflected in learning environments with minimal disruption, systems of clear teaching objectives, and high teacher expectations of students.

When the concept was first introduced, the assumption was made that it was the responsibility of the principal to provide pedagogical leadership. For this reason, measures of pedagogical leadership neglected the contribution of other staff to the development and evaluation of teaching programmes. This exclusive focus on the principal reinforced a heroic view of the role, which few were able to live up to. As Hallinger[162] comments:

> Instructional leaders led from a combination of expertise and charisma. These were hands-on principals, hip-deep in curriculum and instruction … and unafraid of working directly with teachers on the improvement of teaching and learning. Descriptions of these principals tended towards a heroic view of their capabilities that often spawned feelings ranging from inadequacy to guilt among the vast majority of principals who wondered why they had such difficulty fitting into this role expectation (p. 224).

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[157] Organisational learning comprised four sub-dimensions: collaborative climate, taking initiatives and risks, shared and monitored mission, and professional development. See Table 2 in Silins & Mulford (2002), ibid., p. 576.

[158] The sum of the direct and indirect effects of organisational learning on teachers' work was .24. The total impact of transformational leadership on organisational learning was .8. See Table 4 in Silins & Mulford (2002), ibid., pp. 589–590.

[159] Silins & Mulford (2002), op. cit.

[160] For background on instructional leadership and its variants, see:
Hallinger, P. (2005). Instructional leadership and the school principal: A passing fancy that refuses to fade away. *Leadership and Policy in Schools, 4*(3), pp. 221–239 and
Alig-Mielcarek, J. M., & Hoy, W. K. (2005). Instructional leadership: Its nature, meaning, and influence. In C. G. Miskel & W. K. Hoy (Eds.), *Educational Leadership and Reform* (pp. 29–52). Greenwich, CT: Information Publishing Age.

[161] Bossert, S. T., Dwyer, D. C., Rowan, B., & Lee, G. V. (1982). The instructional management role of the principal. *Educational Administration Quarterly, 18*(3), pp. 34–64.

[162] Hallinger (2005), op. cit.

Hallinger[163] goes on to say, "There is little evidence to support the view that on a broad scale at either the primary or secondary school level principals have become more engaged in hands-on directed supervision of teaching and learning in classrooms" (p. 230). Our review of the evidence relating to how New Zealand principals spend their time suggests that this conclusion probably also applies to them (see Chapter 2).

Some of the more recent research on pedagogical leadership looks beyond the role of principals. Four of the 13 studies included in Appendix 4.1 have a more inclusive focus.

Like transformational leadership, pedagogical leadership is measured through teacher surveys. Box 1 presents some of the items that are typically asked of teachers in an instructional leadership survey.

Box 1. Sample items from survey of instructional leadership

Principal leadership

- The principal makes several formal classroom observations each year.
- The principal reviews and interprets test scores with faculty.
- Instructional issues are seldom the focus of faculty meetings. (reverse scored)
- At the principal's initiative, teachers work together to effectively coordinate the instructional programme within and between grades.
- The principal is very active in securing resources, arranging opportunities, and promoting staff development activities for the faculty.
- The principal is highly visible throughout the school.

Clear mission

- School-wide objectives are the focal point of reading instruction in this school.
- Reading objectives are coordinated and monitored through all grades.
- In reading, an identified set of objectives or skills exists at each grade level.

Teaching expectations

- In my school, high academic standards are communicated to all students and parents.
- Teachers in my school expect high proportions of their students to do well on standardised tests.
- Teachers treat students in ways that emphasise their strengths and potential rather than focus on their failures.

Opportunity to learn

- There are few interruptions of students' work during class time.
- Other school activities do not often interfere with basic skills (reading and maths) instruction in this school.
- Class atmosphere in this school is generally very conducive to learning for all students.

All items were answered using a five-point Likert scale with ratings that ranged from strongly disagree (1) to strongly agree (5).[164]

Note that all the items in Box 1 relate to direct involvement by the principal in teaching and learning: doing classroom observations, reviewing student results, ensuring appropriate instructional resources, discussing progress with staff. Indeed, all the outcomes included in the pedagogical leadership studies were academic.

[163] ibid.

[164] Hallinger, P., Bickman, L., & Davis, K. (1996). School context, principal leadership, and student reading achievement. *The Elementary School Journal, 96*(5), pp. 527–549.

4.2.4 A meta-analysis of studies of pedagogical leadership and student outcomes

Twelve of the 13 instructional leadership studies were able to be included in our meta-analysis. These collectively contributed 188 effect size statistics—between one and 60 from each study. Where more than one effect size was calculated for a particular leadership–outcome relationship, only the mean is reported in Appendix 4.1. As for the studies of transformational leadership, effect sizes varied widely: of the 16 effects reported in the appendix, eight were weak or small and eight were moderate-to-large. The overall estimate for the impact of instructional leadership on student outcomes is .42, which we interpret as moderate.

The evidence typically shows that pedagogical leaders have an indirect effect on student outcomes as they establish clear academic missions, put in place curricula that are coordinated across classes and year levels, safeguard instructional time, ensure orderly classrooms, and raise teacher expectations. In Chapter 5, we discuss these particular leadership practices in greater depth.

To summarise, these 12 studies suggest that by getting directly involved in setting and monitoring teaching goals, providing appropriate resources, and overseeing the teaching programme and by observing and providing feedback to teachers, pedagogical leaders can make a moderate difference to student achievement.

4.2.5 Explaining the relative impacts of pedagogical and transformational leadership

Figure 13 compares our estimates of the effects of transformational, pedagogical, and other theories of leadership on student outcomes. The impact of pedagogical leadership is three to four times that of transformational leadership. The third bar represents the mean effect size of the five studies that were based on other leadership theories. For details of these five studies, see Appendix 4.1.

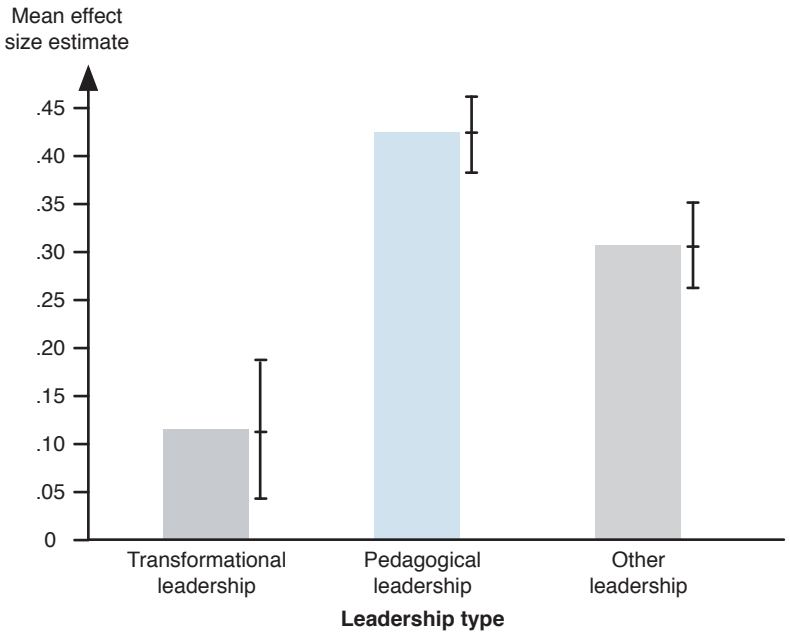

Figure 13. Comparative effects of pedagogical and transformational leadership on student outcomes

Our review of the evidence raises the question of why the effect of pedagogical leadership on student outcomes is generally about three times that of transformational leadership. There are several related possibilities:

1. Transformational leadership is a theory of leadership, not a theory of educational leadership. Its original purpose was to explain how leaders make an impact on adults ('followers'), not to explain how leaders make a difference to students. So, transformational leadership pays homage to theories of adult motivation, loyalty, commitment, teamwork, and power relations—not to theories of teaching and learning. By contrast, the origins of pedagogical leadership are found in rich observations of how leadership is exercised in schools where the students perform at levels that are well above or well below what would otherwise be expected. From the very beginning, therefore, pedagogical leadership was designed to identify those leadership practices that make a difference to students' learning.
2. The instruments used to assess leadership reflect their theoretical origins. Since transformational leadership is oriented more towards the social psychology of leader–follower relations and less towards teaching and learning, it is likely that the assessments associated with this approach will be less able to discriminate the leadership practices that make a difference to students. This can be illustrated by reference to the kinds of survey items typically used to assess goal orientation—a dimension that features in measures of both transformational and pedagogical leadership. The items in the left-hand column of Table 5 come from an instructional leadership survey. Note how they have a more precise focus on student achievement than the items in the right-hand column, which come from a transformational leadership survey and emphasise an unspecified sense of shared purpose. This sense of shared purpose is important in transformational leadership theory because of its correlation with staff satisfaction, loyalty, and commitment. But for schools, the problem is that sense of purpose may or may not translate into goals that reflect the needs of particular student groups. It is this kind of goal orientation that is most likely to deliver improved outcomes for students.

Table 5. A comparison of measures of leaders' focus on goal/mission

Items in instructional leadership survey[165]	Items in transformational leadership survey[166]
Strong instructional leadership of the principal	Building school vision and goals
1. The principal makes student achievement the school's top goal.	1. Gives us a sense of overall purpose
2. The principal states the school's mission in clear, concrete terms.	2. Helps clarify the practical implications of the school's mission
3. The principal ensures that there is an effective, ongoing system for evaluating the school's progress towards its goals.	3. Communicates school mission to staff and students
	4. Helps us understand the relationship between our school's mission and board or Ministry initiatives
	5. Works toward whole-staff consensus in establishing priorities for school goals
	6. Encourages the development of school norms supporting openness to change

3. As surveys of transformational leadership tend to be more general and more focused on relationships than surveys of pedagogical leadership, they are more prone to subjectivity and bias. Bias is introduced when teachers' responses to questions about their leaders' practices are coloured by their feelings towards those leaders. Recent research has found

[165] Heck, R. H. (2000). Examining the impact of school quality on school outcomes and improvement: A value-added approach. *Educational Administration Quarterly, 36*(4), pp. 513–552.
[166] Leithwood, K., & Jantzi, D. (1999). Transformational school leadership effects: A replication. *School Effectiveness and School Improvement, 10*(4), pp. 451–479.

that there is a strong correlation between the way staff rate their leaders and the extent to which they like them[167]. When this 'liking' factor is controlled for, the association between transformational leadership and organisational outcomes is significantly weaker. If assessments of transformational leadership are so heavily influenced by personal like and dislike, then teacher ratings will not reliably pinpoint their leaders' practices, making it difficult to uncover how leaders influence student outcomes.

In summary, we suggest that the leadership practices associated with pedagogical leadership are better predictors of student outcomes than those associated with transformational leadership because (a) the theory is more grounded in evidence about effective teaching and learning, (b) assessment tools are more directly focused on educational practices and purposes, and (c) surveys are less subject to personal bias.

4.2.6 Reflections on pedagogical and transformational leadership

We began this chapter by arguing that the important question is not 'What is the impact of leadership?' but 'What is the impact of different types of leadership?' Our meta-analysis—admittedly limited—has shown that the type of leadership known as transformational has a much smaller impact on student outcomes than that which is known as pedagogical or instructional.

Given transformational leadership's emphasis on relationships and pedagogical leadership's emphasis on purposes that are specifically educational, one could argue that both theories are needed. As mentioned earlier, there is actually increasing convergence between the two theories as transformational leadership incorporates explicitly educational elements and pedagogical leadership incorporates explicitly relational elements (such as consensus seeking skills). Although the foci are different, the two theories are perfectly compatible if pedagogical leadership is exercised in a collaborative rather than directive manner.

A recent study by Marks and Printy[168] investigated integration of the two approaches in schools with high proportions of economically disadvantaged and minority students. Rather than confine responsibility for instructional leadership solely to the principal, the authors constructed a broad measure that assessed the contributions of teachers, senior management team, and principal. They also assessed the principal's transformational leadership contribution using observations and teacher interviews. The intellectual quality of maths and social studies assignments[169] was used as a measure of the impact of the two kinds of leadership. Rather than use standardised tests, the researchers assessed student outcomes by coding 5000 completed assignments in terms of clearly defined dimensions. This study is important in that it is one of the few we have come across that has traced the impact of leadership on both teaching practice and student outcomes.

Of the 24 schools in the Marks and Printy study, seven rated highly on both shared instructional and transformational leadership, a style of leadership that the authors refer to as 'integrated'. These comprised two primary, two middle, and three secondary schools. Nine schools rated low on both types of leadership, while six rated highly on transformational leadership and low on shared instructional leadership. In these six schools, the principals focused on reform in areas other than teaching and learning—for example, provision of social services[170].

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[167] Brown D. J., & Keeping, L. M. (2005). Elaborating the construct of transformational leadership: The role of affect. *The Leadership Quarterly, 16*(2), pp. 245–272.

[168] Marks, H. M., & Printy, S. M. (2003). Principal leadership and school performance: An integration of transformational and instructional leadership. *Educational Administration Quarterly, 39*(3), pp. 370–397.

[169] The intellectual quality of lessons, assignments set, and student work was judged on the basis of evidence of higher-order thinking, depth of knowledge, and the making of connections beyond the classroom.

[170] Two of the original 24 schools were dropped from the analyses because of data missing from the leadership measures.

All schools that rated highly on shared instructional leadership also rated highly on transformational leadership. The authors comment:

> Put another way, if a principal demonstrates no capacity for transformational leadership—for example, articulating an intellectual vision, providing structures for participatory decision making, building consensus toward a productive school culture, and promoting collaboration, the principal will be ill disposed to share responsibility with teachers in matters of instruction, curriculum, and assessment in a shared instructional leadership model (p. 385).

There were, however, schools that rated highly on transformational leadership but were low on instructional leadership. This suggests that transformational leadership is a necessary, but not sufficient condition for shared instructional leadership. Analyses found a definite relationship between integrated leadership and the intellectual quality of the instruction[171]: when student background factors were controlled for, students in schools with integrated leadership achieved significantly higher, on average, than those in schools that did not have such leadership[172].

The Marks and Printy study suggests that it is important that leadership combine collaborative capacity-building with a keen pedagogical focus. It is not clear, however, whether this means that leaders should be specifically taught transformational leadership or simply the skills and knowledge that they need to build relationships as they go about improving teaching and learning. Transformational leadership theory does not teach leaders how to achieve this integration. It may be that the backward mapping analysis of New Zealand research discussed in Chapter 6 and the discussion of leadership knowledge, skills, and dispositions found in Chapter 8 provide more useful resources than transformational leadership theory itself.

The major limitation of the analysis reported in this chapter is the abstract, broadly-specified nature of the theories of leadership with which we have been concerned. When the focus is leadership theory rather than specific leadership practices, a great deal of potentially useful information can be overlooked. For example, the mean effect size for one study was derived from six different effect sizes. These ranged from a zero effect size for strategic resourcing to .94 and .82 respectively for communication about and coordination of instruction. Aggregation obscures these very different impacts; separate effect sizes get one closer to understanding them. The next chapter focuses on an analysis of the impact of these more specific types of leadership practice.

4.3 Summary

We began this chapter with a brief summary of five reviews of international evidence on the impact of leadership on student outcomes. These revealed wide variation in the estimated impact of leadership. Some of this variation could be explained by differences in what was being measured (direct or indirect effects) and by differences in the particular samples of studies reviewed. We reported our own meta-analysis of research on the impacts of pedagogical and transformational leadership on student outcomes. The former was shown to have a substantially greater impact than the latter. The fact that transformational leadership theory is more generic, focusing on leader–follower relations rather than on educating students, may be the explanation for this weaker effect. We noted the increasing convergence of transformational and pedagogical leadership theory as relationship skills come to be included in measures of pedagogical leadership and studies of transformational leadership gain a sharper pedagogical focus.

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[171] Controlled for student background, there was a .6 increase in instructional quality for a unit increase in shared instructional leadership.

[172] The average achievement was .6 of a standard deviation higher in schools with integrated leadership.

5. The dimensions of school leadership that make a difference to students

In Chapter 4, we examined the impact of pedagogical and transformational leadership on student outcomes. We now move to a more detailed examination of the impact of particular leadership dimensions on a range of student outcomes. By 'dimension', we mean a broad set of leadership practices. For example, the dimension 'planning, coordinating, and evaluating teaching and the curriculum' includes all leadership activities connected with planning a curriculum, coordinating it within and between year levels, and monitoring the results—as well as evaluation of teaching.

The leadership dimensions reported in this chapter were derived from the wording of the various survey items used to measure school leadership and from the definitions of the leadership constructs. While these dimensions make it clearer what leaders should focus on to make a difference to student learning, they offer limited guidance on how to lead. This guidance is found in chapters 6, 7, and 8.

5.1 The relative impacts of different dimensions of leadership

Further details about how we derived the leadership dimensions, and their impacts on student outcomes, are to be found in Appendix 5.1. The results of this analysis are presented in Table 6 and in Figure 14. For each dimension, the table provides a brief description, the mean of the effect size estimates, and the standard error (a measure of uncertainty)[173]. The five listed dimensions emerged from the 12 asterisked studies listed in Appendix 4.1 and reflect the research to date. As such, they will not be the last word on effective leadership—new dimensions may emerge from future research on the leadership–outcomes relationship.

Many accounts of effective school leadership distinguish between dimensions or practices that address organisational tasks (such as coordinating the curriculum) and those that involve people relationships[174]. Our five dimensions do not recognise this task–people dichotomy because each dimension involves both aspects. In goal setting, for example, effective leadership involves not only determining the goal and the standard to be achieved (task aspects) but also ensuring that staff understand and become committed to the goal (relationship aspects).

[173] Standard error is a measure of sampling variability. While a small standard error suggests that a sample is representative of the population, a large standard error can sometimes be an expression of meaningful variability.

[174] For example, Leithwood, Louis, and Wahlstrom (2004) organise their literature review on how leadership influences student learning under the three headings: setting directions, developing people, and redesigning the organisation. Leithwood, K., Seashore Louis, K., Anderson, S., & Wahlstrom, K. (2004, September). *How leadership influences student learning*. Retrieved June, 2005, from www.wallacefoundation.org/NR/rdonlyres/E3BCCFA5-A88B-45D3-8E27-B973732283C9/0/ReviewofResearchLearningFromLeadership.pdf

Table 6. The impact of five leadership dimensions on student outcomes (n = 199)

Leadership dimension	Meaning of dimension	Mean effect size and standard error
1. Establishing goals and expectations	Includes the setting, communicating, and monitoring of learning goals, standards, and expectations and the involvement of staff and others in the process so that there is clarity and consensus about goals.	ES = .42 (.07) 49 effect sizes from 7 studies
2. Resourcing strategically	Involves aligning resource selection and allocation to priority teaching goals. Includes provision of appropriate expertise through staff recruitment.	ES = .31 (.10) 11 effect sizes from 7 studies
3. Planning, coordinating, and evaluating teaching and the curriculum	Direct involvement in the support and evaluation of teaching through regular classroom visits and the provision of formative and summative feedback to teachers. Direct oversight of curriculum through school-wide coordination across classes and year levels and alignment to school goals.	ES = .42 (.06) 80 effect sizes from 9 studies
4. Promoting and participating in teacher learning and development	Leadership that not only promotes but directly participates with teachers in formal or informal professional learning.	ES = .84 (.14) 17 effect sizes from 6 studies
5. Ensuring an orderly and supportive environment	Protecting time for teaching and learning by reducing external pressures and interruptions and establishing an orderly and supportive environment both inside and outside classrooms.	ES = .27 (.09) 42 effect sizes from 8 studies

Figure 14 suggests that dimensions 2 and 5 have small effects on outcomes, dimensions 1 and 3 have moderate effects, and dimension 4 has a large effect[175]. We have adopted Hattie's guidance (based on a synthesis of over 800 meta-analyses) and taken an effect size of .2 to be small, .4 to be medium, and .6 to be large[176]. Recent New Zealand research using asTTle (Assessment Tools for Teaching and Learning) data[177], found that the yearly effect of teaching in reading, mathematics, and writing (years 4–13, n = 83,751) was about .35 (though the pattern was not linear). Teachers typically achieve an effect of between .2 and .4 growth per year, and this is considered average. This leads Hattie to believe that teachers should be seeking effects of greater than .4 over a school year for gains in student achievement to be considered above average. Gains greater than .6 can be considered excellent. With regard to innovations, Hattie argues that an "effect size of .4 sets a level where the effects of innovation enhance achievement in such a way that we can notice real-world differences, and this should be a benchmark of such real-world change. It is not a magic number … but a guideline to begin discussions about what we can aim for if we want to see students change."[178]

While it is apparent that the dimensions that are closer to the core business of teaching and learning have a greater effect, this does not explain the large difference between leadership that is directed at planning, coordinating, and evaluating the curriculum and leadership that is directed at teacher learning and development. Both dimensions are concerned with a school's

[175] Effect size is a statistic used to express the extent to which one variable influences another. For example, the effect of cooperative learning on the development of mathematical problem-solving skills. Since the results of many different types of study can be expressed in terms of effect size, this statistic provides a convenient way of comparing the relative magnitude of the impacts of different variables.

[176] Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London: Routledge, pp. 7–21 and 237–261. Hattie notes that, when making policy or practice decisions, it is important to consider the effect in relation to the investment required to gain it. Also, a small effect can nevertheless be important. Using a health-related example, he points out that although the effect of regularly taking low-dose aspirin is small (effect size = .07), the practice costs very little and saves lives.

[177] ibid.

[178] ibid., page 17

core business, but only the second relates to leadership of learning. It may be, therefore, that this second dimension discriminates between leadership support for teaching and learning that is essentially managerial and support that is primarily focused on professional learning. Whatever the explanation, this dimension offers a path by which leaders of syndicates, departments, faculties, schools, and school clusters can make a significant impact on student outcomes.

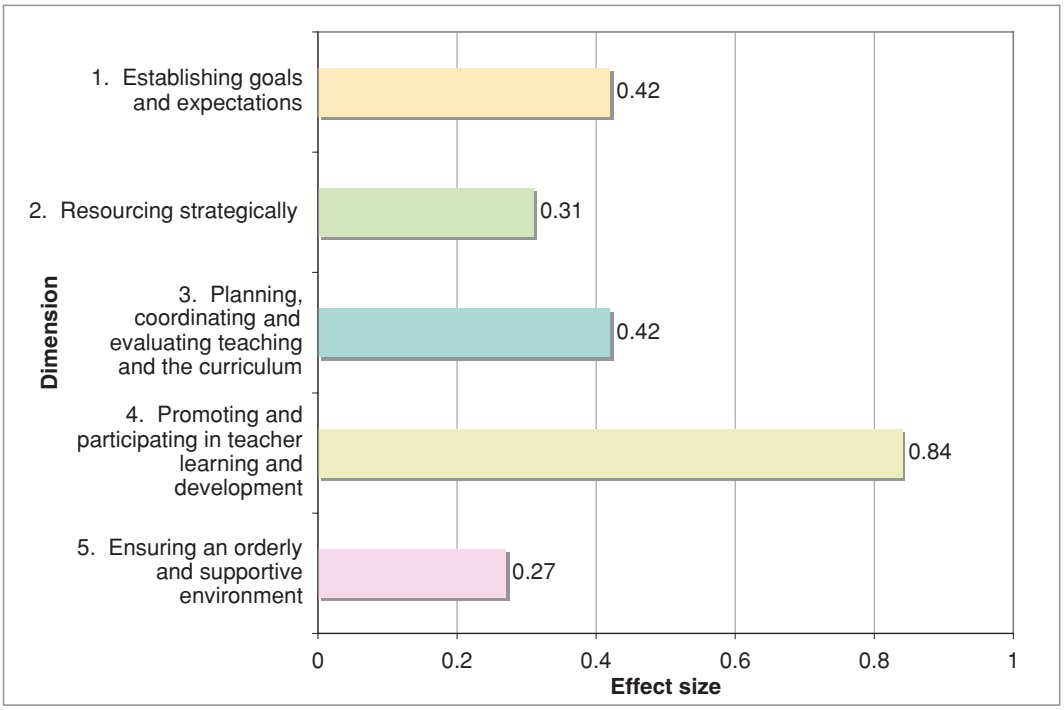

Figure 14. The relative impact of five leadership dimensions on student outcomes

We now review the evidence as it relates to each dimension. In some cases, what we have to say will be brief, because the quantitative studies provide little information about exactly how the dimensions work—they have been designed to test, rather than explain, the leadership–outcomes relationship. If leaders are to apply the dimensions in ways that benefit their students and staff, they need explanations of the particular attributes that make the difference. We draw some information on these attributes from the 12 quantitative studies discussed here; many other insights are found in the qualitative research presented in Chapter 6.

Dimension 1: Establishing goals and expectations

Seven of the 12 studies in the dimensional analysis provided evidence for the importance of goals and expectations. We were able to calculate effect sizes for 49 indicators of this dimension; the mean was .42, which can be interpreted as moderate and educationally significant.

Like all the leadership dimensions discussed, goal setting has indirect effects on students (and sometimes on parents too). With student background factors controlled for, leaders made a difference to students by emphasising clear learning goals[179]. This was observed even in schools where leaders did not make academic goals the top priority. For example, Goldring and

[179] Bamburg, J. D., & Andrews, R. L. (1991). School goals, principals and achievement. *School Effectiveness and School Improvement, 2*(3), pp. 175–191.
Brewer, D. J. (1993). Principals and student outcomes: Evidence from US high schools. *Economics of Education Review, 12*(4), pp. 281–292.
Heck, R. H., Marcoulides, G. A., & Lang, P. (1991). Principal instructional leadership and school achievement: The application of discriminant techniques. *School Effectiveness and School Improvement, 2*(2), pp. 115–135.

Pasternak[180], in their study of Israeli community schools, found that while academic excellence was not one of the top five goals of either low- or high-performing schools, the latter gave it significantly more emphasis than the former.

It is important that goals are specific. In a recent study involving Sydney secondary schools[181], it was found that the more strongly principals espoused abstract vision statements, the more negatively their teachers reacted. The indicators of leadership vision/inspiration were:

- specifies the importance of having a strong sense of purpose;
- talks enthusiastically about what needs to be accomplished;
- talks optimistically about the future;
- articulates a compelling vision for the future;
- expresses confidence that goals will be achieved;
- talks about their most important values and beliefs.

The negative reactions were due to a perceived discrepancy between the principal's talk and walk—visions that never amount to more than words and symbols soon lose any power to inspire. This particular study illustrates the importance of understanding the qualities that discriminate between effective and ineffective enactments of the five leadership dimensions.

In high-achieving schools or schools that are making major achievement gains, a focus on academic goals is both a property of leadership ('the principal makes student achievement the school's top goal') and a quality of school organisation ('school-wide objectives are the focal point of reading instruction in this school'). To function as coordinating mechanisms, goals need to be embedded in school and classroom routines and procedures[182]. Successful leaders exert their influence through interpersonal relationships and by structuring how teachers do their work[183].

That relationships are an important aspect of this dimension is apparent from the fact that leaders in higher-performing schools tend to put greater emphasis on communicating goals and expectations[184], informing the community of academic accomplishments, and recognising academic achievement[185]. It also appears that the level of staff consensus on goals may be a significant discriminator between otherwise similar high- and low-performing schools[186].

There is evidence that the content of goals may be as important as the process by which they are set. Some of the pedagogical leadership studies included indicators that required teachers to report their leaders' emphasis on particular goals, not just the extent to which their leaders provided a general direction. This greater alignment in the pedagogical leadership research between leadership indicators and outcome variables may partly account for its stronger effects (compared with transformational leadership). A similar suggestion was made by Leithwood and Jantzi[187] when discussing the role of transformational leadership in England's national literacy and numeracy reforms. These authors found that while effective transformational leadership could explain the extent of teacher change, the extent of teacher change bore no relationship to student gains in either literacy or numeracy. We support Leithwood and Jantzi's

[180] Goldring, E. B., & Pasternak, R. (1994). Principals' coordinating strategies and school effectiveness. *School Effectiveness and School Improvement, 5*(3), pp. 237–251.

[181] Barnett, K., McCormick, J., & Conners, R. (2001). Transformational leadership in schools: Panacea, placebo or problem? *Journal of Educational Administration, 39*(1), pp. 24–46.

[182] Robinson, V. M. J. (2001). Embedding leadership in task performance. In K. Wong & C. Evers (Eds.), *Leadership for quality schooling: International perspectives* (pp. 90–102). London: Falmer Press.

[183] Ogawa, R. T., & Bossert, S. T. (1995). Leadership as an organizational quality. *Educational Administration Quarterly, 31*(2), pp. 224–243.

[184] Heck, R. H., Larsen, T. J., & Marcoulides, G. A. (1990). Instructional leadership and school achievement: Validation of a causal model. *Educational Administration Quarterly, 26*(2), pp. 94–125.
Heck, Marcoulides, & Lang (1991), op. cit.

[185] ibid.

[186] Goldring & Pasternak (1994), op. cit.

[187] Leithwood, K., & Jantzi, D. (2006). Transformational school leadership for large-scale reform: Effects on students, teachers, and their classroom practices. *School Effectiveness and School Improvement, 17*(2), pp. 201–227.

call for leadership researchers to focus more on *what* changes leaders encourage and promote and less on the extent to which they promote *unspecified* changes or innovation:

> There is a significant gulf between classroom practices that are "changed" and practices that actually lead to greater pupil learning; the potency of leadership for increasing student learning hinges on the specific classroom practices which leaders stimulate, encourage and promote (p. 223)[188].

In the context of goal setting, this means that leaders and researchers need to focus not only on motivational and direction-setting activities but on the educational content of those activities and their alignment with desired student outcomes.

The Witziers et al. meta-analysis of research on the direct effects of leadership on academic achievement[189] also suggests the importance of goal setting. While the authors found that the impact of leadership per se was negligible, the direction-setting role of the leader had greater direct impact on student outcomes than any of the other six dimensions of leadership for which data were available. This finding is at variance with our own meta-analysis, but this is not surprising, given that the two use quite different methodologies and databases. Goal setting was also one of the 21 dimensions of effective school leadership that emerged from the Marzano et al.[190] meta-analysis of US research on the links between leadership and student oucomes.

There are many issues that the research has not addressed. What knowledge and evidence do leaders and teachers need for setting student learning goals? How do they know what counts as an appropriate goal or target? What are the pitfalls and challenges involved in goal setting? How can goal setting be an empowering rather than a punitive exercise? Leaders need to know how to engage in the process—and what goals are educationally valuable and pedagogically appropriate. They also need to know how to weave the school mission, goals, and direction into the organisational fabric of the school. Goals are powerful, coordinating mechanisms; they must be articulated and communicated, but they only impact on students when they are embedded in organisational and classroom routines. We return to these issues in Chapter 6.

Dimension 2: Resourcing strategically

The use of 'strategically' in this context signals that this leadership dimension is about securing and allocating resources that are aligned to pedagogical purposes, not securing resources per se. This differentiates it clearly from the skills of, for example, fundraising, grant writing, or partnering with business, as these skills may or may not be applied in ways that serve important pedagogical purposes.

Seven studies provided evidence for how principals can influence student achievement through decisions that concern staffing and teaching resources[191]. Eleven indicators yielded an average effect size of .31, which suggests that this dimension has a small, indirect impact on student outcomes.

One study found a small relationship between leaders' ability to secure instructional resources and student achievement in a sample of Californian schools and a large relationship in a sample of Marshall Island schools[192]. The stronger finding for the Marshall Islands probably reflects a relative scarcity of teaching resources. Another study, involving 20 US high schools, revealed an interesting interaction between principals' control of teacher selection and the ambitiousness

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[188] ibid.

[189] Witziers, B., Bosker, R. J., & Krüger, M. L. (2003). Educational leadership and student achievement: The elusive search for an association. *Educational Administration Quarterly, 39*(3), pp. 398–425.

[190] Marzano, R. J., Waters, T., & McNulty, B. (2005). *School leadership that works: From research to results*. Auroroa, CO: ASCD and McREL.

[191] Andrews, R., & Soder, R. (1987). Principal leadership and student achievement. *Educational Leadership, 44*(6), pp. 9–11.
Bamburg & Andrews (1991), op. cit.
Heck, Larsen, & Marcoulides (1990), op. cit.

[192] Heck, Marcoulides, & Lang (1991), op. cit.

of their academic goals[193]. For those with high academic goals, student achievement was higher where they had been able to appoint a greater proportion of their teachers. For principals with low academic goals, the reverse was true: where they had been responsible for appointing their own staff, student achievement was generally lower.

We need to learn more about the knowledge and skills that leaders require in order to link the recruitment and allocation of resources to specific pedagogical goals. For example, how do leaders decide which of the many literacy programmes available to introduce into their schools? What criteria (implicit and explicit) are used, and on what information will decisions be based? This dimension needs greater conceptual development, particularly with respect to how budgeting and staff appointments link to goal setting.

Dimension 3: Planning, coordinating, and evaluating teaching and the curriculum

Eighty indicators drawn from nine studies show that this leadership dimension has a moderate impact on student outcomes (ES = .42). Leaders in high-performing schools are distinguished from their counterparts in otherwise similar, low-performing schools by their personal involvement in planning, coordinating, and evaluating teaching and the curriculum. This dimension has four interrelated sub-dimensions.

1. Teachers in high-performing schools report that their leaders are actively involved in collegial discussion of instructional matters, including how instruction impacts on student achievement[194]. The one New Zealand study included[195] also suggests that it is important for leaders to be involved in the oversight and discussion of instruction. This study sought to determine how much of the variation in the reading achievement of 9-year-olds was attributable to student background, community characteristics, and school context. While school context explained only 5% of the variance, the researchers found a significant relationship between principal engagement with teaching and student achievement: "The more school principals involved themselves in teacher evaluation and development, the greater the likelihood that the students from their schools would score highly on the reading tests" (p. 174)[196]. The level of principal engagement in these activities was assessed using teacher surveys (see Box 2 for the nature of the questions asked). There is no obvious reason why heads of department in secondary schools could not be similarly assessed. Since they are entrusted with much of the pedagogical leadership in their schools, outcomes-linked research on their effectiveness is sorely needed.

Box 2. Assessing principal engagement in evaluation of teachers and teaching[197]

The Measure of Principal Engagement was derived from teacher responses to questions designed to assess:

- whether they perceived their work to be evaluated by the school principal (or deputy principal);
- whether the school principal (or deputy principal):
  - discussed with them explicit achievement standards for the subjects they taught;
  - asked for evaluation results or progress of their students in reading;
  - made suggestions about the choice of instructional methods in reading;
  - encouraged contacts among teachers;
  - initiated activities directed at the professional development of teachers;
  - made suggestions about the content that must be covered in reading.

[193] Brewer (1993), op. cit.
[194] Heck, Marcoulides, & Lang (1991), op. cit.
[195] May & Wagemaker (1993), op. cit.
[196] ibid. It is important to note, however, that subsequent multivariate analyses did not reveal a significant relationship between this variable (principal engagement) and student achievement.
[197] For the exact questions, see Postlethwaite, N., & Ross, K. (1992). *Effective schools in reading: Implications for educational planners*. Hamburg: IEA.

2. The leadership of high-performing schools is distinguished by its active oversight and coordination of the instructional programme. School leaders and staff work together to review and improve teaching—an idea captured by term 'shared instructional leadership'[198]. Leaders in high-performing schools were more directly involved in coordinating the curriculum across year levels than those in low-performing schools. They might, for example, contribute directly to the development of year-level progressions of teaching objectives for reading[199]. It is probable that the importance of close leader oversight of teaching depends to some extent on the effectiveness of the school or department. In one study of only four schools in the Marshall Islands, teacher reports of being left alone to teach were a strong predictor of high levels of achievement. The authors suggest that this may indicate that poor performance attracted close supervision.

3. In high-performing schools, leaders were more likely to do classroom observations and provide subsequent feedback. Teachers in such schools reported that their leaders set and adhered to clear performance standards for teaching[200] as well as doing regular classroom observations that helped them improve their teaching[201].

4. In high-performing schools, there was greater emphasis on ensuring that student progress was systematically monitored[202] and test results were used for the purpose of programme improvement[203]. In a study of Hawaiian primary schools, principals led school-wide examinations of achievement data and teachers took the lead in classroom monitoring of student achievement[204]. Teacher use of data to evaluate student progress, adjust teaching, plan the weekly programme, and give students feedback was a strong indicator of school quality, and school quality was a significant influence on student achievement in reading and maths. Unfortunately, the three relevant studies gave very little information about the routines and procedures used to review student progress, or about how the schools involved developed the expertise and infrastructure to collect, interpret, and then use data. In Chapter 6, we synthesise the New Zealand evidence on the role of leadership in improving student learning. This chapter will provide much more detail on what is needed to develop the capacity and infrastructure for this work.

It is important to consider whether these findings are equally applicable to primary and secondary schools. The greater size of many secondary schools, their differentiated structures, and the culture of specialist teaching suggest that the influence, particularly of the principal, may be attenuated[205]. One US study involving elementary and high schools[206] measured the instructional leadership activities of both principals and others with designated responsibilities. Despite this more inclusive definition of leadership, the author found that the mean frequency of instructional leadership activity in both high- and low-performing schools was lower for secondary than for elementary schools; the mean effect sizes were .42 and 1.1 respectively. This suggests that strong leadership oversight of teaching and curriculum has more impact in primary than in secondary schools. This is an area in which further research, using identical indicators across both high- and low-performing primary and secondary schools, is needed.

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[198] Heck, Larsen, & Marcoulides (1990), op. cit.
Heck, Marcoulides, & Lang (1991), op. cit.
Marks, H. M., & Printy, S. M. (2003). Principal leadership and school performance: An integration of transformational and instructional leadership. *Educational Administration Quarterly, 39*(3), pp. 370–397.

[199] Heck, Marcoulides, & Lang (1991), op. cit.

[200] Andrews & Soder (1987), op. cit.
Bamburg & Andrews (1991), op. cit.

[201] ibid.
Heck, R. H. (1992). Principals' instructional leadership and school performance: Implications for policy development. *Educational Evaluation and Policy Analysis, 14*(1), pp. 21–34.
Heck, Larsen, & Marcoulides (1990), op. cit.

[202] ibid.

[203] Heck, Marcoulides, & Lang (1991), op. cit.

[204] Heck, R. H. (2000). Examining the impact of school quality on school outcomes and improvement: A value-added approach. *Educational Administration Quarterly, 36*(4), pp. 513–552.

[205] Siskin, L. S., & Little, J. W. (1995). *The subjects in question: Departmental organization and the high school.* New York: Teachers College Press.

[206] Heck (1992), op. cit.

Dimension 4: Promoting and participating in teacher learning and development

The descriptor for this dimension includes the words 'and participating' to make it clear that the leader doesn't stop at supporting or sponsoring their staff in their learning; they actually participate in the learning themselves—as leader, learner, or both. They do this in structured situations, such as staff meetings and professional development workshops, and in informal situations; for example, corridor discussions about specific teaching problems.

Seventeen effect sizes derived from six studies were calculated for this dimension, yielding a mean effect size of .84. This large effect provides empirical support for calls for leaders to be actively involved with their teachers as the leading learners in their schools. Based on teachers' reports, leaders (usually the principal) in high-achieving and high-gain schools participate more actively in teacher learning and development than leaders in low-achieving or low-gain schools[207]. They are also more likely to promote and participate in staff discussion of teaching and teaching problems[208].

In one study, teachers were asked to name those colleagues who (a) they went to for advice, (b) they discussed school events or issues with, (c) were their personal friends[209]. Those in high-achieving schools were significantly more likely to view the principal as a source of instructional advice, which suggests that such principals are more accessible and more knowledgeable on instructional matters than their counterparts in otherwise similar, lower-achieving schools. In contrast, the extent to which teachers identified principals as close personal friends or as people they discussed things with was not significantly related to school performance. The authors suggest that leaders who are seen as sources of instructional advice and expertise gain respect from their staff and, as a result, have greater influence over how they teach. Given that the principal occupies a central position in the school communications network, advice from them is more likely to have a system-wide influence than the same advice coming from a colleague[210]. Once again, we need to point out how little information there is on secondary schools, particularly relating to the leadership provided by faculty heads, heads of department, or their equivalents.

Dimension 5: Ensuring an orderly and supportive environment

Pedagogical leadership also involves creating an environment in which important academic and social goals can be pursued and achieved. In an orderly environment, teachers can focus on teaching and students can focus on learning. Eight studies produced 42 indicators for this dimension, with a mean effect size of .27. These indicators included a focus on cultural understanding and a respect for difference; provision of a safe, orderly environment, with a clear discipline code; and minimal interruptions to teaching time. They also included protection of faculty from undue pressure from parents and officials, and effective conflict resolution.

The findings suggest that the leadership of effective schools is distinguished by an emphasis on, and success in establishing, a safe and supportive environment through clear, consistently enforced social expectations and discipline codes[211]. One study surveyed teachers, parents, and students to find out how safe, comfortable, and caring they found the school environment[212]; all three groups gave similar reports. The more positive this response was, the greater the quality of the school and the higher its achievement levels when student background factors

[207] Andrews & Soder (1987), op. cit.
Bamburg & Andrews (1991), op. cit.
[208] Heck, Larsen, & Marcoulides (1990), op. cit.
Heck, Marcoulides, & Lang (1991), op. cit.
[209] Friedkin, N. E., & Slater, M. R. (1994). School leadership and performance: A social network approach. *Sociology of Education, 67*(2), pp. 139–157.
[210] ibid.
[211] Heck, Marcoulides, & Lang (1991), op. cit.
[212] Heck (2000), op. cit.

were controlled for. In Chapter 2, we reviewed the New Zealand evidence about student safety and support for students because these are important outcomes regardless of their connection to achievement. The evidence presented here suggests that they are indeed connected.

The leadership of high-performing schools is judged by teachers to be significantly more successful than the leadership of low-performing schools in protecting them from undue pressure from education officials and parents[213]. This finding is particularly strong for secondary schools. Protection of this kind is not about being defensive—indeed, parent–school relationships, where monitored, were found to be more positive in high-performing schools. Rather, it is about allowing teachers to focus on their teaching and about ensuring a coordinated (rather than ad hoc) response to parental politics and lobby groups. Given that school–community relations are less politicised in New Zealand than in the United States, it may be that this particular leadership practice is not so important for New Zealand schools. But, at the very least, it reinforces the importance of ensuring that teachers are able to focus on their teaching.

An orderly and supportive environment is also one in which staff conflict is quickly and effectively addressed. In one study, the principal's ability to identify and resolve conflict, rather than allow it to fester, was strongly associated with student achievement in mathematics[214]. Differences in teacher and principal perceptions of the latter's ability to identify and resolve conflict was an even more significant discriminator between high- and low-performing schools.

On a related theme, the qualitative literature on leadership in 'turn-around' schools suggests how important it is for leaders to have the ability to tackle tough issues. We pick this theme up again in Chapter 8, when we consider leadership knowledge, skills, and dispositions.

5.2 Summary

This dimensional analysis suggests there are important differences between the practices of leaders in otherwise similar, high- and low-performing schools. In high-performing schools, leaders reportedly give greater emphasis to setting, communicating, monitoring, and reporting school goals, especially those that are related to student achievement. In high-performing schools, leaders work directly with teachers or departmental and faculty heads to plan, coordinate, and evaluate teachers and teaching. They are more likely than their counterparts in otherwise similar, low-performing schools to provide evaluations that teachers find useful and ensure that student progress is monitored and the results used to improve teaching. The strongest effects were found for active leader involvement in teacher and professional learning in both structured and informal contexts. Teachers in high-performing schools report that their leaders are initiators of and active participants in professional learning and a valuable source of advice on pedagogical problems. When leaders are actively involved in professional learning, they appreciate the conditions that teachers require to achieve and sustain improvements in student learning. They are then able to discuss changes with teachers and support them as they make appropriate adjustments to class organisation, resourcing, and assessment procedures[215].

It needs to be kept in mind that only 27 published studies were available for analysis and even fewer contributed to the effect size estimations. Most of the studies were conducted in primary schools and focused on the leadership of the principal. There is no obvious reason why the findings from these studies should not also be applicable to other school leaders and to secondary schools, but more research is needed. We would have preferred to do separate

[213] Heck (1992), op. cit.
Heck, Marcoulides, & Lang (1991), op. cit.

[214] Eberts, R. W., & Stone, J. A. (1986). Student achievement in public schools: Do principals make a difference? *Economics of Education Review, 7*(3), pp. 291–299. This finding does not mean that there is no relationship between conflict resolution and outcomes in other subject areas – only maths outcomes were assessed.

[215] Nelson, B. S., & Sassi, A. (2005). *The effective principal: Instructional leadership for high quality learning.* Columbia, NY: Teachers College Press.

analyses of academic and non-academic outcomes, but the number of available studies was too small for this to be practicable.

While further research is needed, we conclude from our analysis that pedagogically focused leadership has important impacts on student outcomes: the more leaders concentrate their influence, their learning, and their relationships with teachers on the core business of teaching and learning, the greater their influence on the well-being and achievement of students.

The focus of this chapter has been the five leadership dimensions derived from the forward mapping strategy. The next chapter focuses on the three further dimensions that were derived from the backward mapping strategy. Figure 15 shows how the dimensions derived from the two different strategies relate and integrate.

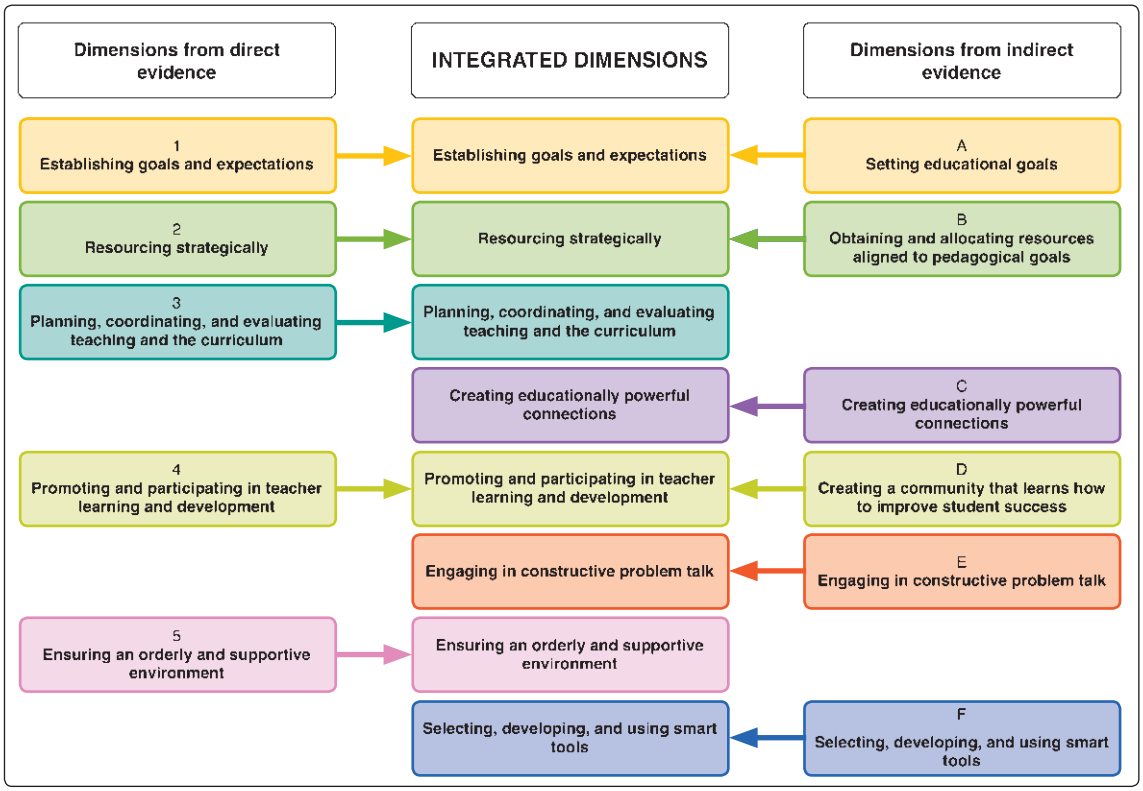

Figure 15. An integration of the dimensions from direct and indirect evidence

6. Leading the improvement of teaching and learning

As discussed in Chapter 3, there is little New Zealand research that links school leadership with student outcomes. The question arises, therefore, as to whether leadership dimensions derived from an analysis of international evidence are applicable to the New Zealand context and, more particularly, to the Māori-medium context.

The dimensions were checked for relevance by comparing them with those that emerged from a second, independent analysis of evaluations of initiatives to improve teaching and learning in New Zealand schools. This time, the starting point was not theories of leadership, as in Chapter 4, but initiatives that have had a demonstrable impact on one or more valued student outcomes. Starting with this evidence, and using the process of backward mapping described below, we derived the leadership dimensions that supported teachers in their work of improving student achievement and well-being.

While these evaluation studies were not designed as studies of leadership, they include descriptions of the role played by leaders in the improvement process. From these descriptions, we derived six dimensions. Because New Zealand initiatives to improve teaching and learning typically involve partnerships between school leaders, researchers, professional developers, and Ministry officials, these dimensions reflect a widely distributed approach to the leadership of school improvement[216]. The evidence from which the dimensions are derived comes predominantly from primary schools. Although many of our findings will also be applicable to secondary schools, much more research is needed on the leadership of teaching and learning in this sector.

In the following sections, we briefly review the procedures used to identify the leadership dimensions associated with enhanced student outcomes. We then describe each of these dimensions and explain how they work. Both positive and negative illustrations are used to exemplify and discriminate the particular qualities that make these dimensions effective.

6.1 Research approach

Two sets of studies informed our analysis. The first set was selected from a recent Best Evidence Synthesis Iteration[217], which identified the attributes of teacher professional learning that has a positive impact on student outcomes[218]. From this synthesis, we identified 16 quantitative studies that rated medium to high in terms of methodological adequacy and medium to high in terms of impact on student outcomes (as measured by effect size)[219]. Fifteen of these studies measured academic outcomes, and one, social outcomes. Seven were conducted in primary schools, one in an intermediate school, and one in a secondary school. Seven involved a cross-sector analysis[220].

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[216] See Annan, B. (2006). *A theory of schooling improvement: Connectivity and consistency to improve instructional practice*. Unpublished doctoral thesis, The University of Auckland.

[217] Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best evidence synthesis iteration (BES)*. Wellington: Ministry of Education.

[218] Outcomes were defined as: greater academic achievement; enhanced personal identity, self-esteem, self-concept, or attitudes towards learning; improved interactions with and acceptance by peers and teachers; greater school attachment.

[219] An effect size between 0 and .20 was taken to mean a weak or non-existent impact; between .20 and .40 as a small but educationally significant impact; between .40 and .60 as a medium, educationally significant impact; and greater than .60 as a large, educationally significant impact. Where effect sizes were not provided by the authors of the individual studies, the BES advisors computed effect sizes from the data provided.

[220] One study did not report the sector involved.

A second set of quantitative studies, 15 in all, was drawn from published reports and unpublished theses[221] of research undertaken in New Zealand schools. These studies assessed the impact on student outcomes of a variety of initiatives, all focused on pedagogical practice. Sufficient information was provided for us to be confident that the design of the studies and the reporting of data met the BES guidelines. Eight of these studies related to Māori-medium contexts and seven to English-medium contexts. Thirteen were conducted in primary schools; one involved a cross-sector analysis[222].

Thirteen of the studies measured academic outcomes and one, both academic and social outcomes[223]. Effect sizes for the English-medium studies were either directly reported or obtained from other evaluations of the same initiatives. The eight Māori-medium studies did not provide effect sizes but reported outcomes as pre-/post-intervention gain scores. We judged the educational significance of these interventions for the targeted students and included only those studies that provided evidence of positive outcomes. In many cases, the evidence was weak and the changes, though positive, were not strong. We nevertheless included these studies to ensure that our leadership dimensions were derived from both Māori- and English-medium educational contexts.

After reading each study and taking detailed notes on every aspect of leadership mentioned, we did an analysis of key themes, initially identifying 23 categories of leadership. These categories were entered into an Excel™ spreadsheet, together with details of the studies and outcomes for students. An iterative checking process was then undertaken to ensure that the categories identified adequately represented the specific characteristics of leadership mentioned in each study, particularly the characteristics found in the studies situated in Māori-medium contexts.

Into the spreadsheet we added brief descriptions of the leadership practices included under the different categories, and identified exactly who the authors were referring to when they used the term 'leadership'. We then critiqued the entries under each category and merged categories with similar meanings. Categories with fewer than three entries were removed. As a result of this process, the initial 23 categories were merged into the six broad dimensions listed in Figure 16 and discussed in the remainder of this chapter. Additional studies were located that provided theoretical depth and rich descriptions of the practices captured by each dimension—in some instances, descriptions of contrasting negative cases.

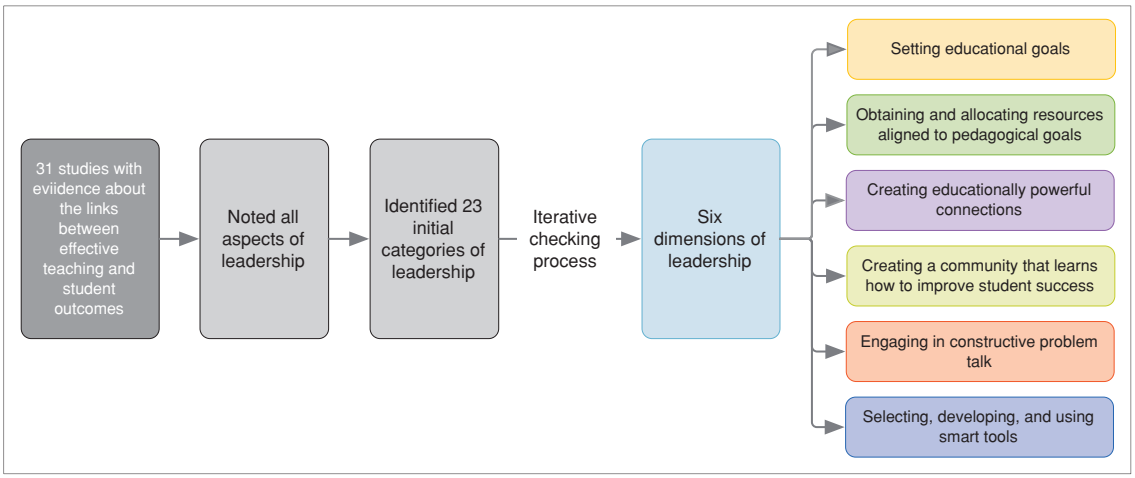

Figure 16. The strategy used to derive six leadership dimensions from New Zealand evidence

[221] The methodology used for selecting theses is described in Chapter 3.
[222] In one study, we were unable to identify the sector.
[223] In one study, we were unable to identify the outcomes being measured.

6.2 What is the role of leadership in developing effective teaching?

Each of the six leadership dimensions identified by our analysis is defined, illustrated, and explained in the following sections. Since we wish to avoid creating a leadership checklist, we have attended particularly to the principles and values that explain what makes the different dimensions powerful. In some cases, this has involved linking dimensions with relevant theory. Our discussion of goal setting, for example, includes both practical examples and a brief account of goal-setting theory. The findings of the *Teacher Professional Learning and Development BES* show that provision of underlying principles and theory, together with linked practical examples, is a feature of effective professional learning experiences[224].

Dimension A: Setting educational goals

Setting and communicating goals for teacher and student learning was one of the most obvious exercises of leadership reported by the 31 studies. In many of the improvement projects researched, external leadership set overarching objectives to be followed by all participants. Within these overarching objectives, however, there was usually scope for schools to formulate their own goals. For example, an objective of the national Literacy Leadership Project[225] was to increase the ability of school leaders to work with their staff in ways that improved the literacy of their lowest-performing students. Leaders were required to use an evidence-based analysis of student needs to set specific goals for improving some aspect of literacy. Progress towards the goal was to be monitored through the school's own action-research project. So, although policy makers, researchers, and programme developers were instrumental in setting the overall objectives in this and other initiatives, school leaders had an important role in setting goals that were tailored to the specific needs of their students.

From the studies, it emerges that leaders can set goals effectively if they:

- establish the importance of the selected goals;
- ensure that goals are clear;
- develop the capacity to set appropriate goals.

Leadership establishes the importance of the selected goals

Goals do not motivate unless they are seen to be important. They gain importance by being linked to wider philosophical and moral purposes. Articulating and gaining commitment to such purposes is part of what is meant by visionary leadership. Unlike the research on transformational leadership discussed in Chapter 4, none of the studies used in this analysis discussed or evaluated leadership vision. This is probably because moral and philosophical commitment can be deeply embedded in leadership practice and, unlike a leader's speech or writing, not easily recognised as visionary. Yet it is apparent in some of these studies that the personal commitment of leaders was central to establishing the importance of a goal. In some cases, it was a leader's driving moral or philosophical purpose that, along with relevant evidence, enabled them to recognise a discrepancy between current and desired achievement and led them to discuss this discrepancy with others. It then became their goal to reduce the discrepancy—not for compliance reasons but from a need to be true to themselves. The link between personal, moral, or philosophical commitment and goals is illustrated in Box 3. The context is a kura literacy programme led by the tumuaki in conjunction with an external

[224] Timperley, Wilson, Barrar, & Fung (2007), op. cit.

[225] For an evaluation of this initiative and schools' capacity to set goals based on evidence of student need, see Timperley, H. S., Parr, J., & Higginson, R. M. (2003). *Evaluation of the Literacy Leadership initiative: The enhancement programme 2001*. Wellington: Ministry of Education.
Timperley, H. S. (2005b). Instructional leadership challenges: The case of using student achievement information for instructional improvement. *Leadership and Policy in Schools, 4*, pp. 3–22.

researcher and the kura whānau. The goals of the literacy programme are encompassed by a wider vision held by Māori, to which the kura whānau is committed—a vision for the Māori language, cultural regeneration, and educational achievement.

Box 3. Establishing goal importance by making links to moral and philosophical commitments

The tumuaki and whānau leadership of a kura kaupapa Māori cared deeply about the fact that their year 8 students who were highly competent in Māori were struggling when they entered the bilingual programme at the local secondary school (the only option available). They believed that this was due in part to their failure to adequately prepare their students to confidently and competently meet the challenge of learning through the medium of English. The problem was important to them because their graduates were still part of the kura whānau and were therefore still their responsibility. The kura whānau were committed to the principle, enunciated in Te Aho Matua[226] and elsewhere, of competency in both Māori and English. This commitment led the kura whānau and tumuaki to collaborate with a literacy researcher in the delivery of a 10-week English-medium literacy programme. The explicit goal was to improve reading and writing in English while maintaining or improving Māori language and literacy. Post-intervention assessment showed that the gains made during the programme were being maintained one or two terms later. The inclusive, explicit discussion of the problem, combined with a whānau sense of collective responsibility, ensured that all those involved saw the goal as urgent and important[227].

Further evidence that it is important to link goals to wider moral and philosophical purposes comes from a follow-up evaluation of an early literacy intervention in seven South Auckland primary schools[228]. School leaders (principals and senior management teams) were asked why they joined this project. The three most successful schools (as measured by pre-/post-intervention gains in achievement) were distinguished from the others by their frank acknowledgment that dissatisfaction with current reading achievement was one of their reasons for participating. The principals who did not mention achievement said that they had joined the project either because of its fit with their current programme, or because any professional development would be helpful, or because it was sponsored by the Ministry of Education. It is likely that these reasons would have been less compelling for teachers than an open, principal-led discussion of literacy achievement, followed by the principal's explicit commitment to work with staff to raise literacy levels.

The value of linking goals to a compelling moral purpose is also seen in a South Island school's journey "from a deficit model of special education needs programming to an inclusive model of student learning support"[229]. The senior management team wanted to move from a special class model to one that was more inclusive and classroom-based. They were keen to do this because they had increasing numbers of moderate needs children and because they believed (in line with the National Administration Guidelines) that "meeting the needs of all students was a mandatory part of every teacher's job". This moral purpose was embodied in goals to enhance the reading achievement, parent–school relationships, and self-esteem of a pilot group of 26 students, drawn from every class in the school except new entrants.

Leaders give symbolic messages about what is important by what they choose to attend and how they participate. Leaders who not only attend, but also participate in the workshops and meetings associated with an initiative, signal their commitment to its goals and a determination

[226] Te Aho Matua is a philosophy specifically developed for kura kaupapa Māori that describes operational principles and principles for teaching and learning.

[227] This vignette is based on Berryman, M. A. (2001). *Toitū te whānau, toitū te iwi: A community approach to English transition*. Unpublished master's thesis, University of Waikato, Hamilton, New Zealand.

[228] Timperley, H. S., & Wiseman, J. (2003). *The sustainability of professional development in literacy: Part Two: School-based factors associated with high student achievement*. Wellington: Ministry of Education.

[229] Morris, C., & Katon, S. (2006). A torrent of change: Enhancing effective change in special education—one school's journey. *Kairaranga, 7*(Special Edition), pp. 28–32.

to support their staff to successfully implement it and achieve the desired outcomes[230]. Presence and visibility (being a 'seen face', kanohi kitea or kia kite a-kanohi) is an important aspect of Māori leadership. Researchers often noted, but without explaining why, that the active support and participation of leaders was an important characteristic of successful, sustainable interventions.

Leadership ensures that goals are clear

According to the considerable literature on goal setting[231], one of the requirements for effectiveness is that goals are clear and unambiguous. Teachers know that this is true when setting student learning outcomes—it is also true when setting goals for the improvement of teaching. Goals are clearer when they include a target and a timeframe (for example, 80% of all students will be at age-expected levels by the end of year 1).

The role of targets was investigated in connection with the Numeracy Development Project[232]. In 13 of the 19 schools involved in the longitudinal evaluation, at least 75% of teachers reported using achievement targets for numeracy. In these schools, with the exception of two year levels, fewer students than in the other six schools were working at the lower stages of the Number Framework.

No matter how often they are articulated by leadership, goals are not clear if they are not understood by those they are intended to influence. This is particularly important when those who set the goals are not those who have to achieve them. Box 4 describes a national literacy intervention in which the goals put in place by the national leadership were not successfully communicated at school level.

Box 4. The importance of checking whether goals are clear

One of the goals of the national Literacy Leadership Project (2000–03) was to give principals and literacy leaders the skills to work more effectively with teachers to raise the achievement of their lowest-performing students. Facilitators were asked to "work directly with the principal and literacy leader only with the aim of upskilling them sufficiently to work more effectively with their staff" (p. 238)[233]. The aim of enhancing learning-centred leadership was made explicit in the workshop materials. A project evaluation was conducted in 29 primary schools across the country, selected by the national facilitators as representative of varying levels of success. When the evaluators asked facilitators, principals, literacy leaders, and teachers to tell them whose learning needs were the focus of the project, only the facilitators consistently nominated school leadership. Principals and literacy leaders consistently saw the initiative directed at teacher and student learning, not their own. The evaluation did not provide a definitive explanation for this mismatch. One possibility is that the facilitators did not know how to tell school leaders that they were the focus. Another is that they spent so much time working with teachers rather than leaders that the original intention was overlooked. A third possibility is that school leaders did not study the rationale and purpose of the initiative so did not position themselves as learners alongside their teachers. The evaluation showed that the initiative made no difference to the reading achievement of students.

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[230] Amongst other sources, see:
Absolum, M. (2004a). *Assess to Learn Project* (Project proposal submitted to the Ministry of Education). Auckland: Evaluation Associates.
Trinick, T. (2005). Te Poutama Tau: A case study of two schools. In *Findings from the New Zealand Numeracy Development Project 2004* (pp. 103–114). Wellington: Ministry of Education.

[231] See Latham and Locke for an accessible summary of this research and the discussion at the end of this section: Latham, G. P., & Locke, E. A. (2006). Enhancing the benefits and overcoming the pitfalls of goal setting. *Organizational Dynamics, 35*(4), pp. 332–340.

[232] Thomas, G., & Tagg, A. (2005). Evidence for expectations: Findings from the numeracy project longitudinal study. In *Findings from the New Zealand Numeracy Development Project 2004*. Wellington: Ministry of Education.

[233] Timperley, H. S., & Parr, J. M. (2005). Theory competition and the process of change. *Journal of Educational Change, 6*, pp. 227–251.

Leadership develops the capacity to set appropriate goals

Setting appropriate goals involves more than learning how to specify targets that are objective and measurable. Goal setting—for both teacher and student learning—is part of a cycle of evidence-based assessment, analysis, and determination of next steps. As we will show in Chapter 8, to do this well, leaders need considerable knowledge of subject-specific assessment, curriculum progressions, and pedagogical strategies. It was a feature of successful projects that leaders checked, rather than assumed, teachers' capacity to set appropriate goals and, where needed, provided opportunities for them to learn how to link student data to next teaching steps[234].

In the early stages of some New Zealand initiatives, policy makers and programme developers have not adequately checked the capacity of the implementing agents to meet the objectives and have consequently underestimated the amount of learning and support that teachers and school leaders will need. In the Literacy Leadership Project, for example, few schools were able to complete the required evidence-based assessment, goal setting, and action-research project. The subsequent Literacy Professional Development Project[235] recognised the complexity of these tasks and the need for more expert support. As a consequence, its impact on both teacher and student learning has been much more significant.

Goal setting requires an appropriate level of difficulty to be established. If goals are seen to be too difficult or too easy, they will not be motivating. The perceived difficulty of a goal and the perceived capacity to meet it are inseparably linked, so what counts as difficult will change as capacity changes. Box 5 describes how one school leader worked with her staff to set progressively more challenging goals for student achievement.

Box 5. An assistant principal helps teachers set and achieve more challenging goals

The assistant principal in a low-decile, urban primary school worked with a university researcher to lift levels of reading achievement. Initially, the teachers rejected the use of national benchmarks, believing them to be unrealistic for their students. The author[236] writes:

"They indicated that they already knew that the students were reading below expectations for their age. Various comments alluded to the belief that national expectations were unrealistic for their students. For example, when the assistant principal indicated the expected reading level after six months at school, one teacher asked in an aside, 'Is that according to real life?'" (p. 10).

One year later, after learning to use classroom data to improve their teaching, the staff involved were setting national benchmarks as their goal and routinely plotting their students' reading data against them. One teacher explained, "I think you have got to have expectations and you have to have something to aim for. I guess it comes down to what the vision is, where we collectively want the kids to be as well" (p. 16).

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[234] Descriptions of such work are available in:
Absolum (2004a), op. cit.
Absolum, M. (2004b). *ATOL programme 2004* (report prepared for company purposes only). Auckland: Evaluation Associates Ltd.
Fung, I. Y. Y., Townsend, M. A. R., & Parr, J. M. (2004). *Teaching school children to think critically in language arts: How and why?* Paper presented at the British Educational Research Association Annual Conference (16–18 September), UMIST, Manchester, UK. Retrieved from: www.leeds.ac.uk/educol/documents/00003713.htm
Parr, J., Timperley, H., Reddish, P., Jesson, R., & Adams, R. (2006). *Literacy Professional Development Project: Identifying effective teaching and professional development practices for enhanced student learning*. Milestone 5 (Final report). Wellington: Learning Media.
Phillips, G., McNaughton, S., & MacDonald, S. (2001). *Picking up the pace: Effective literacy interventions for accelerated progress over the transition into decile one schools* (Final Report). Wellington, NZ: Ministry of Education. Retrieved from: www.minedu.govt.nz/web/document/document_page.cfm?id=6444

[235] Parr, Timperley, Reddish, Jesson, & Adams (2006), op. cit.

[236] Timperley, H. S. (2005b). Instructional leadership challenges: The case of using student achievement information for instructional improvement. *Leadership and Policy in Schools, 4*, pp. 3–22.

Explaining the power of goal setting

Goal setting is a powerful leadership tool, and since the studies discussed above were not designed as studies of leadership (let alone goal setting), it is important that we help readers understand how and why it is effective.

There is a long history of empirical research on goal setting, recently summarised in an easily accessible form by two of the leading theorists (see Figure 17). The following discussion is based on their recent paper[237].

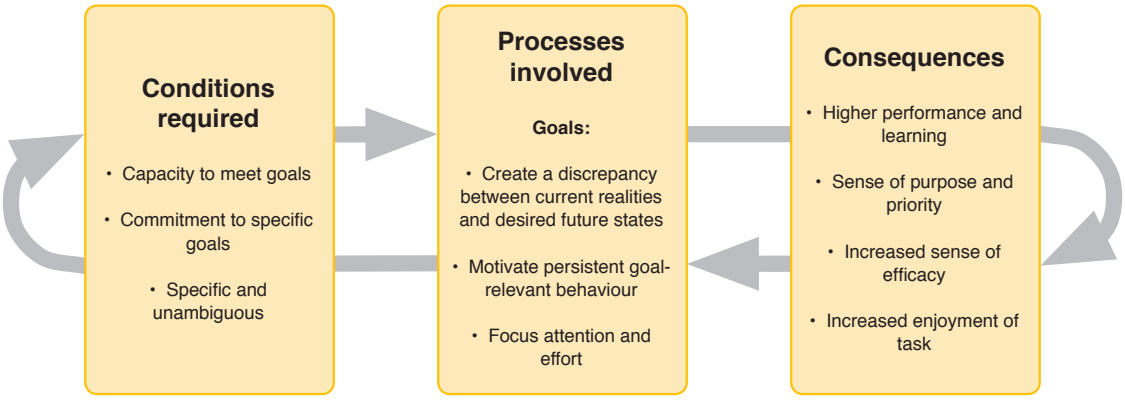

Figure 17. How does goal setting work?

Goal setting works by creating a discrepancy between the current situation and a desired future state. For people committed to a goal, this discrepancy is experienced as constructive discontent that motivates persistent, goal-relevant behaviour. Goals focus attention and lead to more determined and sustained effort than would otherwise be the case. For example, a teacher's goal is to have 80% of her students achieving at or above age-appropriate levels in reading comprehension by the end of the year. As only 50% do so at present, she is motivated to systematically record and review their performance and to seek more successful ways of teaching.

Goals are only motivating, however, if the three conditions listed in the left-hand box in Figure 17 are met:

1. Teachers, parents, or students feel they have the capacity to meet the goals: either they believe their current resources are sufficient for the purpose or they are confident they will be given the additional expertise and support they need.
2. People are committed to the goals. This requires first of all that they understand and value them. As long as this is the case, it does not matter whether they participate in the actual goal-setting process. New Zealand research on teacher professional development in literacy does, however, draw attention to the effectiveness of goals that are co-constructed and based on a joint analysis of problems[238]. This is probably because the shared process enhances teachers' understanding of what it will take to achieve the goals at the same time as it builds their capacity and confidence.
3. The goals are specific and unambiguous. Specificity makes it possible to assess progress and adjust one's practice accordingly. Self-regulation is impossible if the goal—and, therefore, progress towards the goal—is unclear.

Goal setting enhances performance and learning. It is also psychologically beneficial in that, by bringing clarity of purpose, it no longer seems that everything is equally important and

[237] Latham & Locke (2006), op. cit.
[238] Parr, Timperley, Reddish, Jesson, & Adams (2006), op. cit.

overwhelming. This sharpened focus and sense of purpose can lead to greater enjoyment of one's work and greater willingness to take on challenges.

There are, of course, limitations and pitfalls to be aware of. They are summarised in the following table, together with strategies for preventing or overcoming them:

Table 7. Goal setting: common problems and how to overcome them

Problem	Strategy
People lack the skills and knowledge to achieve the goal.	Set relevant learning rather than performance goals.
Individuals' goals may be in conflict with others' goals.	Set team or superordinate goals.
Failure to achieve goals is seen as a risk.	Encourage and reward learning from mistakes.
Successful goal attainment can reinforce old strategies that are inappropriate in a changing environment.	Invite robust critique and review of goals and strategies for reaching them.
Accountability for goal attainment can lead to biased and inaccurate reporting.	Check validity of a small sample of reports. Leaders model an ethical culture and show no tolerance for deviations.
Important outcomes that are not set as goals may be ignored.	Set more inclusive goals. Set goals for all critical outcomes. Inquire into goal interrelationships.

It is one thing to set good goals and gain commitment to them and another to successfully pursue them in the face of the constant distractions of other necessary work. The section in Chapter 2 on principals' use of time highlights this particular challenge confronting principals who want to take greater responsibility for leading teaching and learning. Practical advice about how to manage the distractions, together with the problem-solving and interpersonal skills required, will be found in Chapter 8[239].

Dimension B: Obtaining and allocating resources aligned to pedagogical goals

Leadership is exercised in obtaining and allocating material, intellectual, and human resources to meet pedagogical goals. Of all the functions that come under this dimension, the most important of all is appointment of teaching staff, since quality of teaching explains more of the variance in student achievement than any other system variable[240].

Leaders at all levels of the system play a vital role in working with teachers to identify and develop appropriate teaching resources and ensuring that these resources are readily available. For Māori-medium schools, finding resources that align pedagogically and philosophically with valued goals is a significant challenge as there are relatively fewer teaching and assessment resources available in te reo Māori[241].

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[239] Practical advice about how to manage distractions in ways that do not undermine the pursuit of goals is also found in Levin, B. (2009) *How to change 5000 schools: A practical approach for leading change at every level*. Cambridge, MA: Harvard Education Press.

[240] Alton-Lee, A. (2004, June). *Impact of teaching and schools on variance in outcomes*. Retrieved October 6th, 2006, from www.minedu.govt.nz/web/downloadable/dl8910_v1/impact-of-teachers-and-schools-on-variance-in-outc.doc

[241] Rau, C. (2005). Literacy acquisition, assessment and achievement of year two tauira in total immersion in Māori programmes, *The International Journal of Bilingual Education and Bilingualism, 8*(5), pp. 404–432.

Resource availability and allocation not only impacts the quality of teaching, it has wider societal implications via its influence on school quality, which has been shown to have a remarkable impact on economic growth[242]. Yet simply increasing resources will not improve the quality of teaching and learning[243]: the challenge is to strategically align resources to pedagogical goals, not accumulate resources as an end in itself[244].

Besides obtaining and allocating the materials and information needed for improving teaching and learning, strategic alignment may also involve developing or recruiting the expertise to use these effectively. Such expertise might already exist within the school—in the staff or students, or in the community or kura whānau. When this is the case, leadership may involve identifying those with the particular expertise needed or selecting individuals for important roles. For example, the principal of a decile 2 school in Manukau City asked two teachers to share with their colleagues how they had successfully raised the achievement of five of their students with learning and behaviour difficulties. Over the course of three one-and-a-half-hour professional development sessions, these teachers explained how, supported by a university-based facilitator, they had used an action-research process to examine and then change their own practice in ways that led to significant improvements in the reading, writing, and behaviour of these previously hard-to-teach students. The principal reported:

> This exercise has reinforced a belief, long held by the senior management of this school, that sharing of expertise within our own learning community, by staff members who know and understand our students, is the most powerful tool in effecting change. From my observation of the two staff members involved in the project I noted an increased understanding of the value of cooperatively interchanging ideas and practice, an increased ability to clearly define the outcomes they required and a subsequent growing in confidence in their ability to move their students forward (p. 37)[245].

When expertise is not readily available, leadership seeks it out. This is illustrated in the vignette in Box 3. The tumuaki, on behalf of the kura whānau, sought the expertise of a researcher to help the kura better prepare graduates to cope with the academic English they would encounter at secondary school.

In the initiatives described in the 31 studies reviewed for this chapter, expertise often came into schools from outside in the form of project personnel, who assumed key leadership roles. As we examined how these external personnel and school-based leaders identified and obtained resources aligned to the purpose of improving teaching and learning, two points emerged:

Leaders who strive to identify and obtain resources aligned to pedagogical goals:

- use clear criteria that are aligned to pedagogical and philosophical purposes;
- ensure sustained funding for pedagogical priorities.

Leadership uses clear criteria that are aligned to pedagogical and philosophical purposes

Effective identification of material and human resources is not an ad hoc process. Rather, it is guided by already-established goals and purposes. These purposes shape the development of the criteria used to identify the necessary resources. Leadership ensures there is shared awareness and understanding of the purpose of the resources and of the criteria that will be used to identify or develop them. An example of clear identification of relevant expertise from within a school is found in Figure 22 on page 136. Teachers in the school disaggregated data so that they could see exactly which students—and, therefore, exactly which teachers—needed

[242] Hanushek, E. A. (2005). *Economic outcomes and school quality*. Paris: IIEP and Brussels: IAE.
[243] ibid.
[244] Bryk, A. S., Sebring, P. B., Kerbow, D., Rollow, S., & Easton, J. Q. (1998). *Charting Chicago school reform: Democratic localism as a lever for change*. Boulder: Westview Press.
[245] Hiranniah, N., & Mahoney, B. (2006). Within our circle of influence. *Kairaranga, 7*(Special Edition), pp. 33–38.

more help. The disaggregation also enabled them to identify one of their number who was particularly successful in raising the achievement of her students. As a result, colleagues observed her teaching, were coached by her, and actively sought her advice[246].

In this example, the teacher expert and her colleagues knew why she was selected and understood her resource person role. A contrasting study, of a project called Te Kauhua, highlights how important it is that staff are aware of the criteria for selection. Te Kauhua focused on helping teachers understand the types of teacher–student relationships that foster Māori achievement[247]. Over half the teacher-facilitators who had been seconded for two and a half years to clusters of participating schools raised the need for greater clarity about their roles and responsibilities—they were neither sure of their roles nor sure of why they had been appointed.

To meet specific goals, it may sometimes be necessary to identify and recruit individuals with the required expertise from outside the school. The importance of clear links between recruitment criteria and educational goals can be seen in the vignette in Box 6. The scenario in this case is a school that has been invited to send a Māori cultural group of 24 students to perform at an international cultural festival.

Box 6. Recruiting personnel who have the knowledge and qualities necessary for meeting educational goals

Preparation for the performance involved implementation of an intensive Māori culture group experience. This was combined with a carefully planned and implemented series of interventions and activities designed to improve the students' self-esteem and sense of agency, which, according to standardised test results, were low. The impacts of the experience on academic performance were also evaluated. The Pākehā deputy principal, who had been leading the cultural group, decided to appoint a kaiako and kaiarahi reo from a local marae to take over this role. The deputy principal helped ensure that the culture group's programme was culturally appropriate by recruiting skilled Māori personnel. These people had the knowledge and expertise to successfully prepare the group for their performance. They could also assist in developing cultural identity and by acting as role models. As they were not trained teachers, they were given some specific training in developing children's self-esteem and sense of agency.

Pre- and post-assessments of the children in the culture group showed that there were positive, statistically significant changes in students' self-esteem and sense of agency over the course of the intervention. There was also a small positive effect on academic achievement. Neither of these changes was observed in a comparison group.[248]

Picking up the Pace[249], an early literacy initiative, provides an example of how criteria for identifying and obtaining material resources can be driven by externally facilitated changes to current practice. Box 7 describes how these changes demanded new criteria for the allocation and use of resources.

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[246] Timperley, H. S., & Wiseman, J. (2003). *The sustainability of professional development in literacy: Part 2. School-based factors associated with high student achievement*. Wellington: Ministry of Education. Retrieved from www.minedu.govt.nz/index.cfm?layout=document&documentid=8638&data=l

[247] Tuuta, M., Bradnam, L., Hynds, A., Higgins, J., & Broughton, R. (2004). *Evaluation of the Te Kauhua Māori mainstream pilot project*. Wellington: Ministry of Education.

[248] This vignette is drawn from Rubie, C. (1999). *The effect of a Māori culture group experience on children's self esteem, locus of control and academic performance*. Unpublished master's thesis, University of Auckland.

[249] Phillips, G., McNaughton, S., & MacDonald, S. (2001). *Picking up the pace: Effective literacy interventions for accelerated progress over the transition into decile one schools* (Final report). Wellington: Ministry of Education. Retrieved from www.minedu.govt.nz/web/document/document_page.cfm?id=6444

Box 7. Pedagogically aligning resources to changing practices

A New Zealand professional development research project in literacy teaching had shown how the traditional big book activity, involving a whole class, left low-progress children somewhat confused. In light of this finding and international research showing that effective teachers use a range of rich texts, Picking up the Pace facilitators worked with teachers to change their practice. Instead of reading big books with the whole class, they read a range of appropriate small books with small groups of students. Reading five small books (appropriate in terms of topic, text meaning, difficulty, vocabulary, etc.) every day as a part of a flexible, small-group Reading To programme, instead of one big book over several days, was found to be a more helpful practice. As the children read the different books, the teachers were able to observe the kinds of text selected and discern mismatches between text and reader perception. The junior school leadership had to respond to these changes, ensuring that suitable texts were available, that instructional reading happened with a small (rather than large) group, and that there were appropriate tasks and resources for the other groups of children.

Besides aligning pedagogically, resources need to align with philosophical purposes and teaching programmes. Trinick studied two kura that had participated in Te Poutama Tau in 2003 and shown gains in mathematical achievement[250]. This professional development programme for Māori-medium teachers of numeracy is based around what is known as the Number Framework. Developed specifically for the New Zealand context, the programme requires individual schools to opt in. The senior staff of the kura agreed that their success with Te Poutama Tau was partly because the teaching and learning philosophy behind it aligned well with the school's commitment to cooperative learning. Cooperative learning approaches also align well with the philosophy behind Te Aho Matua[251].

Timely availability is one aspect of resource alignment. Te reo Māori versions of key resource materials (such as the diagnostic interview and teacher booklets) were developed as part of the Te Poutama Tau programme but, as Christensen notes, facilitators were working with Māori-medium teachers well before these became available[252].

Notwithstanding the timeliness issue, Te Poutama Tau resources have helped Māori-medium teachers understand the stages by which students typically develop understanding of number, and this in turn has helped them cater more effectively for the individual learning needs of their students[253]. Te Poutama Tau represents a significant step forward in terms of aligning pedagogy and resources to Māori educational philosophy and aspirations.

In English-medium schools, the commitment of leaders is a major determinant of the priority given to purchasing or developing resources for Māori-medium teaching. In a study of three schools, Clark[254] found little commitment on the part of senior leadership to assessing and reporting the te reo Māori achievements of students from Māori-medium programmes. Māori-medium teachers from two of the schools described how they fitted bilingual outcomes into the English-medium report template as best they could. In one, teachers had to attach a separate te reo Māori report to the standard report. In these schools, resources for assessing and reporting were not aligned to important pedagogical and cultural goals.

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[250] Trinick, T. (2005). Te Poutama Tau: A case study of two schools. In *Findings from the New Zealand Numeracy Development Project 2004*. Wellington: Ministry of Education, pp. 103–114.

[251] Te Aho Matua is a philosophy specifically developed for kura kaupapa Māori that describes principles for operation and teaching. It has a focus on cooperative learning.

[252] Christensen, I. (2003). *An evaluation of Te Poutama Tau 2002: Exploring issues in mathematics education.* Wellington: Ministry of Education.

[253] ibid.

[254] Clark, S. M. (2003). *Reporting to parents in Māori bilingual units*. Unpublished master's thesis, University of Auckland.

In an evaluation[255] of the use of commercially available literacy packages in English- and Māori-medium classrooms, teachers were asked a series of interview questions designed to find out how well they could match the packages with the needs of their students. The authors write:

> The conclusion with respect to obtaining a match between needs of students and features of the package is that this was often problematic from the outset. Not all schools, by any means, were clear about what the package they were selecting had to offer or how this related to the needs of their students. Schools were prepared to rate the package highly in terms of meeting needs of their students but were generally unable to specify the way in which the package helped them to cater for the needs of target groups (p. 35).

The evaluators' report includes a detailed, hypothetical case of how a deputy principal might lead a series of evidence-based discussions about the literacy learning needs of their students, selection of a resource to match those needs, and ongoing evaluation of its impact on student reading.

Leadership ensures sustained funding for pedagogical priorities

There is a conspicuous shortage of New Zealand research on how school leaders identify and obtain resources in the everyday business of leading a school. Most of the studies from which we have derived leadership dimensions involve improvement projects, but resources made available during the 'hothouse' phase of an intervention will not necessarily be available on an ongoing basis from regular school budgets[256]. For this reason, concern is often expressed during improvement projects that, to sustain new practices and gains in student outcomes, continued access to resources is required. Provision of these resources is a bottom line[257], but meeting it can be problematic when the extra funds associated with a project run out and continued work must be funded from the regular school budget[258].

The McDowall et al. study provides evidence about how school leadership might address concerns about the ongoing funding of programmes that are initially partly externally funded[259]. This study, described in Box 8, focused on decisions relating to Reading Recovery, an early intervention for students making limited progress in reading and writing after their first year at school.

Box 8. Ensuring that there is sufficient funding for pedagogically aligned resources

The number of Reading Recovery places available in a school is dependent on hours provided by the Ministry of Education specifically for the purpose and on what the school allocates from its operations grant and other discretionary funding. Schools are expected to at least match the hours provided by the Ministry, so the extent to which they meet the need for Reading Recovery places is partly dependent on their priorities for discretionary funding. In all but one of the case study schools, the school contribution was greater—sometimes considerably greater—than the hours provided by the Ministry. Schools can also use discretionary funding to cater for unexpected placements or to provide time for Reading Recovery teachers to carry out extra activities such as monitoring discontinued students. Some effective Reading Recovery schools have taken up this option. Their leaders realised that successful implementation of Reading Recovery necessitated adjustments to funding,

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[255] Parr, J., Aikman, M., Irving, E., & Glasswell, K. (2004). *An evaluation of the use and integration of readymade commercial literacy packages into classroom programmes* (Final report). Wellington: Ministry of Education.

[256] McLaughlin, M. W., & Mitra, D. (2001). Theory-based change and change-based theory: Going deeper, going broader. *Journal of Educational Change, 2*(4), pp. 301–323.

[257] ibid.

[258] ibid.

[259] McDowall, S., Boyd, S., Hodgen, E., & Vliet, T. V. (2005). *Reading Recovery in New Zealand: Uptake, implementation, and outcomes, especially in relation to Māori and Pasifika students.* Wellington: New Zealand Council for Educational Research.

often at the expense of other things. Leaders face a delicate juggling act when deciding how to use their school's discretionary funding[260].

Contestable funding is another possible avenue for leaders wanting to access ongoing material and human resources for priority areas, but there may be considerable opportunity costs associated with such funding. A report prepared for the Ministry of Education highlights principals' concerns:

Box 9. Opportunity costs in relation to compliance requirements associated with resourcing

Fifty school principals and board of trustees members from 29 schools were interviewed about their schools' experiences of compliance requirements. Fourteen principals said that they found the compliance and reporting associated with contestable resourcing onerous and time-consuming, particularly with respect to teacher and teacher aide hours and funding. Eight principals were concerned about the amount of time it took to prepare funding applications and to meet compliance and reporting requirements for successful applications. Principals and trustees also said they faced considerable human and other costs meeting compliance requirements such as those related to electrical safety (e.g., checking power cords[261]) and road safety (e.g., supervisor-to-student ratio when crossing roads)[262].

In New Zealand's largely self-managing environment, strategic resourcing is a key responsibility of school leadership, yet there are few resources to help school leaders learn how to use the resources they have to more effectively support the improvement of teaching and learning[263].

Dimension C: Creating educationally powerful connections

Leadership through the creation of educationally powerful connections designed to improve teaching and learning was apparent in many of the 31 studies in our analysis. Connections between individuals, organisations, and cultures can contribute to enhanced student achievement by ensuring a closer pedagogical and philosophical match between what happens at home and at school. Pedagogical match is also enhanced when schools provide continuity of content and teaching approach for students as they move from one programme or class to another.

While relationships are important in all the dimensions identified in this chapter, this is particularly the case when it comes to creating connections and continuity. Effective relationships both reflect and build shared understandings and goal commitments. They can also lead to greater knowledge of and respect for individual and cultural identities. In this discussion, however, our emphasis is adult relationships, collaborations, and partnerships that are focused on the achievement and well-being of students[264]. As Fullan notes, "unless the right things are being focused on, collaborative relationships *may end up being powerfully wrong*"[265].

Our analysis shows that leaders create educationally powerful connections when they:

- establish continuities between student identities and school practices;
- develop continuities and coherence across teaching programmes;
- ensure effective transitions across educational settings.

[260] ibid., pp. xv–xvi.
[261] Ministry of Education internal memo (12 March 2007), a summary of issues raised by principals and principal bodies regarding electrical testing in schools.
[262] Malone, K. (2006). *Project report: Reducing compliance; increasing trust*. A report prepared for Education Management Policy, Ministry of Education and Kingston Associates.
[263] A starting point for developing such New Zealand resources could be Karen Hawley Miles and Stephen Franks' forthcoming book, *The strategic school: Making the most of people, time and money*. Thousand Oaks, California: Corwin Press.
[264] Timperley, H., & Robinson, V. (2002). *Partnership: Focusing the relationship on the task of school improvement*. Wellington: New Zealand Council for Educational Research.
[265] Fullan, M. (2001). *Leading in a culture of change*. San Francisco: Jossey-Bass. p. 67.

Leadership establishes continuities between student identities and school practices

Te Kotahitanga[266] is an initiative to increase the achievement of Māori students in English-medium secondary schools. The major strategy involves building relationships between individuals and groups, establishing the kinds of connections and continuities that have been shown to make a difference to the outcomes of Māori students. Māori students can experience major discontinuities between the cultural practices encountered in the classroom and their culturally located identities[267]. Te Kotahitanga seeks to address this problem by developing learning–teaching relationships that recognise and affirm Māori students' identities. Leadership is needed from researchers and professional developers, principals, and boards of trustees (among others) to facilitate such relationships and promote a common vision of educational excellence for Māori. Bishop et al.[268] identify connectedness as fundamental. This requires "teachers who are committed to and inextricably connected to their students and the community" (p. 25), plus complementary school and home aspirations. Recent findings appear to indicate that Māori students whose maths teachers have undergone Te Kotahitanga training achieve more highly than those whose teachers have not[269]. Even more important is the evidence that, for the period 2005–06, the level 1 NCEA results of participating schools improved significantly more than those of a comparison group of schools[270].

Results from the National Education Monitoring Project (NEMP) also show that learning experiences that connect with their cultural knowledge give Māori students opportunities to achieve across a range of learning areas. For example, Māori achieve significantly better than Pākehā in tasks that involve Māori contexts[271].

Nakhid[272] provides a vivid example of the discontinuities that can occur for Pasifika students when teachers have not developed their knowledge, skills, and understandings and, for this reason, cannot positively mediate relationships between Pasifika students and their non-Pasifika peers. Two groups of Pasifika students involved in her doctoral research described what often happened when they asked questions about parts of lessons that they didn't understand:

Group 1 students

Researcher:	What makes you feel they [classmates] look down on you?
Sina:	We keep on asking questions and they just go 'Ugh'. I feel like slapping them.
Tavita:	It's true. You feel like standing up and bop them.
…..	
Researcher:	When they go 'Ugh', do the teachers do anything about that?
Sina:	No.
Elena:	No, they [the teachers] start laughing at us.

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[266] Bishop, R., Berryman, M., Cavanagh, T., Teddy, L., & Clapham, S. (2006). *Te Kotahitanga phase 3: Whānaungatanga: Establishing a culturally responsive pedagogy of relations in mainstream secondary school classrooms.* Wellington: Ministry of Education Research Division and Poutama Pounamu Research and Development Centre.

[267] Such discontinuities conflict with the broad goal of education 'enabling Māori to live as Māori'. See Durie, M. (2001, February), *A framework for considering Māori educational advancement*. Opening Address, Hui Taumata Mātauranga, Turangi.

[268] Bishop, Berryman, Cavanagh, Teddy, & Clapham (2006), op. cit.

[269] ibid.

[270] Memo from NZQA Senior Statistical Analyst to Ministry of Education Chief Education Advisor 29 July, 2007.

[271] Crooks, T., & Flockton, L. (2006). *Social studies: Assessment results 2005*. National Education Monitoring Report. Dunedin: Educational Assessment Research Unit.

[272] Nakhid, C. (2003). Comparing Pasifika students' perceptions of their schooling with the perceptions of non-Pasifika teachers using the 'mediated dialogue' as a research methodology. *New Zealand Journal of Educational Studies, 38*(2), pp. 220–221.

Group 2 students

Researcher:	What do you do when the teachers laugh?
Ripeka:	Laugh with them. You laugh it off but you're really angry.
Mele:	Then it just makes you just forget about asking the question in the first place.
Ripeka:	And never again
Mele:	Yeah.
…..	
Mele:	And there's always a time when you ask the teacher, and the teacher like totally ignores you and then you turn around and ask someone else, someone who you think might know in the class, then you get in trouble for talking in the first place but they didn't answer your question.

Nakhid explains how experiences of this kind, which stem from disconnection between their Pasifika identities and school practices, disadvantage students by discouraging them from participating in the classroom. In their eyes, teachers condone the negative behaviour of their non-Pasifika classmates by not intervening or preventing it.

Leadership develops continuities and coherence across teaching programmes

A coherent teaching programme is guided by a common set of principles and key ideas. These drive strategies for teaching and assessment and inform policies and procedures (relating, for example, to staff recruitment, evaluation, and professional development) that impinge on the teaching programme. High-quality programmes have high-quality content and a high degree of coherence.

While none of the New Zealand studies attempted to measure programme coherence, there were many leadership activities that had an impact on coherence. For example, in some studies, teachers at a particular year level learned a common approach to teaching and assessing junior school reading[273] or writing[274]. One study showed that, by permitting staff to opt out of a common pedagogical approach, leaders may put student achievement at risk[275].

An investigation into the sustainability of the gains from an intensive professional development course on literacy acquisition shows the importance of continuity and coherence across a teaching programme. The professional development involved the literacy leaders and teachers of year 1 classes from seven schools. The two schools with the highest achievement in year 3 (schools F and G in Table 8) were the only schools where participating teachers attended regularly scheduled meetings at which benchmarked achievement data, disaggregated by level, were available for discussion[276]. In these two schools, the principal had explicitly assigned to the literacy leader responsibility for ensuring that implementation across classes was consistent.

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[273] Phillips, G., McNaughton, S., & MacDonald, S. (2001). *Picking up the pace: Effective literacy interventions for accelerated progress over the transition into decile one schools* (Final report). Wellington: Ministry of Education. Retrieved from www.minedu.govt.nz/web/document/document_page.cfm?id=6444.

[274] Parr, J., Timperley, H., Reddish, P., Jesson, R., & Adams, R. (2006). *Literacy professional development project: Identifying effective teaching and professional development practices for enhanced student learning. Milestone 5 (Final Report)*. Wellington: Learning Media.

[275] Timperley, H. S. (2005a). Distributed leadership: Developing theory from practice. *Journal of Curriculum Studies, 37*(4), pp. 395–420.

[276] The Early Childhood Primary Link (ECPL) was developed and delivered by Dr Gwenneth Phillips of the Child Literacy Foundation.

Table 8. Analysis of meetings[277]

School	Achievement data discussed				Implementation discussed
	Regularity of schedule	Length of meeting	Benchmarked achievement data for year level	Achievement data for class	
A	Not scheduled	N. A.	N. A.	N. A.	One meeting
B	Irregularly	1 hour	Yes	No	Irregularly
C	Not scheduled	N. A.	N. A.	N. A.	Irregularly (first year only)
D	One in year 2	1 hour	Yes	No	Not scheduled
E	Irregularly (second year only)	20–30 mins	Second year only	No	Irregularly (first year only)
F	Regularly (twice per term)	30 mins	Yes	Yes	Regularly (same meeting)
G	Regularly (once per term)	1 hour	Yes	Yes	Regularly (same meeting)

Leadership ensures effective transitions across educational settings

Leaders create educationally powerful connections by ensuring that learners are able to make effective transitions from one educational setting to another. An aim of the Picking up the Pace early literacy initiative was to promote continuity in literacy development between early childhood centres and primary schools. In this way, it was hoped to make better use of children's pre-school learning when they entered primary school. Early childhood teachers typically said they knew a little about the teaching of reading and writing at school, but the majority of primary teachers said they knew very little about reading and writing in early childhood centres. Both thought it would be useful to know more about children's development and about the teaching and learning that was going on in the other setting.

In this case, effective transitions were achieved in two ways. The first involved a focus on literacy and language activities in early childhood centres. The second involved changing primary school teachers' beliefs about literacy acquisition during the first year of school. A consequence of the programme was that teachers became more aware of the strengths children brought with them when they started school. One teacher explained:

> I realise that they actually know more about book knowledge than I was aware of before, like where a book starts and ends, all that sort of thing. I wasn't really focusing on that before, but now after doing the course, I can see that the kids come in with that knowledge already, you don't need to teach it.[278]

Another consequence was that the children made substantial gains in literacy by the end of the first year at school.

Effective transitions are promoted, not only by ensuring that teachers know more about learners and the teaching they have experienced, but also by using culturally valued practices. Box 10 illustrates how Te Poutama Tau leaders drew on culturally valued social processes to smooth the transition from a kōhanga reo to a Māori-medium school.

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[277] Timperley, H. S., & Wiseman, J. (2003). *The sustainability of professional development in literacy: Part 2. School-based factors associated with high student achievement.* Wellington: Ministry of Education. Retrieved from www.minedu.govt.nz/index.cfm?layout=document&documentid=8638&data=l, p. 80.

[278] Phillips, McNaughton, & MacDonald (2001), op. cit., p. 118.

Box 10. Using culturally valued processes to support transitions

The principal and senior staff of a Māori-medium primary school helped prepare for the transition of children from the local kōhanga reo by visiting it. In this way, they became kanohi kitea ('seen faces'). Cultural processes were an important element in these visits—recognising and affirming the kōhanga reo and school's shared commitment and contribution to Māori language and culture. During the visits, features of the school and classroom life were discussed with staff and parents, and they were given an introduction to Te Poutama Tau (the Numeracy Project).

Positive effects on children's learning were indicated:

"The principal thought that this had positive outcomes, with a number of kōhanga graduates entering the kura beyond the emergent stage of the Number Framework" (p. 82)[279].

Chapter 7 complements these findings derived from the backward mapping of educationally powerful connections by focusing on school–home connections that have the largest effects on student achievement.

Dimension D: Creating a community that learns how to improve student success

Whether initiated by researchers and developers from outside, or by the school's own leadership, many of the interventions described in these 31 studies involved groups of teachers meeting regularly to review and improve their teaching. In doing so, they developed a shared language and a shared set of experiences relating to their endeavours. These regular meetings also provided mutual support during what could be a tough change process.

There is nothing new about teachers working in groups: staff, syndicate, and departmental meetings are a standard feature of school life. If, however, they are to provide benefit for students as well as support for teachers, they need to be characterised by particular qualities. The qualities that emerged from our reading of the New Zealand studies are similar to those identified by Timperley et al. in their recent synthesis of evidence on the impact of professional learning and development on students[280].

Collaborative opportunities for professional learning are most likely to deliver benefit for students when they are characterised by:

- an intensive focus on the relationship between teaching and learning;
- collective responsibility and accountability for student achievement and well-being.

Leadership focuses on the relationship between teaching and learning

In the research reviewed in chapters 4 and 5, a strong academic focus distinguished high-achieving schools from low-achieving schools with similar student background characteristics. The New Zealand research[281] confirms this finding and provides rich descriptions of how an academic focus can deliver benefits for students. It shows that strong academic focus is not about excessive emphasis on test results or pressure on teachers and/or students to raise scores unaided. It is much more about in-depth, collaborative analysis of the relationship between how teachers teach and what students learn.

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[279] Trinick, T. (2005). Te Poutama Tau: A case study of two schools. In *Findings from the New Zealand Numeracy Development Project 2004,* (pp. 103–114). Wellington: Ministry of Education.

[280] Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best Evidence Synthesis Iteration (BES)*. Wellington: Ministry of Education.

[281] Timperley, H. S. (2005b). Instructional leadership challenges: The case of using student achievement information for instructional improvement. *Leadership and Policy in Schools, 4*, pp. 3–22.
Parr, Timperley, Reddish, Jesson, & Adams (2006), op. cit.

The importance of focusing on the teaching–learning relationship was demonstrated in a follow-up study of literacy professional development in seven Auckland primary schools. The study found a correlation between the content of professional discussions on reading and whether students were (or were not) reading at age-appropriate levels. Careful coding of these discussions indicated that teacher and student learning both benefited when teachers talked with each other about how they taught particular lessons and what it was that their students understood or achieved as a result. Such talk was more productive than that which focused on teaching without considering its impact on students[282]. In the two schools where student reading achievement was highest, the proportion of meeting time devoted to discussing the problems of specific students and how to address them was substantially higher than in the other five.

This difference in teacher talk was probably attributable to leadership. Box 11 describes how a literacy leader in one of the schools with high student gains shifted the focus of teachers' discussion from student backgrounds to the impact of their own teaching.

Box 11. Moving the focus from outside to inside the classroom[283]

The literacy leadership in the five schools with lower achievement in reading differed in a number of ways from the literacy leadership in the two higher-achieving schools. One difference was focus on the teaching–learning relationship. In the lower-achieving schools, literacy leaders had difficulty getting teachers to focus on their own practice instead of the students' home backgrounds. One literacy leader expressed her frustration in this way:

Literacy leader: That discussion—about no lunches and all that sort of thing and I do remember trying to cut that off because I think we're past that. We've been through all that blame sort of thing.

Researcher: What stopped you from saying something like that?

Literacy leader: Probably because I sympathise with how they feel because it shows things that are a reality for some children and I want to kind of say 'yes' and acknowledge that we've got to move on from there … There is a group of teachers that are like that and it's almost like 'Well that's where they're at, at the moment.' I'm hoping that people will come to a natural conclusion of getting past that.

When, in year 3 of the project, she began to focus more on identifying and targeting failing students, she no longer allowed herself to be so influenced by the teachers.

Literacy leader: While I still try to sympathise with the problems the teachers are having, I know that if we want to raise achievement we have to get past all that. Since we changed focus, it never comes up about blaming kids and homes. The teachers are now focused on what they can do.

Changing the norms and content of meetings so that they give greater priority to the teaching–learning relationship can pose leaders a considerable challenge. When evaluating the national Literacy Professional Development Project (LPDP), the researchers asked the participating principals, literacy leaders, and teachers in six Auckland and Northland schools to indicate on a 1–6 scale how strongly they agreed with the statement: 'Meetings at this school really help me teach those students I find most difficult to teach.' They did this three times: prior to the start of the professional development and following years one and two. As can be seen from Table 9, prior to the professional development, there was a general belief that the meetings did not help teachers with their most difficult-to-teach students. By the end of year one, the meetings were viewed as much more useful. This perception continued through year two.

[282] Timperley (2005a), op. cit.
[283] Based on Timperley (2005b), op. cit.

Table 9. 'Meetings help me teach those I find most difficult to teach'[284]

	Prior to PD		End of year one		End of year two	
	Mean	Range	Mean	Range	Mean	Range
Principals	2.6	2–3	4.8	4.5–5	5	5
Literacy leaders	2.7	1–4	4.6	4–6	4.8	4–5
Teachers	2.6	1–5	4.0	1–6	4.4	2–6
1 = Disagree, 6 = Agree						

One is left to speculate why, though the ratings improved greatly, they fell short of a strong teacher consensus that the meetings were really helpful. A possibility is that they were still dominated by discussion of classroom issues and resource organisation, not the impact of teaching. The authors note:

> While it is important to address organisational issues, because good management is fundamental to a well-run school, only one of the analysed meetings exhibited the qualities of professional learning communities that are associated with improving student outcomes. These meetings focus on the teaching–learning–outcomes links (p. 235)[285].

A greater shift in teacher talk would require leaders with a stronger calling to be leaders of teacher learning rather than facilitators and organisers of collegial discussion. As the authors note, "Participation and valuing of all teachers' contributions was given greater weight in most meetings than focused analysis of the teaching–learning relationship" (p. 235)[286].

It is indicative of a focus on the teaching–learning relationship that leaders use student impact as the touchstone for evaluating what works. The principals of schools that made most progress in the Picking up the Pace intervention were more likely than the principals of other schools to use evidence of student achievement to justify participation—and to judge progress. The principals of schools that made less progress were more likely to use teacher reaction as the criterion[287]. The power of principal decision making is illustrated in Box 12, which describes what happened when a new principal arrived at a high-progress school.

Box 12. When a principal's decision making is not based on student outcomes

Of the seven schools evaluated, School A had sustained the highest levels of achievement across the three years of the literacy programme. However, at the end of the third year, a new principal questioned the effectiveness of the literacy leader. The principal explained her concern like this:

"An effective teacher doesn't slavishly follow one programme, like … [the literacy leader] is doing. She should go to lots of different courses, then develop a programme to meet the needs of the children she is teaching. It should be a combination of many programmes. I have tried to get her to think about other ways of teaching, but she won't listen. She keeps saying she wants to do just this programme."

The principal used her belief in a mix of approaches, rather than impact on students, as her criterion for programme effectiveness. School A was the only school of the seven in which reading scores declined significantly between years two and three of the project. While the literacy leader was acutely aware of the decline, the principal was not, which raises

[284] Parr, Timperley, Reddish, Jesson, & Adams (2006), op. cit., p. 229.
[285] ibid.
[286] ibid.
[287] Timperley, H. S., & Wiseman, J. (2003). *The sustainability of professional development in literacy: Part 2. School-based factors associated with high student achievement.* Wellington: Ministry of Education. Retrieved from www.minedu.govt.nz/index.cfm?layout=document&documentid=8638&data=l

questions about the quality of their conversations. The literacy leader placed the blame at the door of the new principal:

"She keeps taking away our literacy [instructional] time. This term we've lost a third of our literacy time because she has organised other things [school events]. She doesn't respect it like … [the previous principal] did."

When the researcher followed up, the principal denied the accusation and there was no opportunity to verify what had led her to change the programme.

Leadership promotes collective responsibility and accountability for student achievement and well-being

A second quality associated with effective professional communities is that members collectively accept responsibility and accountability for student achievement and well-being. Timperley et al.[288] note the following about the relationship between professional community and teacher and student learning:

> Nearly every core study that described school-based professional communities reported greater collaboration among teachers and more collective responsibility for students. The focus on promoting student learning was, however, sometimes more implicit than explicit. Without such a focus, collaboration can become a sharing of 'war stories' instead of a means for improving the learning of students (p. 205).

If a professional community is to benefit students, not just teachers, it must foster teacher responsibility for student learning and experience. Some authors define collective responsibility as the extent to which a group of teachers takes responsibility for the success or failure of its own teaching[289]. The implication is that teachers have confidence in their ability to help all their students succeed—not just those who are more able and/or motivated. Statements from a scale that has been used to measure collective teacher responsibility are reproduced in Box 13.

Box 13. Statements from a scale designed to measure collective teacher responsibility

1. If a child doesn't learn something the first time, teachers will try another way.
2. Teachers in this school are skilled in various methods of teaching.
3. Teachers here are well prepared to teach the subjects they are assigned to teach.
4. Teachers in this school really believe every child can learn.
5. If a child doesn't want to learn, teachers here give up. (reverse scored)
6. Teachers here fail to reach some students because of poor teaching methods. (reverse scored)
7. Teachers here don't have the skills needed to produce meaningful student learning. (reverse scored)[290]

Other authors argue that collective responsibility is not just the sum of individual teachers' responsibility for their own students but also responsibility for all students in the school. Newmann says it is "a sense of responsibility, not only for one's own actions and students, but also for the actions of colleagues and other students in the school"[291]. While efficacy and responsibility are often thought of as characteristics of individual teachers, they can also be

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[288] Timperley, Wilson, Barrar, & Fung (2007), op. cit.

[289] Lee, V. E., & Smith, J. B. (1996). Collective responsibility for learning and its effects on gains in achievement for early secondary school students. *American Journal of Education, 104*(2), pp. 103–147.

[290] These items are from a 21-item scale found in Goddard, R. D., Hoy, W. K., & Hoy, A. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Educational Research Journal, 37*(2), pp. 479–507. p. 504.

[291] Newmann, F. (1994). *School-wide professional community: Issues in restructuring schools* (Issue Report No. 6). Madison,WI: Center on Organization and Restructuring of Schools, University of Wisconsin, p. 2.

characteristics of the normative environment of the whole school, a department, or a group of staff. There is an interaction between individual and collective responsibility because the responsibility that individual teachers feel is either attenuated or enhanced by the collective beliefs of their colleagues. Newmann describes the interaction as follows: "The assurance that one's colleagues share responsibility for all students helps to sustain each teacher's commitment"[292].

Increased collective responsibility and accountability for students implies a reduction in teacher autonomy. In several studies, teachers largely accepted this loss because with it came increased social and practical support for overcoming problems that were important to them. The social support was derived from the awareness that others were experiencing similar difficulties or had done so in the past. Teachers who had formerly struggled on their own now had the help of colleagues who understood what they were up against and who cared about succeeding. With shared goals, a shared professional development curriculum, and a shared language, colleagues could offer relevant and timely assistance. When teachers learn together, they move easily between the roles of observer/observed, coach/coached, and teacher/learner, depending on the distribution of expertise relevant to the task in hand. Such transitions are made easier by a shared professional development curriculum and leaders' expectations that teachers will help one another achieve common goals. The following quote is from a teacher in the Picking up the Pace initiative. New to her school, she experienced the support within her team and expectations that she would reflect on her own practice as novel sources of professional learning:

> As a team, we look at ourselves far more I think here, because I mean I have experience of teaching in junior levels at the other schools. We did look at the children's data, but we never looked at ourselves. This time we had to look at the way we were doing things and we were supporting each other. If I have problems with a particular child in my reading group, I can ask a colleague to have a look at what I'm doing or take a running record and we can have a look together at the processes the child uses (p. 93)[293].

In schools where teacher autonomy and private classroom practice are the norm, the development of collective responsibility can pose a considerable challenge for leaders. Several studies refer to the role of leadership in deprivatising teacher practice so that it can more readily be discussed and observed. A lead teacher in the Numeracy Project described[294] how school leadership encouraged "teachers not to lock themselves in their own classrooms. Here we have an open door policy where with good teaching practice we get teachers … to go into those rooms and actually observe. That's where they are going to pick up their good teaching practice" (p. 55).

Similarly, in a South Auckland literacy project, the external programme developer and facilitator talked directly to teachers about the need for a team approach. They discussed the role of the team in developing a common language, clarifying issues, supporting and sharing, and minimising the difficulties that could undermine the school's efforts[295].

Leaders can strengthen the sense of collective responsibility by the ways in which they organise activities and expect their teachers to work together. In Box 14, the literacy leader embeds expectations of collective responsibility in her handling of this discussion of under-achieving students[296].

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[292] ibid., p. 2.
[293] Timperley & Wiseman (2003), op. cit.
[294] Higgins, J. (2004). *An evaluation of the Advanced Numeracy Project.* Wellington: Ministry of Education.
[295] Phillips, G., McNaughton, S., & MacDonald, S. (2001). *Picking up the pace: Effective literacy interventions for accelerated progress over the transition into decile one schools* (Final report). Wellington: Ministry of Education. Retrieved from www.minedu.govt.nz/web/document/document_page.cfm?id=6444.
[296] Timperley & Wiseman (2003), op. cit., p. 87.

Box 14. Communicating an expectation of collective responsibility

A literacy leader in one of the more successful Picking up the Pace schools established norms of collective responsibility not by explicitly discussing teamwork but by communicating the expectation that it would happen. The following dialogue took place during a systematic discussion of every child who had been identified as reading books that were below the level of difficulty expected for their age.

Teacher:	I think those two are finding it hard with the level I had them on last time because they were on Level 9 so I put them down to Level 6 or lower than 6. Just up and down on those levels because I don't know what to do with them now. I'm having trouble with …
Literacy leader:	So you are asking for help?
Teacher:	Yes.
Literacy leader:	Do you want someone to observe you taking the book, or do you want to observe somebody [teaching], or do you want someone to look at the reading strategies in the whole process?
Teacher:	Maybe how I can help these two children with their book …
Literacy leader:	OK, so we need some help for you. Be thinking, team, about the kind of help that we may be able to offer.

The importance and power of collective responsibility

Leaders who are used to allowing teachers considerable autonomy and treating the classroom as a semi-private domain may question our emphasis on collective responsibility for student achievement and well-being. There are, however, good reasons for developing a sense of collective responsibility.

Firstly, reducing disparities in achievement requires teachers to teach differently. Figuring out what works better is a complex business, and teachers will often find they need to supplement their existing knowledge and expertise. Those who work together to solve teaching problems have more resources available to them than those who work alone.

Secondly, what a student learns in one class depends partly on what they have learned in others. Te Kotahitanga (see page 117) seeks to improve educational outcomes for Māori students in English-medium secondary schools by showing teachers how to develop relationships that recognise and affirm the identities of Māori students. Early evaluations suggest that Māori students are discriminating between teachers who have had Te Kotahitanga training and those who have not. It appears that they are becoming more critical of the latter, showing themselves to be "discerning consumers of education"[297]. Interviews reveal that students' encounters with Te Kotahitanga teachers are typically more positive than their encounters with other staff.

> Like in [another] class none of us get along with the teacher and none of us seem to be passing our tests. (School 7: group 1, 2005)
>
> There is no one that teaches like her that's why. (School 10: group 3, 2005)
>
> Yeah true, that's the one, 'cos it's dumb just passing in one class and failing in all the others. (School 4: group 2, 2005)[298]

Te Kotahitanga findings show that when students believe teachers are not giving the very best of themselves they tend to reciprocate by, for example, not regularly attending their classes and

[297] Bishop, R., Berryman, M., Cavanagh, T., Teddy, L., & Clapham, S. (2006). *Te Kotahitanga phase 3: Whanaungatanga: Establishing a culturally responsive pedagogy of relations in mainstream secondary school classrooms.* Wellington: Ministry of Education Research Division, Māori Education Research Institute, and Poutama Pounamu Research and Development Centre, p. 170.

[298] ibid., p. 171.

not making any real effort when they do. By accepting collective responsibility for students across all their classes, teachers can ensure that Māori students experience effective teaching in all learning areas, not just some.

Thirdly, collective responsibility provides an unobtrusive yet powerful form of professional accountability. Describing the qualities of effective professional communities, Kruse et al.[299] state that a strong collective focus on student learning is not enforced by rules, but by mutually felt obligations to standards of instruction and learning: "Instead of obeying bureaucratic rules, faculty members act according to professional behaviour and duty, which have been shown to be far stronger social control mechanisms" (p. 4).

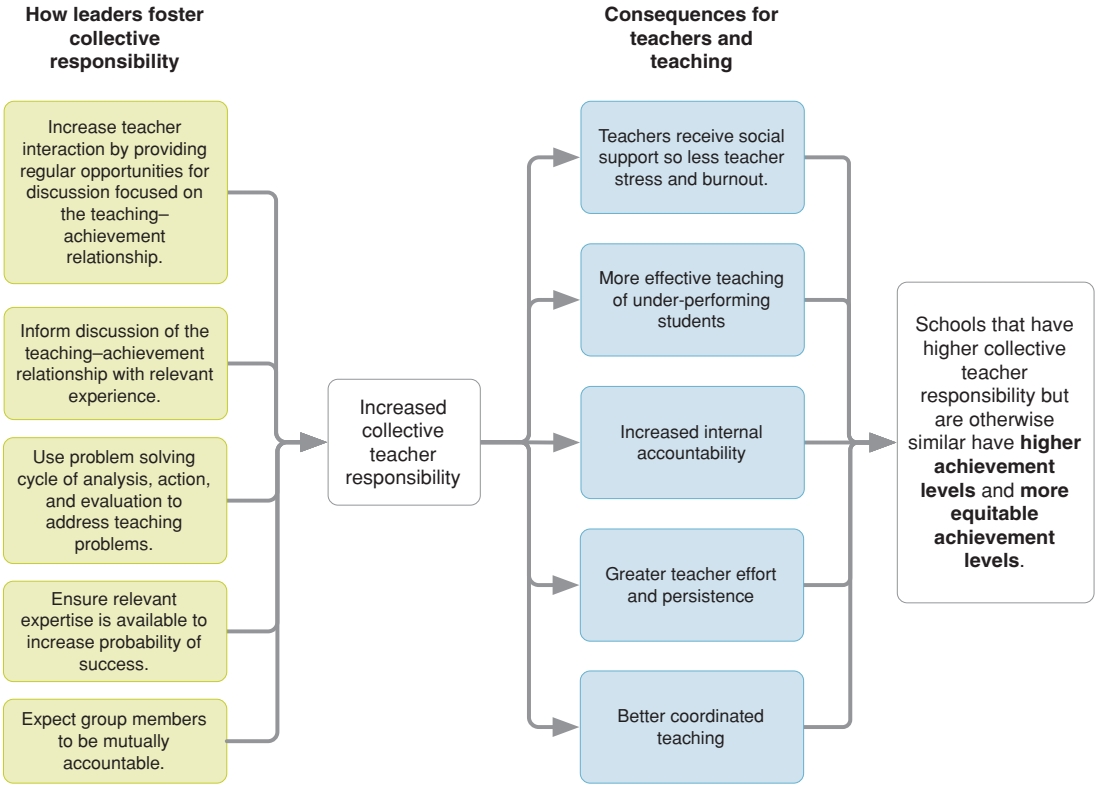

Figure 18. How does collective responsibility work?

Leaders need to know not only why collective responsibility is important but also how they can foster it. Goddard et al.[300] describe four sources of collective teacher efficacy and responsibility. Of these, the most important is mastery, which is achieved only after overcoming difficulties through persistence and effort. In other words, the more skilled teachers become at meeting teaching challenges, the more they accept personal responsibility for the success of their students. The authors conclude that school leaders can build mastery through well-designed professional development and action-research projects. Fortunately, we now know a great deal about the kind of teacher learning opportunities that increase teacher success with underachieving or alienated students. Some of these are listed in the left-hand column of Figure 18, which explains how leaders can foster collective responsibility for student achievement and well-being, and the positive benefits this brings for both teachers and students.

The most powerful way to increase collective responsibility for student learning is by increasing teachers' success with the students they find most difficult. The left-hand column in the figure

[299] Kruse, S., Louis, K. S., & Bryk, A. (1994). Building professional communities in schools. In *Issues in restructuring schools*. Issue report no. 6. Wisconsin-Madison: Center on Organization and Restructuring of Schools.

[300] Goddard, R. D., Hoy, W. K., & Hoy, A. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Educational Research Journal, 37*(2), pp. 479–507.

identifies five conditions that foster such success. The first and last of these have already been discussed. The remaining three reflect findings from the *Teacher Professional Learning and Development BES*[301]. The benefits of collective responsibility are summarised in the last two columns of the figure[302]. When teachers take collective responsibility for all students, teacher stress and burnout should be reduced because problems are shared and more help is available. When teachers work collectively to solve teaching problems, the differing points of view and greater expertise available should produce more effective solutions.

Two studies in particular have established the benefit for students of being in a school where the level of collective teacher responsibility is high. Both studies were conducted in the US: one in primary and one in secondary schools. The secondary school study hypothesised that where teachers took more responsibility for the results of their teaching, students would learn more—and that the effect would be apparent even after between-school differences in students and community had been accounted for. Over the two-year life of the study, the authors tested the relationship between level of collective teacher responsibility for student learning and student achievement in maths, reading, science, and history. The authors concluded, "Schools with a high level of collective responsibility for learning are those where students learn more in all subjects"[303]. Just as significant was the finding that such schools had a more even pattern of achievement across their students. In other words, high-responsibility secondary schools are "not only more effective but more equalising environments for students' learning where the learning of lower-socio-economic status students is similar to that of their higher-socio-economic status counterparts"[304].

The primary school study[305] came to very similar conclusions: once adjustments had been made for student and community characteristics, level of collective teacher responsibility explained from half to two-thirds of the variance in between-school achievement.

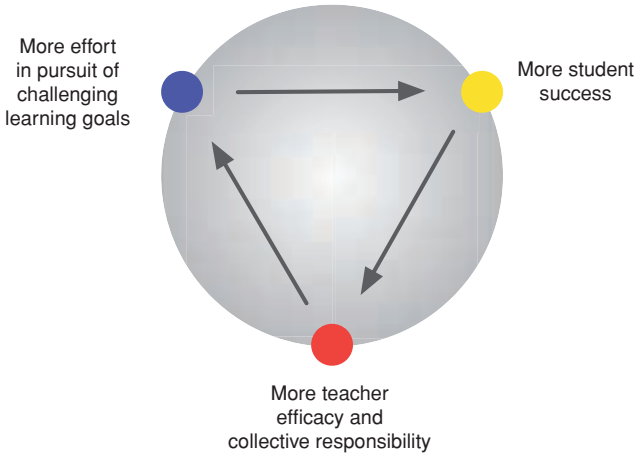

Figure 19. How collective responsibility creates a virtuous circle

By promoting effective teacher learning and establishing a culture of collective responsibility, leaders can turn a vicious cycle of teacher and student failure into a virtuous circle of mutually reinforcing success. Figure 19 shows how increased student success leads to greater teacher efficacy and collective responsibility, which inspires teachers to greater effort and persistence.

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[301] Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best evidence synthesis iteration (BES)*. Wellington: Ministry of Education.

[302] The consequences for teachers are derived from theoretical discussions of collective teacher efficacy rather than from empirical evidence. The consequences for students, however, are derived from two empirical studies:
Lee, V. E., & Smith, J. B. (1996). Collective responsibility for learning and its effects on gains in achievement for early secondary school students. *American Journal of Education, 104*(2), pp. 103–147.
Goddard, Hoy, & Hoy (2000), op. cit.

[303] Lee & Smith (1996), op. cit., p. 127.

[304] ibid., p. 129.

[305] Goddard, Hoy, & Hoy (2000), op. cit.

Teachers are willing to accept new challenges, which helps students achieve new levels of success.

Dimension E: Engaging in constructive problem talk

In order to build communities that learn, leaders may need to challenge and change well-established aspects of teacher culture. The evidence from New Zealand initiatives shows that leaders who engage in constructive problem talk are better able to help teachers make changes that benefit their students than those who avoid problem talk or who blame and invite defensive reactions. We have called this dimension 'Engaging in constructive problem talk' because it is about the ability to name, describe, and analyse problems in ways that reveal possibilities for change. Leaders who engage in constructive problem talk describe problems in ways that invite ownership and commitment. They are also able to respectfully examine the contribution that they and others might be making to the problem situation.

Our use of 'engage' in this context is significant because it signals that leaders need the ability to inquire into the theories behind the practices they wish to change. These theories, known as theories of action[306], describe the links between what people do, the beliefs and values that explain their actions, and the intended and unintended consequences. Theories of action are powerful determinants of current practice—indeed, teachers are unlikely to make changes that conflict with their current theories unless coerced to do so[307]. Leaders who engage with their colleagues' theories show them respect when they take the trouble to learn why they act as they do before recommending something different.

To engage in constructive problem talk, leaders must be able to:

- engage teachers' theories of action.

Leadership engages teachers' theories of action

Theories of action are powerful because they explain teachers' actions and act as filters through which change messages are interpreted[308]. If teachers believe their current practices are effective for teaching reading, for example, this belief will shape how they evaluate messages about alternative approaches. The research evidence shows the importance of engaging teachers' theories when the learning agenda is complex and/or challenges teachers' existing practice[309]. Once their beliefs have been made explicit, teachers can evaluate their worth in relation to the proposed alternative theory of action.

It is important to recognise, however, that this does not mean that leaders must personally inquire into the beliefs of everyone that they wish to influence. If this were the case, the notion of theory engagement would gain little purchase in such contexts as large schools, large-scale change, and policy development and implementation. Theory engagement requires in-depth understanding of the factors that sustain current practice and the challenges involved in changing it. This understanding may be gained directly by involving appropriate staff or more indirectly from research that reveals the relevant theories of action[310].

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306 Argyris, C., & Schön, D. (1974). *Theory in practice: Increasing professional effectiveness*. San Francisco, CA: Jossey-Bass.

307 Robinson, V. M. J. (1993). *Problem-based methodology: Research for the improvement of practice*. Oxford: Pergamon Press.

308 For international examples of the power of teachers' theories of action, see:
Coburn, C. E. (2001). Collective sensemaking about reading: How teachers mediate reading policy in their professional communities. *Educational Evaluation and Policy Analysis, 23*, pp. 145–170.
Spillane, J. P., Reiser, B. J., & Reimer, T. (2002). Policy implementation and cognition: Reframing and refocusing implementation research. *Review of Educational Research, 72*, pp. 387–431.

309 Timperley, Wilson, Barrar, & Fung (2007), op. cit.

310 For a more detailed account of theoretical engagement, see:
Robinson, V. M. J., & Walker, J. C. (1999). Theoretical privilege and researchers' contribution to educational change. In J. S. Gaffney & B. J. Askew (Eds.), *Stirring the waters: The influence of Marie Clay* (pp. 239–259). Portsmouth, NH: Heinemann.

Our advocacy of theory engagement as an important element in any major change process is based on the evidence we found in the New Zealand research: there are positive consequences for both staff relationships and student outcomes. For more on the leadership skills involved, see Chapter 8.

The upper model in Figure 20 treats engagement as a dialogue between two different theories of action. The objective is to make both the leader's theories and the teachers' theories explicit so that the participants can examine their relative merits and agree whether change is desirable. The dialogue may go through a number of iterations before agreement is reached about the relative merits of the teachers' current practice and the leader's proposed alternative and whether change is warranted.

The lower model shows an alternative change strategy, one that bypasses teachers' current theories of action. In this model, leaders focus only on their proposed alternative, persuading others of its merits and providing opportunities for them to learn the new practice. As shown in the diagram, the outcomes of such a strategy are not necessarily negative. Where there is little incompatibility between theories, teachers will often adopt the change agenda, elaborating or adapting their existing theory as necessary. But if there is incompatibility and this is not made explicit and worked through, the result is likely to be either compliance or resistance.

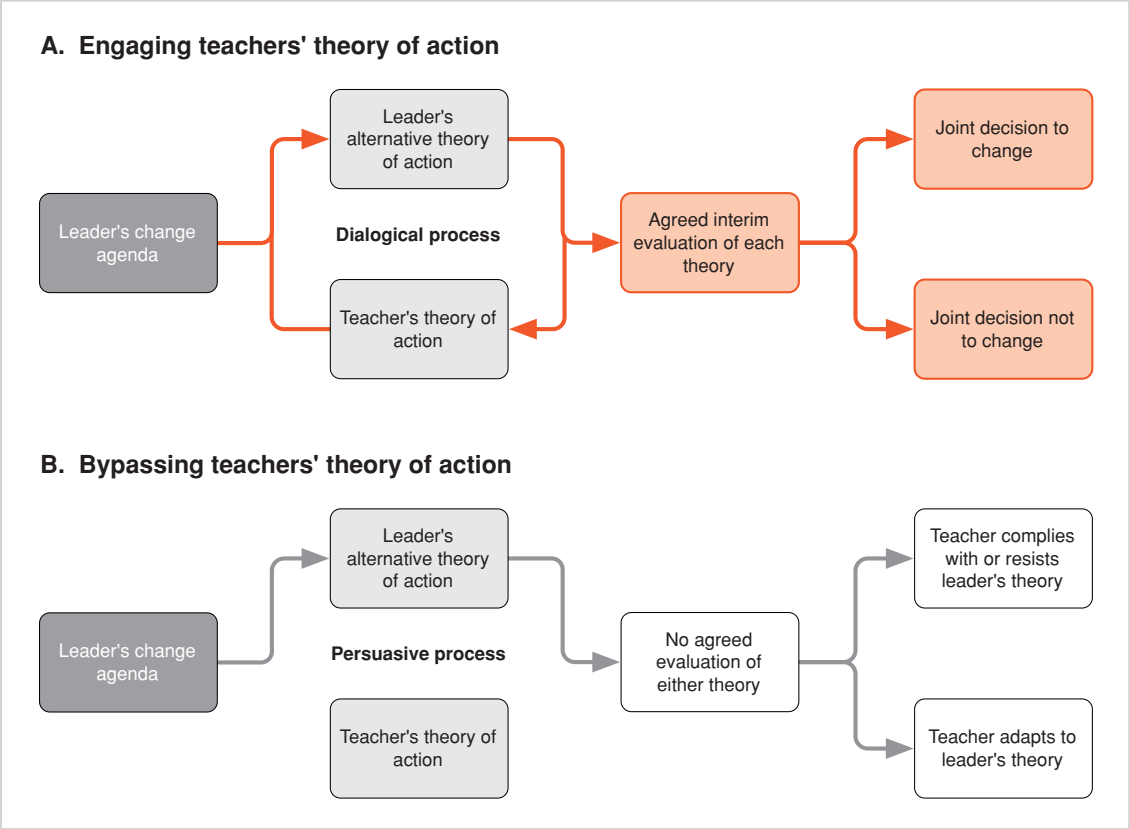

Figure 20. Two leadership responses to teachers' theories of action

In the remainder of this section, we provide examples of these alternative change strategies, drawn from the New Zealand evidence. The first (see Figure 21), which shows the power of engaging teachers' theories of action, is from a rural, decile 5 school involved in the national Literacy Professional Development Project (LPDP)[311]. The facilitator who worked with this school was explicit about her desire to teach the principal and literacy leaders the skills and knowledge they would need to continue the learning beyond the end of the project. The starting

[311] Parr, J., Timperley, H., Reddish, P., Jesson, R., & Adams, R. (2006). *Literacy Professional Development Project: Identifying effective teaching and professional development practices for enhanced student learning. Milestone 5* (Final report). Wellington: Learning Media, Chapter 8.

point was to introduce a process by which teachers could evaluate the way they taught writing; this ensured that everyone could discuss what, if anything, needed to change and why.

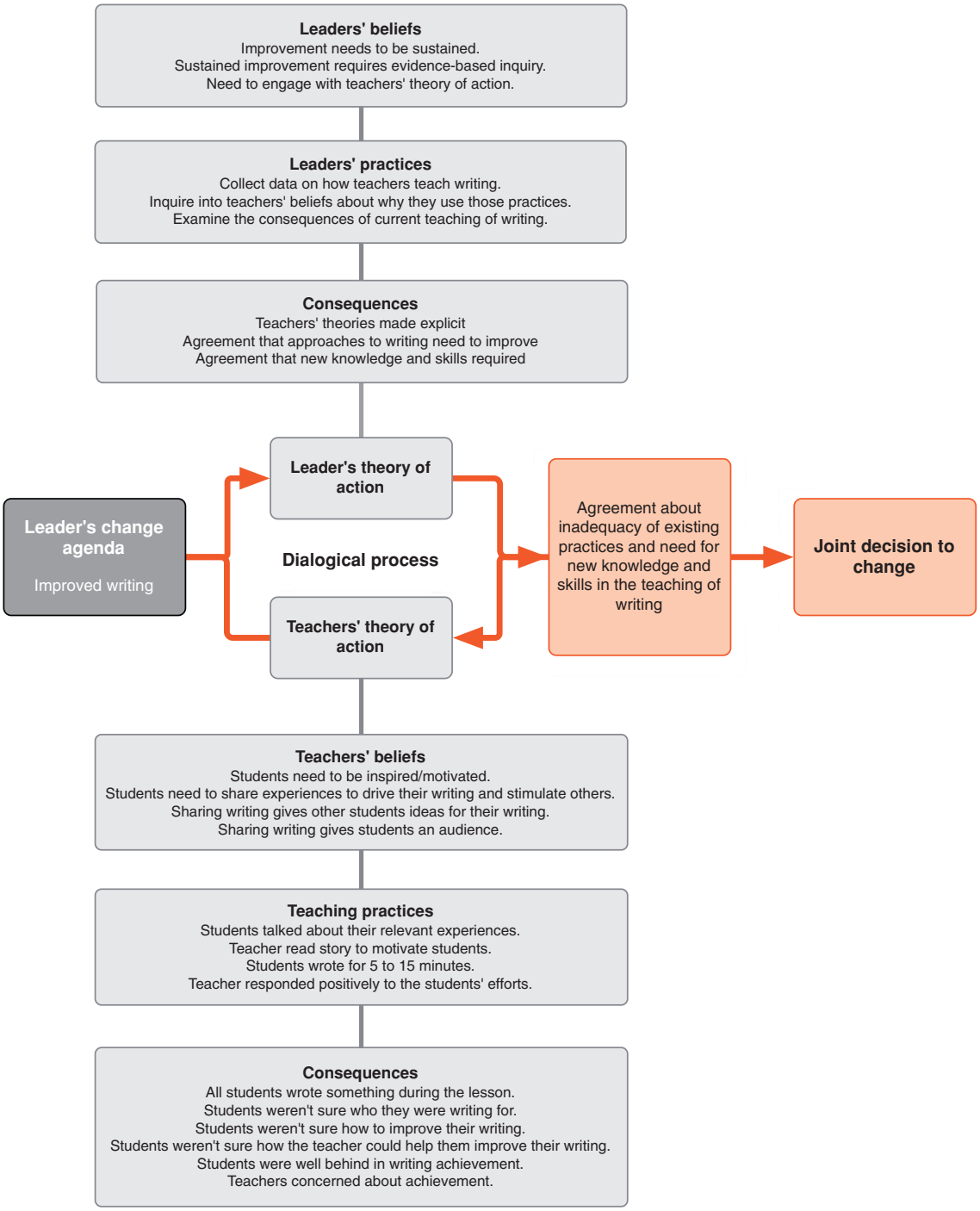

Figure 21. Teachers' theories of action for the teaching of writing

With the assistance of the university-based formative evaluators, the facilitator used a three-stage process for investigating the teachers' current theories on teaching writing. First, three teachers of years 2–6 were observed teaching a 45-minute lesson. (Prior to this, each had completed a form asking them to describe the aims of the lesson and how it fitted the current unit.) Second, a brief summary of the observations was posted in the staffroom.

In the attached box, the teachers were invited to describe the beliefs that had led them to teach the lesson in the way they had[312]. In essence, their descriptions showed that they believed the teaching of writing was primarily a motivational exercise. As a result, they spent considerably more time on motivating the students than on teaching them how to write or letting them write (Figure 21). Third, the consequences—intended and unintended—of the teachers' beliefs and practices were traced. An assessment of their writing showed that the students were well behind national norms. Several good writers and several poor writers from each class were interviewed. This revealed that they had limited understanding of lesson aims or success criteria, so they did not know how to regulate and improve their own performance.

The teachers had little difficulty agreeing that they needed to change their teaching practice because the analysis had exposed the unintended, negative consequences of their current theories. They could see how their beliefs and teaching practices were failing to achieve what they themselves wanted for their students. The alternative theory of action proposed by the facilitator was critical in helping the three teachers deliver more effective lessons. After they had learned more about writing and how to teach it, the teachers were able to formulate and communicate more precise learning intentions and success criteria, align their illustrations and explanations to the success criteria, and give their students feedback that was more focused. Just four months later, a repeat asTTle writing assessment showed that students at all levels had made significant gains. Moreover, both teachers and students reported much greater enjoyment from writing.

The next example illustrates the bypass strategy which, as we have explained, is less effective than engagement when an alternative theory of action is proposed that is incompatible with teachers' theories in some significant way. This example is drawn from the national Literacy Leadership (LL) initiative, which preceded the LPDP discussed in the first example[313]. The evaluation of the LL project revealed a considerable mismatch between the leaders' (policy makers') and teachers' theories of action[314]. Unlike the subsequent LPDP, the designers of the LL and the developers who took it into schools bypassed rather than engaged these theoretical differences.

The evaluators investigated these theoretical differences, interviewing all 19 national facilitators and a sample of staff from the most, somewhat, and least successful schools they had worked with: 28 principals, 28 literacy leaders, and 53 teachers. The evaluators asked them questions about their understanding of the purposes of the intervention, and about its implementation. Those interviewed were also presented with a scenario that tested their knowledge of the conditions that promote teacher learning about literacy. Official documents and resource materials developed for the LL initiative provided evidence of the policy makers' theory of action.

Table 10 compares these theories across three areas: the who and what of the change, the knowledge and skills required, and the desired outcomes and success criteria. Row 1 of the table shows that policy makers and practitioners had quite different understandings about who was the focus of the policy. Policy makers and facilitators were clear that the objective was to train principals and literacy leaders so they could work more effectively with their own staff, but none of the principals or literacy leaders saw themselves as the focus of the training. A similar mismatch is apparent in row 2: how change could be achieved. Policy makers and facilitators saw evidence-informed analysis of the impact of teaching as the catalyst, while practitioners believed the key was collaborative reflection on their teaching. Row 3 shows that there was also a significant difference in how the two groups understood the intended outcomes and the criteria by which success would be judged.

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[312] For a much more detailed discussion of methodology and methods for inquiry into and revising theories of action, see Robinson, V. M. J., & Lai, M. K. (2006). *Practitioner research for educators: A guide to improving classrooms and schools*. Thousand Oaks, CA: Corwin Press.

[313] For an account of the Literacy Leadership initiative see Ministry of Education (2000). *Literacy leadership in New Zealand schools*. Wellington: Learning Media.

[314] Timperley, H. S., & Parr, J. M. (2005). Theory competition and the process of change. *Journal of Educational Change, 6*, pp. 227–251.

Table 10. Policy makers' and practitioners' theories about the purpose of the Literacy Leadership initiative

Aspect of theory	Theory of policy makers (Ministry of Education)	Theory of practitioners (Principals, literacy leaders, and teachers)
Who and what is the focus of the policy?	Principals and literacy leaders are the focus of the policy. Leaders need to become more data-based and learning-centred.	The focus of the policy is teachers and their students.
What is needed to achieve the change?	Principals and literacy leaders need to develop skills in collecting, analysing, and using student achievement information through participating in action-research projects.	No new leadership skills are required. Teachers need more opportunities to collaboratively reflect on their teaching.
What are the desired outcomes and success criteria?	Leaders are more outcomes-focused in their efforts to help staff improve teaching and learning. Improved student achievement in literacy.	Teachers become more focused on teaching and collaboration.[315]

The literacy leaders' change strategy was to bypass rather than engage these theoretical differences. By doing so, they contributed to the failure of the three-year project to achieve either of its two goals: there was no change in mean reading level or word recognition scores for year 1 students and there was little evidence that literacy leadership had become learning centred. This latter failure was due in part to the fact that the 19 national facilitators had not communicated the goal to the very people who were meant to be doing the learning—the principals and literacy leaders.

The problem with the theoretical differences summarised in Table 10 is not that they existed but that they were never explicitly identified and addressed during the three years of the project. The evaluators provide no direct evidence to explain why, but they suggest that the facilitators may not have been aware of the significance of the differences or known how to address them. Policy leadership was also lacking in that assumptions made about the capacity of schools to implement new policy were not properly tested.

Dimension F: Selecting, developing, and using smart tools

When people think of leadership, they typically visualise face-to-face interaction. Leadership, however, is not only an interpersonal activity. It is also exercised in impersonal ways as leaders shape the situations in which people learn how to do their jobs[316]. One of the most powerful means for doing this—observed in a number of the studies reviewed for this chapter—is to develop or introduce tools and associated routines that assist teacher learning.

Spillane defines tools as "externalised representations of ideas that people use in their practice"[317]. The use of the word 'ideas' captures the fact that tools incorporate useful knowledge that can help teachers improve their practice in relation to a specific task. The asTTle assessment tools, for example, incorporate a great deal of knowledge about developmental progressions. It is not necessary, therefore, for every New Zealand teacher to be a psychometric specialist: much of the knowledge they need to reliably and validly assess their students and determine

[315] The table is adapted from Timperley & Parr (2005), ibid., p. 239.
[316] Spillane, J. P., Reiser, B. J., & Reimer, T. (2002). Policy implementation and cognition: Reframing and refocusing implementation research. *Review of Educational Research, 72*, pp. 387–431.
[317] Spillane, J. P. (2006). *Distributed leadership*. San Francisco, CA: Jossey-Bass. p. 18.

next teaching steps is built into this formative assessment tool. It shapes their practice by helping them match their teaching to the learning needs of their students.

'Tool' is a concept that can cover everything from whiteboards to classroom furniture to software for tracking assessment data and attendance, to policy documents and report forms. In this section, however, we limit ourselves to tools for which we have some direct or indirect evidence showing how they can assist in improving teaching and learning.

The tools and associated routines that shape the work of teachers originate at different levels of the education system. School leaders may either develop their own tools or import them ready-made from other schools, researchers, suppliers, or policy makers. They may also inherit tools and associated routines from previous administrations[318]. Tools developed at one level of the system are often intended to shape those developed at another. In New Zealand's self-managing system, national policy often provides space for schools to develop their own policy within a broad national framework.

For leaders, it is not just a matter of selecting or developing tools but of ensuring that any tools they introduce—together with the associated routines—assist the users to achieve the intended purposes. We call tools that meet this criterion smart tools. For example, if the purpose of formal reporting is to give parents accurate information about their child's progress and to do so in a manner that strengthens the teacher–parent–child partnership, then reports should have certain qualities. The information they contain should be accurate and benchmarked so parents can interpret it. They should provide feedback on social and academic outcomes that parents care about. There is evidence that many of the portfolios and traditional-style reports that go home to parents lack some of these qualities[319]. The distinction between tools and smart tools is critical because, as we shall see, there have been instances where teachers have aligned their activities to tools that lacked the qualities needed to help them achieve the intended purposes.

It follows from our definition that the qualities that make a tool smart vary, depending on the task. For example, a good report form and a good school policy on reporting will have quite different qualities because they serve different purposes. They will nevertheless share two characteristics: both will incorporate valid theories of the tasks for which they were designed and both will be well designed.

Smart tools:

- incorporate sound theories;
- are well-designed.

Leadership selects tools that incorporate sound theories

Tools are not just forms, policies, or software: each incorporates a theory about how the purpose in hand can best be accomplished. For example, the purpose of the Numeracy Project is to "improve student performance in mathematics through improving the professional capability of teachers"[320]. Two tools have been designed to further this purpose. The first is the Number Framework, which sets out the progressions students go through as they gain understanding of number; the second is the Numeracy Project Assessment Tool (NuMPA), which teachers use

[318] For an introduction to tools and their role in distributed leadership, see Spillane, J. (2006). *Distributed leadership*. San Francisco, CA: Jossey-Bass.

[319] Evidence about how New Zealand primary schools report to parents is found in:
Robinson, V. M. J., & Timperley, H. S. (2000). The link between accountability and improvement: The case of reporting to parents. *Peabody Journal of Education, 75*(4), pp. 66–89 and in:
Timperley, H. S., & Robinson, V. M. J. (2004). O le Tala ia Lita—Lita's Story: The challenge of reporting achievement to parents. *New Zealand Journal of Educational Studies, 39*, pp. 91–112. Some more recent evidence on portfolio reporting is found in:
Thomas, P. J. (2003). *Reporting student achievement through portfolios: Teacher practice and parental reaction.* University of Auckland.

[320] Ministry of Education (2004). *Book 1: The Number Framework*. Wellington: Author. p. 1.

to assess where students are on the Framework. Both tools incorporate a theory of the nature of mathematics, the development of mathematical understanding, and mathematical pedagogy. A tool is only as good as the theory it incorporates. For this reason, leaders need to check the validity of the theories incorporated in tools that shape how teachers teach.

A tool that is smart for the teaching of one group of students may not turn out to be smart when used with another group. For example, a theory of language progression that is valid for teaching reading in English-medium classrooms may not be valid for Māori-medium classrooms. Smart tools for Māori-medium classes will recognise that teaching and learning is taking place in the context of language regeneration: students (and teachers too) bring with them very different levels of skill in te reo Māori and very different learning experiences. To assist teachers, Rau et al.[321] have developed He Ara Angitu, a tool for assessing the reading achievement of Māori-medium students in their first 18 months at school. This tool accounts for differences in language development, making it easier to develop clear profiles and realistic expectations.

Tools such as asTTle and He Ara Angitu need considerable investment in research and development before they are deemed fit for the purpose. The theoretical and practical knowledge built into them has been subject to extensive scrutiny by both practitioners and researchers[322]. Tools that are purpose-built by schools don't need high levels of research and development, but leaders still need to ask if they incorporate valid theories. For example, when developing a new checklist for classroom observations, it is important to consider how effectively it captures teaching practices that evidence-based research has shown to impact positively on student outcomes. If the theory incorporated in a tool has low validity, then it will not help teachers achieve the intended purpose, regardless of how conscientiously they use it.

Generally speaking, the tools used in successful teacher-learning projects are valid because they reflect the evidence about how teachers learn to improve student achievement. These tools have two features that stand out: they define levels of good practice and they structure how data relating to teacher skill, knowledge, and performance are collected and evaluated. For example, as part of the Assess to Learn (AToL) project, Absolum[323] developed a four-by-six matrix that defines excellence in formative assessment in terms of six competencies, each with four levels of expertise (standards). By defining and incorporating standards, tools translate abstract purposes/goals into concrete explanations/illustrations of what is required.

Table 11. A smart tool for formative assessment

Competency 5: Active reflection[324]	
Stage 1	**Stage 4**
Teacher reflection occurs independently of students, can be divorced from good assessment information about outcomes or process, and often centres on surface features of the lesson or enjoyment. Teacher regularly asks students to share work at the end of a lesson and discussion often centres on surface features.	Both teachers and students routinely reflect, and talk reflectively, about what is intended to be learnt, where they have got to, and where they will go next. They also routinely reflect about the learning process. This may often be seen as a formal plenary session, or a learning diary or peer reflection, or student conference.

[321] Rau, C., Whiu, I., Thomson, H., Glynn, T., and Milroy, W. (2001). *He Ara Angitu: A description of success in reading for five-year-old Māori-medium students*. Wellington: Ministry of Education.

[322] Higgins, J. (with Parsons, R., & Hyland, M). (2002). The numeracy development project: Policy to practice. In I. Livingstone (Ed.), *New Zealand Annual Review of Education, 12*.

[323] Absolum (2004b). *ATOL programme 2004* (Report prepared for company purposes only). Auckland: Evaluation Associates.

[324] Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best evidence synthesis iteration*. Wellington: Ministry of Education. From Case 4: Using assessment to build teaching capability.

Table 11 shows the least- and most-advanced standards used to assess Absolum's fifth competency, active reflection. Teachers can use Absolum's matrix tool to see exactly what is meant by formative assessment—and what is involved in becoming more expert.

The Numeracy Project's Number Framework also describes a developmental progression, but this tool was designed in the first place to promote teacher learning. Teachers greatly value it because it brings structure to their understanding of how students develop number sense and learn to reason mathematically:

> Facilitator: When we present them with the Framework it is without doubt the most powerful [time]. They get this enormous sense of knowing that they are going to know where the students are, they are going to know where they have been and where to take them next … they have never had that—knowing where from and where to (p. 49)[325].

When evaluative tools do not come with well-defined standards, users are likely to struggle to make intelligent use of the information they offer. A study of parent responses to student portfolios found that, in the absence of benchmarks, some parents could not tell how well their child was doing at school. For these parents, the portfolio was not a smart tool because it lacked the very information they needed to effectively use it[326].

A tool developed for the Te Kotahitanga programme, PSIRPEG, incorporates standards designed to help teachers implement the pedagogy they have learned in professional development. Teachers focus on *planning* that uses *strategies* for more effective teaching and learning *interactions*, which in turn develop into caring and learning relationships, reinforcing teachers' *positioning* or capability to bring about positive changes in Māori students' educational *experiences*, thus promoting the *goal* of raising their achievement[327].

The power of tools that enable staff to evaluate their own and their students' performance against explicit standards is well illustrated by the wedge graph used in connection with year 1 literacy. This tool was developed by an independent professional developer as part of her work with an early literacy initiative (AUSAD) in Mangere and Otara schools[328]. See Figure 22 for a sample graph.

The graph plots the reading levels of the children in three year 1 classes against the number of weeks they have been at school. The angled lines that form the wedge represent the upper and lower boundaries of expected achievement, given the number of weeks the children have been enrolled at school. It is immediately clear from the graph which students are reading above, at, or below the expected level. The graph is a smart tool because it has features that can promote discussion of the teaching–achievement relationship—one of the characteristics of professional communities that are focused on enhancing student success. Those features include: recording the achievement of each child (not just class mean), providing benchmarks that enable ready interpretation of achievement, and identifying each child's teacher. As discussed in Box 15, Timperley et al.[329] found that the graph, routinely used by the junior school teachers in their regular meetings, gave focus and urgency to the goal of raising their students' reading achievement.

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[325] Higgins, J. (2004). An evaluation of the Advanced Numeracy Project 2003. Wellington: Ministry of Education.

[326] Thomas, P. (2003), op. cit.

[327] Bishop, R., Berryman, M., Cavanagh, T., Teddy, L., & Clapham, S. (2006). *Te Kotahitanga phase 3: Whānaungatanga: Establishing a culturally responsive pedagogy of relations in mainstream secondary school classrooms.* Wellington: Ministry of Education Research Division and Poutama Pounamu Research and Development Centre. p. 49.

[328] Timperley, H., Smith, L., Parr, J., Portway, J., Mirams, S., Clark, S., et al. (2004). *Analysis and use of student achievement data (AUSAD)* (Final evaluation report prepared for the Ministry of Education). Wellington: Ministry of Education.

[329] ibid.

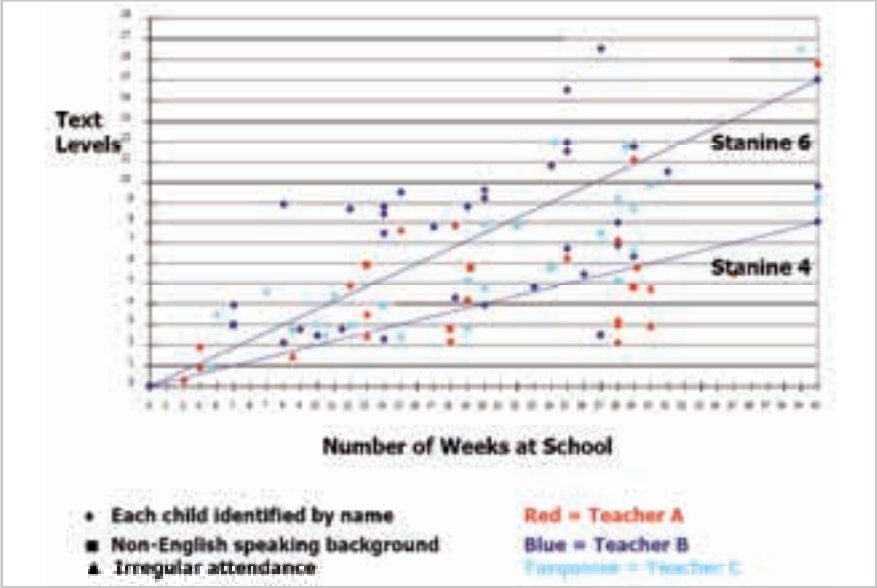

Figure 22. Year 1 reading graph

Box 15. The wedge graph: a smart tool

When interviewed about the wedge graph, teachers told researchers about four ways in which it helped them improve their teaching.

1. One interviewer challenged a teacher to explain how marks on a graph could help her teaching:

Interviewer: They're only marks on a chart. Those little crosses—they don't tell you how to teach.

Teacher: The teacher knows the children, so you're basically linking the graph and what you know about your children. Do you know what I mean? It will be different for you because you're looking at it from a different angle: you're looking at it as crosses. But for me as a teacher and my class, I'm linking the crosses to children. Although L's at red, I know he's going to be moving faster than the other two in the group …

2. The graph helped teachers preserve information about individuals while putting it in the context of other children and age-related benchmarks:

Teacher: We had always graphed the children individually, but this [the wedge graph] was a matter of actually seeing it in front of you and then tallying it up together as a syndicate and then tying it all in together. I think that was a really good push because we could see where the children were actually achieving every five weeks. If we found they were underachieving then we could all get together and discuss what's happening and how we can improve. Whereas if we hadn't plotted them on the wedge graph we would have no way of knowing in relation to all the others in the syndicate how they were doing …

3. The graph was a powerful aid to memory, storing a lot of complex information in a single, simple visual representation:

Teacher: One of the surprises when we first started looking at the graph was how long some of the children had been at school. I think in your room, you don't focus on that really. They're just your class and you sort of forget, 'Well, hey, this one has been here quite a long time.'

4. The tool had valuable routines associated with its use. The junior school leadership used the graph at regular, structured meetings where teachers learned to take collective

responsibility for improving student achievement. The very regularity of these discussions helped keep teachers' efforts sharply focused:

> Teacher: Well I keep saying the word focus … If you don't have that focus, well then another five weeks goes by and things can crop up, like you can do some folk dancing and a marvellous unit on this, and we did this and this. Now we know that every five weeks we are doing the wedge graph, and you don't let reading go. You let other things go, but you don't let that go … I would like to think accountability was intrinsic, but it used to be getting through the day, keeping the room tidy, having a quiet class. At the end of the day, we would go out of the classroom not necessarily thinking 'What have I done today that has helped them to learn to read?' You would go home with a warm fuzzy feeling. 'Oh that was a good day. Maybe I will do some more of that tomorrow.' I think the focus has come right back to 'What have I done today and who is moving and who isn't moving and why aren't they moving?' That is what you are taking home in your head.

In summary, the wedge graph was a smart tool because it incorporated a sound theory about the conditions conducive to teacher learning. By identifying who was teaching who, it enabled teachers to focus on the teaching–learning relationship and to locate expertise. By incorporating standards for student achievement, it enabled teachers to evaluate progress. It was not, however, the tool itself that created teacher learning and student improvement; it was how the tool was integrated into routine professional learning with a focus on improving specific student outcomes.

The above are examples of tools that incorporate theories that are consistent with the best evidence about how to achieve the intended purpose. By way of contrast, we now describe a tool that incorporates a questionable theory: the national policy on teacher appraisal. This tool has powerfully shaped the appraisal policies and practices of our schools[330].

Table 12. The theory implicit in national and teacher appraisal policies and processes

	National appraisal policy	School-based appraisal policies[331]
Appraisal goals	The stated goal is to improve the quality of teaching and therefore learning[332].	70% of the purpose statements in school appraisal policies referred to the improvement of teaching. 15% referred to student learning.
Strategies for achieving appraisal goals	Evaluate teachers against performance expectations including national professional standards and role responsibilities. Professional standards include 24 performance indicators. Indicators describe preferred aspects of teaching style. None of the performance indicators requires inquiry into the teaching–achievement relationship[333].	Schools included an average of 46 performance indicators in their policies. Only 3% of indicators promoted inquiry into student learning. 1 in 11 teachers reported discussing student learning in their appraisals. 4.5% of teachers' appraisal goals were about student learning. The great majority of topics discussed during appraisal were about aspects of teaching that were not connected to student learning and achievement.

[330] The material summarised here is developed more fully in Case 1: Leading teacher appraisal.

[331] The material in the right-hand column of Table 12 is based on Sinnema, C. & Robinson, V. M. J. (2007). The leadership of teaching and learning: Implications for teacher evaluation. *Leadership and Policy in Schools, 6*(4), pp. 1–25.

[332] Ministry of Education (1997). Performance management systems: PMS1: Performance appraisal. *The Education Gazette* (10 February supplement).

[333] Ministry of Education (1998). *Teacher performance management: Primary school teachers, primary school deputy/assistant principals: A resource for boards of trustees, principals, and teachers*. Wellington: Author.

Consequences of appraisal policy	Policy encourages schools to monitor what teachers are doing rather than what students are experiencing and learning. The theory of appraisal incorporated in the policy assumes that if teachers perform in certain ways, then students will inevitably benefit.	Schools' appraisal policies and procedures are aligned with the theory in the national policy. School leaders do not use appraisal as an opportunity to inquire into and strengthen the impact of teaching on student learning.

Table 12 shows how closely a sample of 17 Auckland primary schools followed the national policy guidelines when crafting their own policies and procedures. Although closely aligned, neither national nor school policies are likely to achieve their intended goal because they incorporate a faulty theory of effective teaching—one that is based on conformity to a particular teaching style, not on evidence-based and situated inquiry into the impact of teaching on student learning.

Leadership selects tools that are well designed

We turn now from the theories (implicit or explicit) that are incorporated in tools to the design of tools. Smart tools are designed in ways that make them easy to understand and use. The wedge graph discussed earlier has design features that teachers value. For example, they can see at a glance how long each year 1 child has been at school; this information is of critical importance when organising reading programmes.

Another New Zealand study[334] focuses on the national social studies curriculum and provides even richer insights into how tool design helps or hinders teacher learning and practice. In discussions of curriculum implementation, it is routine to ascribe faulty implementation to resourcing issues or the capacity of those responsible[335]. This study suggests that there may be another explanation: the design of the curriculum. By curriculum design, the author means the "way in which [curriculum elements, including purposes, intended learning outcomes, and recommended teaching and assessment approaches] are arranged and expressed in formal written policy statements of learning intentions mandated by central government" (p. 13)[336]. The study uses design criteria derived from sense-making and cognitive load theory to argue that the 1997 national social studies curriculum document has many features that make it difficult to understand and use.

Research on sense making shows that how teachers interpret policy documents is strongly influenced by their prior understandings and by the norms and understandings that prevail in their current work environment[337]. New policies need to connect with (rather than bypass) existing understandings and theories, making explicit the ways in which the new policy is similar to and different from the old. This is why it is important, when formulating policy, not only to gain stakeholder agreement with the proposed policy but also to inquire repeatedly and thoroughly whether it is understood. The proposed policy can then be revised in ways that increase the chances both of acceptance and faithful implementation.

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[334] Aitken, G. (2005). *Curriculum design in New Zealand social studies: Learning from the past.* Unpublished doctoral thesis, University of Auckland. p. 13.

[335] Coburn, C. E. (2001). Collective sensemaking about reading: How teachers mediate reading policy in their professional communities. *Educational Evaluation and Policy Analysis, 23*, pp. 145–170.
McLaughlin, M. W., & Mitra, D. (2001). Theory-based change and change-based theory: Going deeper, going broader. *Journal of Educational Change, 2*(4), pp. 301–323.

[336] ibid.

[337] For the key ideas on sense making in relation to policy, see:
Spillane, J. P., Reiser, B. J., & Reimer, T. (2002). Policy implementation and cognition: Reframing and refocusing implementation research. *Review of Educational Research, 72*, pp. 387–431.
Spillane, J. P. (2004). *Standards deviation: How schools misunderstand education policy*. Cambridge, MA: Harvard University Press.

Cognitive load theory[338], the second theoretical underpinning of a smart tool, describes how the limits of working memory are challenged by the amount and complexity of information present in any given task. It also offers research-based suggestions for reducing cognitive load by the ways tasks are presented. This chapter is not the place to elaborate these two theories, but Table 13 gives one example of what they offer in the way of criteria for smart tool design and how these criteria can be used to evaluate the design of a policy.

Table 13. Some criteria for the design of smart tools, and their application to the 1997 social studies curriculum

Design criteria	Rationale for criteria	Application to 1997 social studies curriculum[339]
Clearly explains the rationale for change.	Draws attention to the underlying purposes to counteract the tendency to attend only to surface features of policy.	The national curriculum includes 44 separate statements with no integrative discussion, leaving it up to implementing agents to work out the central purpose.
Acknowledges the existing understandings of implementing agents and integrates them into the new document.	Helps teachers make links to prior understandings and reduces perceptions that the change may be disruptive and overly demanding.	There is no acknowledgment in the document itself of the substantial shift from progression by topic to progression by specified learning outcomes and of what this might mean for teachers. (This shift is, however, acknowledged in subsequent handbooks.)
Incorporates misconception alerts.	Counters possible over-assimilation by indicating how the new policy differs from prior or taken-for-granted understandings; indicates what the policy both is and is not.	The difference between the previous focus on people and the new focus on society was neither made explicit nor explained.
Abstract principles are clearly connected to spatially contiguous detail and examples.	Embeds principles in details that teachers are most likely to attend to.	Examples illustrating how the achievement objectives might be met were removed from document in its draft stage due to political pressures.
The document is logically structured around a clear and unambiguous purpose.	Settling on a clear purpose makes the development process more difficult but is essential for coherence and reducing the cognitive load involved in trying to implement disparate and potentially contradictory elements.	Internal contradictions in design; for example, the attempt to develop progressions within the three learning processes rather than through integration with progressively more difficult content.

[338] Key references on cognitive load theory are:
Mayer, R. & Moreno, R. (2003). Nine ways to reduce cognitive load in multimedia learning. *Educational Psychologist, 38*(1), pp. 43–52.
Paas, F., Renkl, A., & Sweller, J. (2003). Cognitive load theory and instructional design: Recent developments. *Educational Psychologist, 38*(1), pp. 1–4.

[339] These are illustrative examples only. For a more complete evaluation of the 1997 curriculum see Aitken (2005), op. cit, chapters 4–6. The social studies curriculum has now been revised and forms part of *The New Zealand Curriculum* (2007). Ministry of Education: Wellington.

Maximises internal coherence and minimises complexity.	Working memory poses severe limits on teachers' ability to understand and integrate multiple, interacting elements of a policy. Complexity is reduced by fewer elements and by giving examples of how competing elements might be integrated.	A complexity analysis shows that, to faithfully implement the curriculum, teachers teaching the concept 'national identity' need to consider[340]: 3 learning processes (including 12 component processes); 2 levels of achievement; 6 perspective statements; 7 essential learning statements; 4 disciplines; 11 concepts; 3 indicators of achievement.
The document supports understanding through the use of charts and diagrams that are aligned with, and make explicit connections to, the text.	Clarifies meaning through alternative (visual as well as verbal) forms of representation.	Three diagrams are used to represent the relationships between the various curriculum elements. These diagrams are misaligned in that they include different content, present it in different orders, and suggest different relationships[341].

Given the power of tools to shape the practice of the nation's teachers, critical questions arise about the processes by which they are developed and validated at national and school level. These questions, which require research, include:

1. What research-and-development expertise and investment is required to develop an effective tool of a particular type?
2. How can that expertise be made available to developers of tools?
3. Given the answers to 1 and 2 above, whose responsibility is it to lead the development of tools?

6.3 Summary

In this chapter, we examined two groups of research studies set in New Zealand schools for evidence of how leadership can contribute to improved student outcomes. Using a backward mapping strategy, we identified six leadership dimensions. Four of these share similarities with the dimensions already identified using our forward mapping strategy (see Chapter 5). These four focus on the roles leaders play in goal setting, resourcing, teacher learning, and problem talk. Goal setting was a function that had particular significance for Māori-medium schools, where it was important that goals were linked to the wider purposes of language and cultural regeneration.

As can be seen from Figure 23, two additional dimensions emerged from this body of research. The first was the role that leaders play in creating educationally powerful connections. Such connections facilitate continuities for students: between their identities and school practices, across different parts of the teaching programme, and between educational settings. While effective relationships are fundamental to all the dimensions discussed in this chapter, they are particularly vital when it comes to developing educationally powerfully connections.

The other additional dimension relates to the selection, development, and use of smart tools. Smart tools promote teacher learning about how to promote student learning. They incorporate

[340] Aitken (2005), op. cit., fig. 14, p. 151.
[341] ibid., pp. 131–133.

valid theories concerning the activity they are intended to support and are designed in ways that make them easy to understand and use.

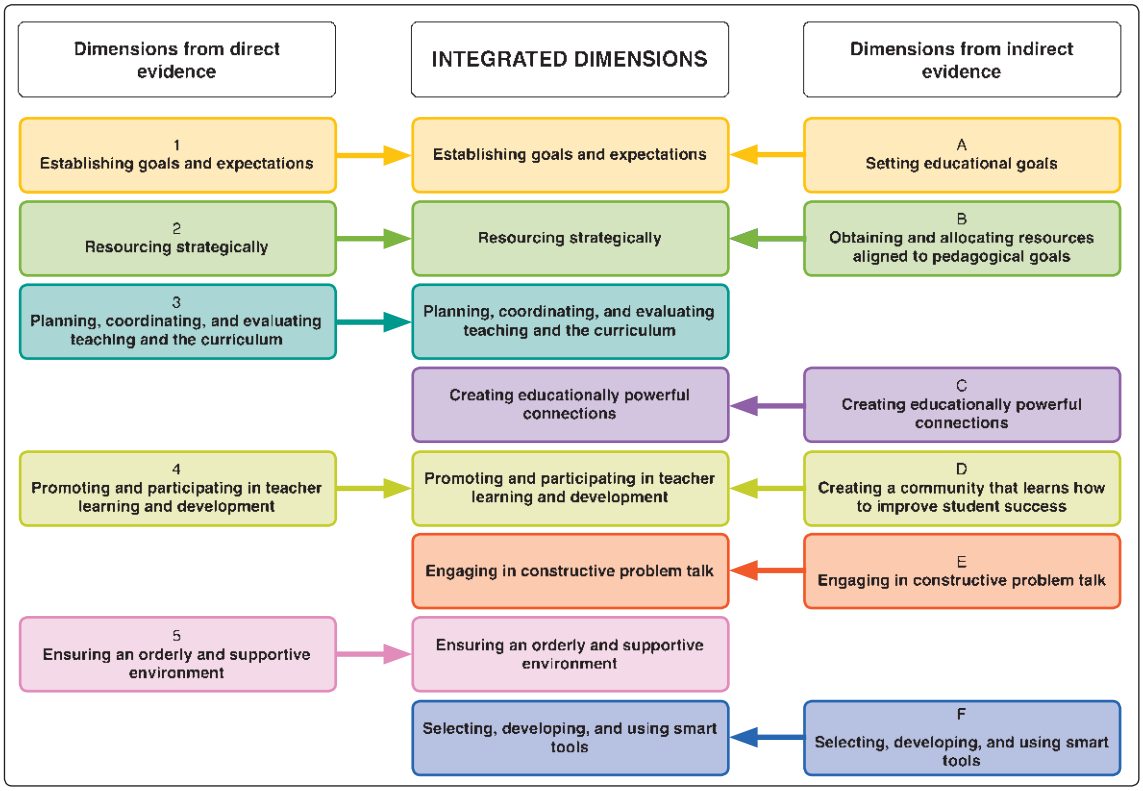

Figure 23. An integration of the dimensions from direct and indirect evidence

The dimensions discussed in this chapter should not be viewed as a checklist but as aspects of the leadership landscape. All should be kept constantly in view but, at any given time, the focus is likely to be on particular ones as specific problems or conditions are encountered and must be dealt with.

7. Creating educationally powerful connections with family, whānau, and communities[342]

What kinds of connections are most educationally powerful? There are three reasons why the answer to this question is of particular importance for school leaders:

First, such connections have the potential to enhance outcomes for all students, especially those who have been under-served or are at risk. This chapter shows that certain kinds of school–family connections and interventions can have large positive effects on the academic and social outcomes of students.

Second, some kinds of engagement with families[343] and communities can be counterproductive. Schools can invest considerable time, energy, and resources in activities that end up having minimal or even negative impact on student outcomes.[344] It is important that school leaders promote engagement that is effective.

Third, by establishing educationally powerful connections, leaders gain access to a greater range and depth of resources to support the work of their schools.

In this chapter, we address two key questions:

- What kinds of connections make the biggest difference?
- How can school leaders build educationally powerful connections with families, whānau, and communities?

A summary of the chapter is provided in Section 7.9.

7.1 Methodology

Only two of the 27 studies[345] used to derive the leadership dimensions reported in Chapter 5 investigated the impact of leadership practices with a focus on school–community relationships[346]. While there was marked variability in the findings of these two studies, ranging from a negative effect to a large positive effect, the average effect for this type of leadership was .28—comparable to the .27 effect for the dimension 'Ensuring an orderly and supportive environment'. This suggests that it matters that leaders play a role in establishing connections with families—and that it matters how they go about doing this.

Given the scarcity of leadership studies on the impact of school–home connections, we turned to the broader literature on school–community relationships, including the *Community and Family Influences BES*[347], to generate the meta-analysis that informs this chapter. The purpose of the meta-analysis was to identify the relative impact of various types of school–home linkages on the social and academic outcomes of students.

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[342] This chapter was authored by Adrienne Alton-Lee, Viviane Robinson, Margie Hohepa, and Claire Lloyd.

[343] The terms 'family' and 'parent' are often used interchangeably in this chapter and should be understood to include parents and step-parents, grandparents, siblings, uncles and aunties, and others in a family or whānau who, by their care and interactions, are in a position to assist a child's learning.

[344] Kessler-Sklar, S. L., & Baker, A. J. L. (2000). School district parent involvement policies and programs. *Elementary School Journal, 101*, pp. 101–118.

[345] Heck, R., Larson, T., & Marcoulides, G. (1990). Instructional leadership and school achievement: Validation of a causal model. *Educational Administration Quarterly, 26*(2), pp. 94–125.
Heck, R., Marcoulides, G., & Lang, P. (1991). Principal instructional leadership and school achievement: The application of discriminant techniques. *School Effectiveness and School Improvement, 2*(2), pp. 115–135.

[346] The failure to include this aspect of influence in most studies of leadership reflects a weakness in the literature rather than the unimportance of the issue.

[347] Biddulph, F., Biddulph, J., & Biddulph, C. (2003). *The complexity of community and family influences on children's achievement in New Zealand: Best evidence synthesis iteration.* Wellington: Ministry of Education.

The meta-analysis drew on 37 studies, syntheses, and meta-analyses, of which 16 were from New Zealand and 21 from other countries. Collectively, they reported on outcomes for over 180,000 students. The studies yielded 168 estimates (effect sizes) of the impact of various types of school–community connection on student outcomes. In some cases, these effect sizes were provided in the original research reports, and in others, they had to be calculated from the data provided. The 168 effects included 42 for homework and 126 for school–home connections. Following adjustments for sample size[348], the findings were grouped into the 19 categories of Figure 24, which shows them in order of effect size. The meta-analysis included a number of unpublished New Zealand studies that had not been through a peer-review process. The effect sizes for these were checked (if available) or constructed[349]. Some categories include fewer source studies; these should be interpreted with more caution. The source studies or reports for each category are listed in Appendix 7.1, along with supplementary studies that inform the issues[350].

As in Chapter 4, we have used the following convention when interpreting effect sizes: 0 to .19, no or weak effect; .2 to .39, small effect; .4 to .59, moderate effect; ≥ .6, large effect[351]. When interpreting negative effects, we have followed this convention: –.1 to –.19, no or weak negative effect; –.2 to –.39, small negative effect; –.40 to –.59, moderate negative effect; ≤ –.60, large negative effect.

A useful benchmark for judging the magnitude of effect is Hattie's finding:

> In our own New Zealand studies, we have estimated the yearly effect in reading, mathematics, and writing from years 4 to 13 (N = 83,751) is .35—although this is not linear[352].

Hattie suggests that .35 is the effect of a year of 'average' teaching and that, for a year of excellent teaching, it is about .60.

Our approach in this chapter is to highlight the potentially high impact that relatively brief interventions can have. After reporting the results of the meta-analysis, we elaborate the findings for school leaders and policy makers by providing further detail about more and less effective approaches.

7.2 What makes a bigger difference in school–family/whānau connections

After adjustment for sample size, the overall effect for school–family/whānau and community connections (excluding homework) was .42 but, as Figure 24 shows clearly, different types of school–home connection vary widely in their effectiveness. Joint interventions involving parents and teachers had the greatest impact on outcomes, with a very high effect of 1.81. While the overall effect for homework was only .22, the best homework practices had an effect of 1.38 and the least effective had impacts that were actually negative.

The findings in Figure 24 suggest there is great potential for leaders to counter patterns of under-achievement by building school–family connections that are explicitly related to the core business of teaching and learning. By means of such connections, student achievement can

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348 These adjustments were made by Professor John Hattie, University of Auckland.

349 This was done by Dr Gavin Brown, University of Auckland (see Appendix 7.2).

350 We have also listed supplementary studies that were used for triangulation purposes. Several used beta coefficients to ascertain unique effect and, for reasons of incommensurability, we could not use them in the wider meta-analysis. Professor John Hattie carried out the final meta-analysis, weighting the findings to adjust for sample size. For studies that did not provide effect sizes for findings, the calculations were done by Dr Gavin Brown of the University of Auckland. (For the approach used, see Appendix 7.2).

351 See Glass, G. V., McGaw, B., & Smith, M. L. (1981). *Meta-analysis in social research.* Newbury Park, CA: Russell Sage Foundation.

352 Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London and New York: Routledge. See p. 17.

be dramatically raised. The high effect sizes obtained for brief interventions designed to help parents support their children's learning contrast with the negative effects sometimes obtained for interventions where parents have lacked such support. The following commentary on the categories of intervention listed in Figure 24 is sequenced according to the size of the effects obtained.

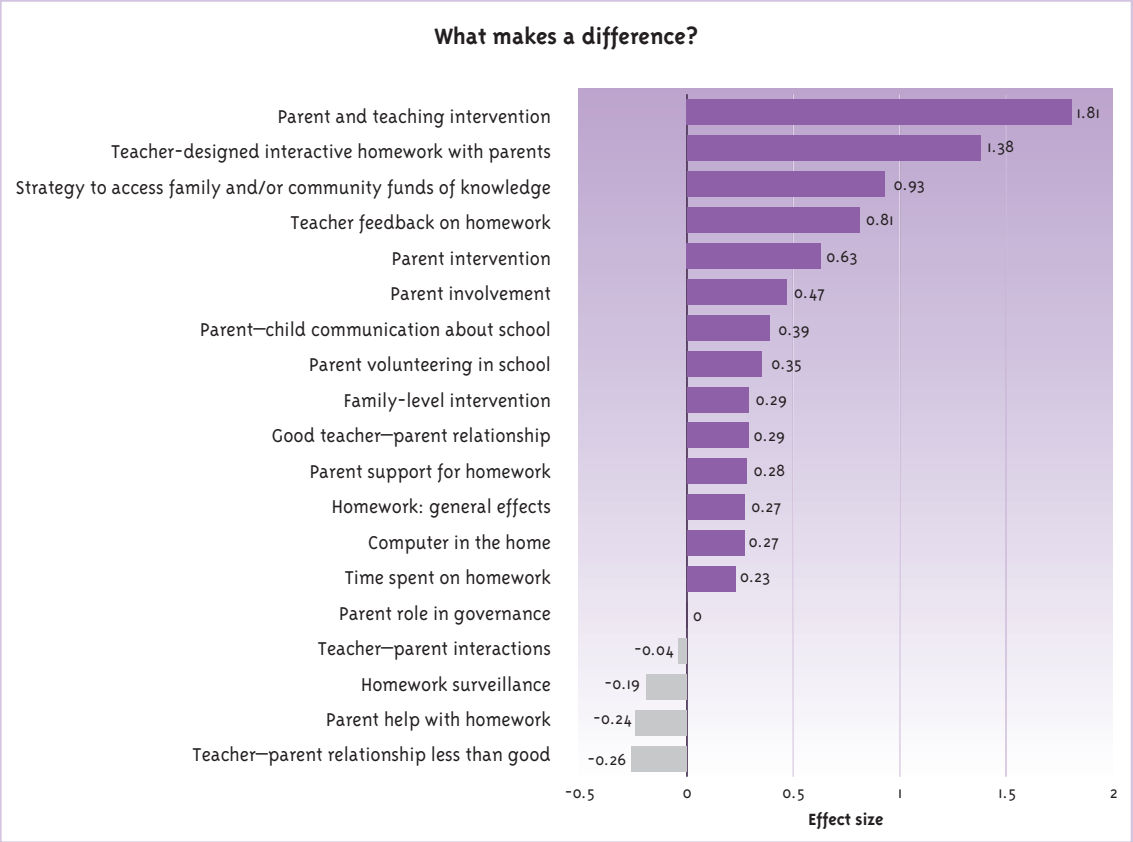

Figure 24: Findings of a meta-analysis of research on the educational impact of making connections between schools, families/whānau, and communities

7.2.1 Approaches that have a high positive effect on student outcomes

Joint parent/whānau and teaching intervention (overall effect size = 1.81)

The highest overall effect was for interventions that were designed to help parents or other community members support children's learning at home and school and that simultaneously provided teachers with professional development. This professional development was directed at promoting teaching that was aligned with, informed by, and supportive of community funds of knowledge and parent contribution. Examples are:

- A user-friendly phonological awareness programme used both at school and at home as part of a language revitalisation programme. The activity involved students in naming items, identifying sounds in words, and then connecting sounds to letter shapes.
- The training and use of parent and in-school peer tutors to support the reading of 6- to 12-year-olds.
- Use of te reo Māori audio-recordings of books, made by elders, to support children's language learning and reading at school and at home.

- Training parents and teachers to work together in identifying and addressing behavioural and learning difficulties in 5- to 12-year-olds.

Of the 13 analyses informing this category, 12 involved joint school–home/whānau interventions and replications designed and led by the Poutama Pounamu Research and Development Centre for Māori-medium learning[353]. These interventions, described in detail later in this chapter, involved the development and refinement of smart tools for intervention and assessment, the use of processes that created high levels of trust, and the provision and evaluation of learning support for parents and teachers as well as children. The other study was a literature review of eight joint parent–school literacy interventions in New Zealand and overseas. Most focused solely on literacy, but one had an additional focus on training parents and teachers to address behavioural and learning difficulties. In all these studies, parents and teachers were supported by external research and development expertise.

Teacher-designed interactive homework with parents (overall effect size = 1.38)

The second-highest effect was for interventions involving teacher-designed interactive homework that engaged parents in assisting their children with their learning. These interventions were informed by research and development programmes in the US[354] and a teacher's postgraduate action-research study in New Zealand that proved highly effective in lifting the achievement of upper-secondary Pasifika students. Further examples are provided later in the chapter.

Strategy to access family and/or community funds of knowledge (overall effect size = .93)

The third-highest effect was for interventions that incorporated family and community knowledge into curriculum and teaching; in some cases, these included a strategy to use homework for this purpose. The interventions involved such strategies as training students to interview their parents, bringing parents into the school as informants, drawing on research and development expertise, and collaborating with the community to develop curriculum informed by indigenous knowledge, and having elders write to and receive letters from individual children in te reo Māori. These interventions resulted in high achievement gains across a range of curriculum areas at both primary and secondary levels. More on making connections with family funds of knowledge across the curriculum can be found in the BESs that focus specifically on teaching[355].

Teacher feedback on homework (overall effect size = .81)

The fourth-highest effect was found for teachers grading and providing feedback on homework. This contrasts with the much lower effect sizes for the assigning of homework that did not subsequently receive teacher feedback. Two US meta-analyses informed this category. Although derived from a limited evidence base, this finding is supported by Hattie's conclusion that teacher feedback in class has high positive effects[356].

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[353] Berryman, M. (2007). *Repositioning within discourses of self-determination*. Unpublished doctoral dissertation, University of Waikato, Hamilton. http://adt.waikato.ac.nz/public/adt-uow20080429.133202/ See Appendix 7.1 for other related references.

[354] For example, Center on School, Family, and Community Partnerships. www.csos.jhu.edu/P2000/center.htm

[355] www.educationcounts.govt.nz/goto/BES

[356] Hattie (2009), op. cit.

Parent intervention
(overall effect size = .63)

The fifth-highest effect was for a wide range of interventions designed to assist parents to effectively support their children's learning, but without a parallel intervention for teachers. Most often, these interventions involved after-school workshops or meetings with a focus on a particular area of the curriculum or on student behaviour or well-being. Such workshops were generally offered by schools themselves; some were supported by external expertise, and some involved children with their parents. While the effectiveness of the interventions varied considerably, the findings show that the overall effect for relatively small numbers of workshops can be higher than for a year's teaching. They were less effective, however, than school–home interventions that were designed to shift the practices of both teachers and parents.

For the most part, the studies that informed this category reported interventions with a literacy focus, though they also included some mathematics and cross-curricular outcomes. Seven of the studies were meta-analyses or reviews. Two were US studies. One cost-effective New Zealand intervention was developed out of a randomised controlled trial with longitudinal follow-up. An evaluation was commissioned to inform this BES about the ways in which a school leadership team used this intervention to dramatically lift reading achievement in a low-decile school. The intervention involved a smart tool designed to help school leaders support parents to assist their children with reading (see Case 5)[357].

7.2.2 Approaches that have a moderate positive effect on student outcomes

Parent involvement
(overall effect size = .47)

A moderate effect was found for parent involvement in children's learning. Findings from four meta-analyses, three studies, and successive analyses from a New Zealand longitudinal study informed this category. Researchers used a range of measures to calculate an overall index of parent involvement. Indicators included participation in school activities, attendance at school functions, volunteering, parents' communication with children about school, and parents' support for their children's learning.

It is clear from the findings that some kinds of parent involvement are more productive than others and that higher effects can be linked to the nature or quality of the involvement. For example, parent attendance at PTA meetings was found to be associated with higher student achievement in a US study but not in the New Zealand data. The role played by school leaders in, for example, keeping parents informed about their children's progress or providing home learning resources or other support was a key to gaining the productive involvement of parents.

At the high school level, it was parent involvement in school outreach activities that had the greatest effect. Awareness of the courses their children were taking and the provision of guidance on academic decisions were both more highly associated with student outcomes than many other forms of parent involvement. A study with a high school focus found that the strongest predictor of grades was parent attendance at post-secondary planning workshops offered by schools for parents and students. This type of outreach was more highly associated with achievement than were parent-initiated meetings for the same purpose.

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[357] Biddulph, J. (2004). *Reading Together: A workshop leader's handbook.* Hamilton: The Biddulph Group. www.readingtogether.net.nz
Tuck, B., Horgan, L., Franich, C., & Wards, M. (2007). *School leadership in a school–home partnership: Reading Together at St Joseph's School Otahuhu.* Report prepared for the Iterative Best Evidence Synthesis Programme, Pasifika Schooling Improvement and St Joseph's School. Wellington: Ministry of Education. www.educationcounts.govt.nz/goto/BES

7.2.3 Approaches that have a small positive effect on student outcomes

Parent–child communication about school
(overall effect size = .39)

This category was included because parent–child communication about school-related matters showed a small positive effect on measured student outcomes, while parent–child communication in general did not show such an effect. The evidence for this finding was limited to one US meta-analysis drawing on 10 source studies. A supplementary study of 11,348 US high school students[358] found that parent–child communications relating to tertiary study were linked to higher achievement and better behaviour.

Parent volunteering in school
(overall effect size = .35)

This category was informed by a US meta-analysis and successive analyses from a New Zealand longitudinal study; these showed that parental volunteering had ongoing small positive effects in terms of achievement in mathematics, reading, and logical problem solving. In the New Zealand study, the effect of the link between parent volunteering in school activities and student achievement was found to be over and above the effects of family socio-economic status.

Family-level intervention
(overall effect size = .29)

This category included two New Zealand initiatives that involved interventions with parents. One introduced computers into the home; the other funded parents to improve their literacy by engaging in tertiary study. In both cases, other family supports were provided as part of the package. Although the interventions had positive effects on children's outcomes over time—and, in one case, marked impacts on family employment and income—some outcomes were greater for the children in comparison groups than for those in the targeted families. Some of the inherent weaknesses in such interventions are discussed later in the chapter.

For leaders, the high effects associated with effective interventions that focus on student learning suggest that it is wise to complement broad, adult-focused policy interventions with targeted workshops that directly assist parents to support their children's learning.

Good teacher–parent relationship
(overall effect size = .29)

This category, based on teacher self-report, was informed by a New Zealand longitudinal study and showed ongoing positive effects through to age 16 for teacher–parent relationships perceived to be good or better. This association of good teacher–parent relationships with higher student achievement was found to be over and above general effects linked to family socio-economic status.

Parent support for homework
(overall effect size = .28)

This category included general parent supervision of homework and the provision of books, library access, and other resources to support homework. One study spelled out what it meant by parent support for homework by listing indicators. These included: limit TV time, limit time out on school nights, monitor homework, be at home after school, ensure that home surroundings are conducive to study.

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[358] Simon, B. (2000). *Predictors of high school and family partnerships and influence of partnerships on student success*. Unpublished doctoral dissertation, Johns Hopkins University, Baltimore.

Computer in the home
(overall effect size = .27)

The evidence for this effect came from a New Zealand longitudinal study, which showed that, for children aged 8 and upwards, a computer in the home had positive impacts on achievement in mathematics and logical problem solving. This positive effect continued through to ages 14 and 16 and was found to be over and above general effects linked to family socio-economic status.

Homework: general effects
(overall effect size = .27)

This category was used to summarise the overall effects of homework on achievement. It was informed by large syntheses, meta-analyses, and studies, and it includes US and international findings on homework effects across the curriculum. Effect sizes for homework vary widely: they tend to be much higher for older students; for younger students, they can even be negative. This suggests the importance of homework design, age-appropriateness, degree of teacher support and feedback, and parent-provided support. Accordingly, our meta-analysis separates out findings for sub-categories that were more and less associated with student outcomes, highlighting, for example, the relatively high impact of teacher-designed interactive homework that involves parents.

Homework is one of the most ubiquitous and, at the same time, fraught of school–home connections. Over the past 20 years, there has been a shift in the evidence about its effectiveness. In 2006, Cooper[359] and his colleagues found an overall effect size of .60 for the impact of homework on achievement in studies carried out with primary and secondary students since 1987. He contrasted the larger effects found in recent studies with the effect of .21 found in his 1989 review. He suggested that the careful matching of students in control groups and use of unit (rather than standardised) tests had improved the ability of the synthesis to detect homework effects. Hattie's (2009) meta-analysis of 161 studies found an effect size of 0.29[360]. Clearly, it is less useful to discuss the average effect of homework than it is to identify the particular qualities that make homework either more or less effective. Later in this chapter, we highlight the role of school leadership in optimising homework policy and practice and making homework an effective school–home connection.

Time spent on homework
(overall effect size = .23)

This finding was informed by six US meta-analyses and syntheses and one New Zealand study. There was considerable variation in the findings, with higher effect sizes for older students (.26 to .37) and some negative effects associated with longer periods spent on reading and mathematics homework by younger primary students. In New Zealand, a negative association was also found for extended time spent on homework by Pasifika students[361].

7.2.4 Approaches that have no effect on student outcomes

Parent role in governance
(no effect)

This category was informed by a New Zealand longitudinal study. It found that parental participation in school governance had no significant impact on student achievement. A US

[359] Cooper, H., Robinson, J., & Patall, E. A. (2006). Does homework improve academic achievement? A synthesis of research. *Review of Educational Research, 76*(1), pp. 1–62.
[360] Hattie (2009), op. cit.
[361] Chamberlain, G., Chamberlain, M., & Walker, M. (2001). *Trends in year 5 students' mathematics and science achievement.* Wellington: Ministry of Education. Table D10 (p. 84).

study also found no effect on student outcomes[362]. This finding contrasts with significant effects found for parent involvement in school events and activities that are focused specifically on the child's learning. In the context of the Chicago reforms, Bryk and Schneider[363] explore the role of school principals in optimising the impact of parent involvement in governance and reinforce the importance of relational trust in mediating the conditions for improved student outcomes (see Chapter 8, section 8.33).

7.2.5 Approaches that have either no effect or a weak negative effect on student outcomes

Frequency of teacher–parent interactions
(overall effect size = –.04)

This category was informed by two Canadian studies and one US study that reported frequency of teacher–parent interactions. The findings appear to reflect a pattern of increased numbers of teacher–parent interactions following a disciplinary incident or identification of a problem.

Homework surveillance
(overall effect size = –.19)

This category was informed by a US meta-analysis of six source analyses. The negative effect was associated with parental surveillance of homework, over-controlling communication, and insistence that work be completed. It contrasts with positive findings for parent supervision, encouragement, resourcing, and involvement in teacher-designed, interactive homework tasks.

7.2.6 Approaches that have a small negative effect on student outcomes

Parent help with homework
(overall effect size = –.24)

This category was informed by five studies: two from the US, one from Cyprus, and two from New Zealand (including successive analyses from a longitudinal study). All found negative effects. 'Parent help' mainly consisted of 'help' with and checking of reading, language, and mathematics homework. Some of the studies quantified parent help in terms of number of minutes.

The New Zealand longitudinal study showed ongoing negative impacts for parent help through to age 16 on a range of student outcomes. The negative effects occurred for high, average, and low achievers. At –.24, the overall effect was small, but moderate negative effects were found in Cyprus and, in New Zealand, helping 10-year-olds with reading homework was found to be associated with large and ongoing negative effects. Later in this chapter, we draw on a range of research to explore why parent help can have this negative effect and highlight the dramatic shifts that can occur when schools assist parents to support their children's homework effectively.

Teacher–parent relationship less than good
(overall effect size = –.26)

This category was informed by successive analyses from a New Zealand longitudinal study. It was found that, when teachers described their relationship with the parents of 10-year-old

[362] Griffith, J. (1997). Linkages of school structural and socioenvironmental characteristics to parental satisfaction with public education and student academic achievement. *Journal of Applied Social Psychology, 27,* pp. 156–186.

[363] Bryk, A. S., & Schneider, B. (2002). *Trust in schools: A core resource for improvement.* New York: Russell Sage Foundation.

children as 'less than good', there was a small, ongoing negative association with student achievement. This negative effect was found to be over and above effects linked to family socio-economic status. When teachers described their relationship with the parents of 8-year-old students as 'satisfactory or worse', the effect was moderately negative and ongoing. These findings highlight the importance of interventions that result in improved teacher–parent relationships as well as improved student outcomes.

7.2.7 Summary

The meta-analysis summarised in Figure 24 shows that proactive strategies to create and sustain educationally powerful school–home connections can have a significant impact. It also shows that, where schools do not provide such leadership, business-as-usual may actually do educational harm (as, for example, when parents try to help with homework and inadvertently undermine achievement). With effective assistance, parents can promote achievement of valued student outcomes in ways that support and resource the work of the school. This is true at both primary and secondary levels.

In the sections that follow, we address the question of how school leaders can effectively facilitate educationally powerful connections with families, whānau, and communities.

7.3 Creating educationally powerful connections through teaching

Leaders can promote educationally powerful connections between home, school, and community by utilising opportunities that arise out of the core business of teaching and learning. This may come as a surprise, because there is a tendency to think of school–home connections in terms of parent involvement in special programmes, extra-curricular activities, or particular tasks. But, as Figure 23 shows, one of the most educationally powerful strategies is to help students connect their school work with their family, cultural, and community experiences, knowledge, and skills.

The *Social Sciences / Tikanga ā Iwi BES*[364], a synthesis of 390 studies, identifies making connections to students' lives as one of four mechanisms that facilitate learning and enhance achievement in the social sciences. The *Mathematics/Pāngarau BES*[365] finds that effective mathematics teaching makes links to the prior knowledge and experiences of diverse learners. One of the 10 main findings of the *Quality Teaching for Diverse Students BES*[366] is that student outcomes are enhanced when there are effective links between school and the various other contexts in which students are socialised.

As children progress through school, the extent to which the educational cultures of their homes and schools align has a powerful influence on their success[367]. McNaughton[368] explains it this way:

> For some kinds of families and communities, there is already a high degree of this kind of continuity with schooling in place. In these, as it were, 'spontaneously' well-matched families and schools, the knowledge and activities that are habitually part of the home life

[364] Aitken, G., & Sinnema, C. (2008*). Effective pedagogy in social sciences / tikanga ā iwi: Best evidence synthesis iteration*. Wellington: Ministry of Education.

[365] Anthony, G., & Walshaw, M. (2007). *Effective pedagogy in mathematics / pāngarau: Best evidence synthesis iteration.* Wellington: Ministry of Education.

[366] Alton-Lee, A. (2003). *Quality teaching for diverse students in schooling: Best evidence synthesis*. Wellington: Ministry of Education.

[367] Jeynes, W. H. (2005). A meta-analysis of the relation of parental involvement to urban elementary school student academic achievement. *Urban Education, 40,* pp. 237–269.
Biddulph, F., Biddulph, J., & Biddulph, C. (2003). *The complexity of community and family influences on children's achievement in New Zealand: Best evidence synthesis.* Wellington: Ministry of Education.

[368] McNaughton, S. (2002). *Meeting of minds*. Wellington: Learning Media.

> are already relatively well tuned to those activities at school; or, if you like, the school is well tuned to the activities of the home. This is the meaning behind the idea of 'cultural capital'—the term contemporary sociology uses for the storehouse of experiences, knowledge, and attitudes a child can capitalise on when going to school, given the practices of schooling (p. 21).

In chapters 4, 5, and 6, we discussed the evidence relating to pedagogical leadership. Amongst other things, pedagogical leadership involves coordination and evaluation of the curriculum. An important criterion against which curricula should be evaluated is the extent to which units of work and teaching resources make connections with students' lives and community resources.

The example in Box 16, drawn from teacher research in a New Zealand secondary school, illustrates how family and community resources can be integrated into a classical studies unit.

Box 16. Designing curriculum units that make powerful connections with home cultures

As part of her postgraduate study, McNeight[369] carried out an action-research study of the effect of a unit of work in classical studies. The unit had been specially designed by the teacher to help her Pasifika students connect the curriculum with their own cultural resources. As part of their learning, the students were equipped with the interview skills and questions they needed to engage their relatives in a discussion of how the key ideas in the unit applied to Pasifika culture. They learned how to maintain focus and record conversations, and they were given practice and small-group opportunities to develop their confidence. Each day, the students were able to discuss their learning experiences with each other.

McNeight reported that this unit of work broke a pattern of failure among her Pasifika students and that their marks in classical studies doubled as a result. By valuing her students' heritage sufficiently to include it in a well-designed curriculum unit, the teacher raised academic achievement, affirmed student identities, and strengthened teacher–parent relationships. Following completion of the unit, parents contacted the teacher, asking what the students would be studying next. McNeight's action-research report documented in detail the experiences of four students. Accustomed to failing grades, all four passed this unit; this was a factor in their subsequent success in senior school qualifications.

While the above example says nothing about leadership per se, it is instructive for school leaders because it shows:

- the degree of planning and prior training that may be needed to help students link apparently alien aspects of the curriculum with the cultural knowledge of their communities;
- that even teachers who have little specific knowledge of students' cultures can design units of work that make effective connections with those cultures;
- that strong school–home connections can be made without direct contact between teachers and parents (in this research, the teacher did not go into the community and the parents did not come into the school—the students were the mediators). This is particularly important for secondary schools, where teachers cannot realistically make personal contact with the parents of all their students.

The school leaders were highly supportive of this research, providing access to two classes. They were also very excited by the results. Despite this, neither the leaders nor the researcher were able to realise the latter's intention that her research would inform wider school-based

[369] McNeight, C. (1998). *"Wow! These sorts of things are similar to our culture!" Becoming culturally inclusive within the senior secondary school curriculum.* Unpublished postgraduate action-research report, Victoria University, Wellington. See Case 2: Making links between cultures: Ancient Roman and contemporary Sāmoan. In Aitken & Sinnema (2008), op. cit.

professional development. There was no formal process to spread the learning acquired by one teacher in one curriculum area to other teachers and other curriculum areas. Given the number of New Zealand teachers who, each year, complete research projects as part of their graduate studies, it is important to ask why this did not happen.

Table 14. Staff research: Personal project or school-based development opportunity?

Staff research as private project	Staff research as opportunity for school-based professional learning and development[370]
Research is presented to leaders by the staff member as a personal project.	Researcher asks for personal support and links their project to school priorities and challenges.
Research is seen by leaders as a staff member's private project.	School support is contingent on the research being more than a personal endeavour.
The staff member doing the project does not hold a leadership position so does not see themself as a leader.	The school culture recognises leadership based on relevant expertise as well as position.
The project is categorised (classical studies) in a way that gives it lower priority than, or little apparent relevance to, other curriculum areas.	The project's potential is assessed in terms of its relevance to an issue (engagement of Pasifika students) rather than a limited curriculum focus (classical studies).
The project is not seen as unique (all teachers make links to students' background knowledge and experiences).	The focus is on evidence of outcomes rather than apparent similarities in teaching approaches.
A focus on big PD projects overshadows the potential for school-based professional learning.	Big PD projects and teacher research are integrated, with teacher research incorporated into PD plans.

The authors' experience as graduate research supervisors suggests that while many school leaders are highly supportive of staff research, they tend not to treat it as an opportunity for school-wide learning and dissemination. Leaders can use Table 14 to evaluate how the benefits of teacher research and development might be spread across their schools.

In another study, connections were created by bringing parents into the classroom. The principal of a primary school in Cyprus worked with an external researcher to develop and evaluate a project in which teachers were asked to use parents' life experiences as teaching resources[371]. Parents born in a part of Cyprus that was being studied in social studies were invited along to share their knowledge and relevant artefacts. Parents working in hospitals and banks were invited along to share their knowledge and to be interviewed by students on topics relevant to their studies. As in the McNeight study, careful planning and training was involved, with the research team training parents and teachers to work as collaborators with complementary responsibilities. Compared with those in the control school, the students in the parent-partnership school made large gains in mathematics, Greek language, and the social sciences. Considerable variation in student achievement across classes suggested that parental involvement and resources were not used consistently by the different teachers. Both parents and students reported positively on the partnership venture.

Carefully designed out-of-school learning opportunities can also be used to bring funds of family and community knowledge into the classroom. Such opportunities can have significant and sustained impacts on student knowledge, attitudes, self-esteem, independence, and confidence[372]. They can be critical to students' long-term learning and can mitigate the effects

[370] The ideas expressed in this column are elaborated in Robinson, V. M. J., & Lai, M. K. (2006). *Practitioner research for educators: A guide to improving classrooms and schools*. Thousand Oaks, CA: Corwin.

[371] Kyriakides, L. (2005). Evaluating school policy on parents working with their children in class. *Journal of Educational Research, 98*, pp. 281–300.

[372] Alton-Lee (2003), op. cit.

of social disadvantage[373]. The wider research evidence relating to field trips and class visits is addressed in the different teaching BESs[374].

There is increasing evidence to show that, when indigenous perspectives are integrated into quality learning tasks, the achievement of indigenous students improves markedly. Lipka and Adams[375] describe the success of a research and development initiative involving teachers, researchers, and Yup'ik elders. With the help of the elders, a series of culturally based mathematics curriculum modules was developed. Quasi-experimental studies across the Fairbanks urban school district and four rural school districts in Alaska found that the Yup'ik students performed significantly better in the culturally based modules, particularly in terms of their understandings of proof, properties, perimeter, area, and probability. As a result of this initiative, there was a reduction in the longstanding academic gap between Yup'ik and non-Yup'ik, non-Yup'ik benefited from the change from the usual curricula and texts, and students reported increased ability to transfer new knowledge to real-life situations.

School–community/iwi partnerships with a focus on the development and use of indigenous teaching resources are also an important element in some New Zealand school improvement initiatives. In the East Coast initiative known as Whaia te iti Kahurangi, a partnership was developed between Te Rūnanga o Ngāti Porou, the Ministry of Education, and local schools. An evaluation of this partnership in 2003 found a range of positive indicators in the primary schools involved, with year 2 reading vocabularies higher than the national average and improvements in writing and mathematics[376]. These improvements appeared to be directly linked to effective professional development in literacy and numeracy and to stronger partnerships between school and iwi.

The evaluators reported:

> Many schools used local knowledge and resources in their class programmes and organised activities with kaumatua and kuia so that students had a living understanding of their hapū, knowledge of whakapapa, and gained knowledge and skills through seasonal food gathering activities. Almost all the principals would like to see a Ngāti Porou 'resource bank' to allow them to incorporate more Ngāti Porou activities into their teaching programmes (p. 3).

There was little evidence of similar gains at secondary level. A reason for this may be that the secondary teachers did not receive professional development.

The importance of teachers learning how to use cultural resources in educationally rich ways can also be seen in the work of Te Kotahitanga. This intervention gives secondary teachers the opportunity to reflect on how they can make connections with students' identities and culture and gives them specific guidance in pedagogies that are culturally responsive and that strengthen teacher–student relationships. With some variability, participating schools have seen significant improvements in senior secondary qualification levels in comparison with non-participating schools[377]. The degree to which principals and others taking leadership roles in Te Kotahitanga have been proactive in setting goals for change, and effective in establishing

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[373] Alton-Lee, A. G., & Nuthall, G. A. (1990). Pupil experiences and pupil learning in the elementary classroom: An illustration of a generative methodology. *Teaching and Teacher Education: An International Journal of Research and Studies*, *6*, pp. 27–46.

[374] See footnotes 364, 365, and 366.

[375] Lipka, J., & Adams, B. (2004). *Culturally based math education as a way to improve Alaska Native students' math performance* (Working Paper No. 20). Ohio University, Athens, OH: Appalachian Collaborative Center for Learning, Assessment and Instruction in Mathematics Research Initiative. (ERIC Document Reproduction Service No. ED346082).
Lipka, J., & Adam, S. (2006, February). *Mathematics in a cultural context: Salmon fishing—Investigations into probability*. Paper presented at the Third International Conference on Ethnomathematics, Auckland.

[376] Wylie, C., & Arago-Kemp, V. (2004). *Whaia te iti Kahurangi: NZCER evaluation* (final report). Wellington: Te Rūnanga o Ngāti Porou & the Ministry of Education.

[377] Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best evidence synthesis iteration*. Wellington: Ministry of Education. See pp. 259–264.

the conditions required to strengthen school–home connections has been found to be critical to bringing about and sustaining improved outcomes for students[378].

7.4 Creating educationally powerful connections through homework

> Homework is the cause of more friction between school and home than any other aspect of education and becomes the prime battlefield when schools, families and communities view one another as adversaries … End the battle and turn homework into a cooperative effort to promote student learning.[379]

Homework is often thought of as a school activity that just happens to be carried out in the home rather than the classroom. It can, however, be much more than this. There is compelling evidence that certain types of homework can connect students' home and school lives in ways that have substantial educational benefits for families as well as for students. There is also convincing evidence that some kinds of homework may have negative effects.

In this section, we summarise the evidence on homework so that leaders can evaluate the extent to which their school's policy guides teachers to plan homework activities that are likely to be productive.

7.4.1 Does homework work?

Homework is set by teachers for a range of purposes. As well as giving students the opportunity to practise skills and anchor new understandings in the memory[380], it can help students prepare for new learning, apply what has been learned to new contexts, apply a range of skills to an integrating task (such as a project), and facilitate child–parent/family interaction.

This section is based on an analysis of published studies that provide evidence of the impact of various types of homework on a range of student outcomes. From these studies, which reported on 152,110 students, 42 effects were calculated. The overall effect size for homework was .27, which we interpret as a small effect, but the effect sizes are very different for different types of homework. Figure 24 groups the homework findings into six categories of like influences. At the one end is a large positive effect (1.38) for teacher-designed interactive homework that involves parents; at the other is a moderate negative effect (–.24) for parental help with homework.

The evidence suggests that the effectiveness of homework depends primarily on the teacher's ability to design, resource, scaffold, and provide feedback on developmentally appropriate homework tasks that support the learning of diverse students without unnecessarily fatiguing and frustrating students[381]. For this reason, when discussing the educational benefits of homework, we need to distinguish between different types of homework. In the following two sections, we look in more detail at the most effective and least effective types.

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[378] Bishop, R., Berryman, M., Cavanagh, T., Teddy, L., & Clapham, S. (2006). *Te Kotahitanga Phase 3: Whakawhanaungatanga: Establishing a culturally responsive pedagogy of relations in mainstream secondary school classrooms.* Final report to the Ministry of Education. Māori Education Research Institute, University of Waikato, Hamilton and Poutama Pounamu Research and Development Centre, Tauranga.

[379] Cooper, H. (2007). *The battle over homework: Common ground for administrators, teachers and parents* (3rd ed.). Thousand Oaks, CA: Corwin Press. [Quote is from back cover]

[380] Alton-Lee, A., & Nuthall, G. (1998). *Inclusive instructional design: Theoretical principles emerging from the Understanding Learning and Teaching Project.* Report to the Ministry of Education. Wellington: Ministry of Education.

[381] Alton-Lee (2003), op. cit.

7.4.2 What types of homework work best?

Across several different curriculum areas, particularly strong effects have been found for teacher-designed interactive homework. For example, in a study[382] investigating the links between different types of homework and student achievement in mathematics—a study involving 18 highly diverse US elementary and secondary schools—the largest achievement gains were for mathematics homework that required students to demonstrate and discuss mathematics skills with a family member. This study also found that the practice of offering parents or students packets of mathematics games or activities from a lending library for use at home was particularly effective. More details on this important study are provided in Box 17.

Box 17. Supporting parents at home to improve student outcomes in mathematics—new understandings about homework effectiveness

For two consecutive years, Sheldon and Epstein[383] examined the efforts of 18 primary schools and secondary schools to involve families in mathematics.

They began by identifying three activities that were used by all the schools in the study and that were considered by staff to be most effective in improving student outcomes. These were: (a) providing parents with information on how to contact mathematics teachers, (b) scheduling meetings with parents of students who were struggling with mathematics, and (c) reporting to parents on student progress and problems in mathematics.

The researchers then compared the effectiveness of these activities with the effectiveness of activities that were designed specifically to involve families. What they found was quite different from what the teachers expected: the only family-involving activities that were consistently associated with improvements in students' maths test scores were learning-at-home activities. In other words, what had the greatest impact was providing families with information and ideas about how to help their children with homework and how to engage in activities and discussions at home that would support their mathematics learning. The researchers also found that, for any activity, quality of implementation rather than frequency of use was more strongly associated with greater student achievement. After controlling for prior levels of achievement, the percentage of students who attained satisfactory mathematics scores was higher in schools that more effectively assigned homework that required parent–child interactions or offered mathematics materials to take home. The authors concluded:

"Our results reinforce the fact that schools must advance beyond a belief that any parent involvement activity will produce important results. We found that rather than use of an activity, the reported quality of implementation was strongly and consistently associated with changes in levels of student mathematics achievement. That finding supports and extends previous research that shows that schools need to move beyond basic steps when they develop programs of partnership in order to affect student achievement test scores" (p. 204).

The positive impact of interactive homework on achievement has been reported across a variety of curriculum areas for both primary and secondary students in other US and European studies. Examples include: positive impacts on science grades[384], maths test scores[385], writing skills and language arts grades[386], and second-language acquisition and literacy skills[387]. Carefully

[382] Sheldon, S. B., & Epstein, J. (2005). Involvement counts: Family and community partnerships and mathematics achievement. *Journal of Educational Research, 98,* pp. 196–206.

[383] ibid.

[384] Van Voorhis, F. L. (2003). Interactive homework in middle school: Effects on family involvement and students' science achievement. *Journal of Educational Research, 96,* pp. 323–339.

[385] Van Voorhis, F. L. (2007, April). *Can math be more meaningful? Longitudinal effects of family involvement on student homework*. Paper presented at the annual meeting of the American Educational Research Association, Chicago.

[386] Epstein, J. L., Simon, B. S., & Salinas, K. C. (1997). *Involving parents in homework in the middle grades.* Retrieved March 11, 2008, from www.pdkintl.org/research/rbulletins/resbul18.htm

[387] Villas-Boas, A. (1998). The effects of parental involvement on student achievement in Portugal and Luxembourg. *Childhood Education, 74,* pp. 367–371.

designed interactive homework involving parents, where the parents have been shown how to assist their children, has been associated with marked achievement gains for both younger and older children, including those from low-socio-economic-status families. Recent New Zealand research on mathematics homework also finds a positive relationship with achievement when homework (a) directly relates to the curriculum, (b) promotes purposeful interactions between parents and children, and (c) provides materials and resources to help parents support their children's learning[388].

The effectiveness of school-provided interactive activities, such as games and books, depends on parents' understanding of the purpose of the activity, their role in the activity, and the way the activity builds on classroom work. A recurring finding is the effectiveness of interactive games that build children's knowledge and understanding while also being fun for families.

Figure 24 also shows a large effect for teacher feedback on homework. Graded homework is included in the *Handbook of Research on Improving Student Achievement*[389] as one of the 10 most effective practices for raising student achievement. Based on their meta-analysis, Marzano, Pickering, and Pollock[390] include homework on their list of nine instructional strategies that are particularly influential on student learning. The explanation for this effect lies in the power of specific and timely teacher feedback. In his meta-analyses of the impact of many educational variables, Hattie has found effective teacher feedback to be one of the most powerful influences on student achievement[391]. Hattie concludes that it is the teacher feedback, more than whether the work is done at school or the home, that makes the difference.

The high effect sizes for teacher comments and feedback on homework, teacher grading of homework, teacher-defined homework, and especially interactive homework signal the crucial importance of instructional design, quality, and pedagogical management. The teacher's role in enabling parents to support their children with their homework is especially critical, given that parents can 'help' in ways that can have unintended, harmful effects.

7.4.3 What types of homework tend not to work?

Despite the educational potential of homework, a range of evidence indicates that it can be unproductive, frustrating, and even harmful—a concern highlighted from time to time in the media, both in New Zealand and overseas.

Homework hell

Homework—kids hate it, parents hate it, teachers hate it—why do we put up with it?[392]

Figure 24 shows that parental surveillance and 'help' with homework can have small negative effects on student outcomes. This finding appears to validate recurring concerns about homework and to suggest that parents need more effective help in this area.

Some commentators have argued that the negative relationship between achievement and parental help is an artefact caused by low-achieving students receiving more help from their parents than high-achieving students. In our re-analysis of the Competent Children longitudinal study, however, the negative effects were found for high, average, and low achievers. In the case of reading, it is probable that children who become proficient readers at an early age are less likely to subsequently have bad homework experiences with their parents that impact

[388] Anthony, G., & Walshaw, M. (2007). *Effective pedagogy in mathematics/pāngarau: Best evidence synthesis iteration.* Wellington: Ministry of Education.

[389] Walberg, H. (2004). In G. Cawelti (Ed.) *Handbook of research on improving student achievement* (3rd ed.). Arlington, VA: Education Research Service.

[390] Marzano, R., Pickering, D., & Pollock, J. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement.* Alexandria, VA: Association for Supervision and Curriculum Development.

[391] Hattie, J. (1999, April). *Influences on student learning.* Inaugural lecture, University of Auckland.
Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement.* London: Routledge.

[392] O'Hare, N. (2001, June 2). Homework hell. *Listener*, p. 18.

negatively on achievement. Nevertheless, there is substantial evidence to show that some of the strategies parents use to help their children learn can negatively influence achievement, especially if their support conflicts with classroom practices, interferes with the child's independence, imposes controls, and/or is critical in nature[393].

Cooper, Lindsay, and Nye[394] reviewed research in which parents complained of their feelings of inadequacy due to changes in pedagogy and curricula, lack of information about the curriculum, and lack of effective training in how to help. In several New Zealand studies[395], well-intentioned parents have reported using a range of practices that are likely to make learning more difficult for their children, for example, asking them to read texts with difficulty levels that are well beyond the child's actual reading level, covering up picture clues, giving answers instead of using prompts, focusing on word accuracy without attending to meaning, getting frustrated and impatient, criticising every mistake, giving tough and confidence-knocking feedback, growling, name-calling, mocking, punishing, and hitting. In a highly effective New Zealand reading literacy intervention, the researchers described how prior to the training, parents had struggled to help their children at home: "I tried to teach him but I got afraid I wouldn't be able to cope. I would lose my temper and whack him."[396] Such comments have been a recurrent subtext in New Zealand studies. They shed light on the kinds of counterproductive practices that have been used by well-intentioned parents—practices that could well explain some of the negative associations that exist between parent help, homework, and student achievement, particularly for underachievers.

As children fall further behind, parents get more and more anxious, and a vicious cycle can set in, with ongoing negative impacts on the children's achievement and self-confidence. Georgiou describes how parental anxiety manifests itself as a set of activities that he calls 'teaching at home'[397]: the parent tries to behave as if they were the child's teacher by helping with homework, examining the child, checking the child's workbooks and so on. The greater the parents' anxiety about their children, the more they 'teach' rather than support. Such 'teaching' exacerbates the child's anxiety, struggle, and sense of failure. Clinton and Hattie[398] also found that parental 'surveillance' of homework was negatively related to reading achievement.

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[393] Biddulph, F., Biddulph, J., & Biddulph, C. (2003). *The complexity of community and family influences on children's achievement in New Zealand: Best evidence synthesis.* Wellington: Ministry of Education.
Boethel, M. (2003). *Diversity: School, family, community connections.* Austin, TX: Southwest Educational Development Laboratory, National Center for Family & Community Connections with Schools. Retrieved March 11, 2008, from www.sedl.org/connections
Henderson, A. T., & Mapp, K. L. (2002). *A new wave of evidence: The impact of school, family, and community connections on student achievement.* Austin, TX: Southwest Educational Development Laboratory.
Mau, W. (1997). Parental influence on the high school students' academic achievement: A comparison of Asian immigrants, Asian Americans, and White Americans. *Psychology in the Schools, 34,* pp. 267–277.

[394] Cooper, H., Lindsay, J., & Nye, B. (2000). Homework in the home: How student, family and parenting-style differences relate to the homework process. *Contemporary Educational Psychology, 25,* pp. 464–487.

[395] Biddulph L. J. (1983). *A group programme to train parents of children with reading difficulties to tutor their children at home.* Unpublished master's thesis, University of Canterbury, Christchurch.
McDowall, S., & Boyd, S. (2005). *Messages about reading: What do parents and teachers hear, share and do, and need when engaging in literacy partnerships?* Wellington: New Zealand Council for Educational Research.
Wylie, C., & Smith, L. (1995). *Junior School Study. Learning to learn: Children's progress through the first 3 years of school.* Wellington: New Zealand Council for Educational Research.
McNaughton, S., Glynn, T., & Robinson, V. M. (1981). *Parents as remedial reading tutors*. Wellington: New Zealand Council for Educational Research.
Tuck, B., Horgan, L., Franich, C., & Wards, M. (2007). *School leadership in a school-home partnership: Reading Together at St Joseph's School Otahuhu.* Report prepared for the Iterative Best Evidence Synthesis Programme, Pasifika Schooling Improvement and St Joseph's School. Wellington: Ministry of Education.

[396] McNaughton, Glynn, & Robinson (1981), op. cit. (p. 18).

[397] Georgiou, S. N. (1999). Parental attributions as predictors of involvement and influences on child achievement. *British Journal of Educational Psychology, 69*, pp. 409–429.

[398] Clinton, J., & Hattie, J. (2009). *Student's perceptions of parental involvement: Relations with liking, efficacy and achievement.* Manuscript submitted for publication.

In our discussion of goal setting in Chapter 6, we discussed the difference between learning goals and performance goals[399]. If students don't know how to attain a goal (such as reading a page of text), performance goals can lead to misdirected effort and frustration. In situations of this kind, learning goals rather than performance goals should be set, because they focus the student on learning the skills and strategies (such as using picture clues and looking at the beginnings of words) that they need to achieve the performance goal[400]. However, parents cannot set appropriate learning goals if they do not understand what their child needs for success. This is why parents need guidance from the teacher about how they can help. In the next section, and in Case 6, we consider evidence-based, user-friendly, and low-cost approaches to supporting parents to effectively help their children with their reading.

7.4.4 Guidance on good homework and homework policies

Epstein at the Center on School, Family, and Community Partnerships at Johns Hopkins University has led over a decade of research designed to develop and improve interactive homework[401]. Her TIPS programme (Teachers Involving Parents in Schoolwork) is an interactive homework approach designed to provide parents with strategies to support their children's learning and help children value their parents' contribution[402]. The focus of TIPS is on teacher agency and leadership in enabling constructive parent engagement. In addition to the enhanced student achievement cited earlier in this chapter, there is evidence that parents are highly appreciative of the opportunity to participate in the programme[403].

Epstein gives an example of a TIPS homework assignment that begins with a message signalling the student's responsibility for initiating interaction and includes a home-to-school connection:

Box 18. School-to-home-to-school homework communication

Dear Family Partner,

My class is learning how to write fractions. This activity will let me show you what I know about fractions. We can talk about how we use fractions at home. This assignment is due _____

Sincerely

Student's signature _____

The associated exercises include instructions on how to involve the family partner. For example: "Explain this example to your family partner. Show your family partner how you do this example … Ask your family partner … In the real world … Poll your family members or friends …" The homework ends with a feedback section for the family partner. For example:

Dear Parent/Family Partner

Please give me your reactions to your child's work on this activity.

Write YES or NO for each statement.

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399 Latham, G. P., & Locke, E. A. (2006). Enhancing the benefits and overcoming the pitfalls of goal setting. *Organizational Dynamics, 35*(4), pp. 332–340.

400 Wylie, C., & Smith, L. (1995). *Junior School Study. Learning to learn: Children's progress through the first 3 years of school.* Wellington: New Zealand Council for Educational Research.

401 Epstein, J. L. (2001). *School, family, and community partnerships: Preparing educators and improving schools.* Boulder, CO: Westview Press.

402 Henderson, A. T., & Mapp, K. L. (2002). *A new wave of evidence: The impact of school, family, and community connections on student achievement.* Austin, TX: Southwest Educational Development Laboratory.
Van Voorhis, F. L. (2001). Interactive science homework: An experiment in home and school connections. *NASSP Bulletin, 85*, pp. 20–32.

403 Epstein (2001), op. cit.

____My child understood the homework and was able to complete it.

____My child and I enjoyed the activity.

____This assignment helped me to know what my child is learning in math.

Any other comments:

Parent/Family Partner's signature _____

The TIPS approach has been used in primary, middle, and high schools. Features include:

- scheduling homework over a period of time so that families can plan time do it;
- making meaningful links to the curriculum;
- ensuring the time demands of homework are appropriate;
- using only accessible materials or providing the necessary materials;
- making enjoyable and thoughtful student–family interactions part of every activity;
- planning carefully for both students and parents;
- including brief questions for students and parents about how the activity went so that teachers can understand how the homework works (or not) and respond quickly to improve it.

Since the evidence summarised in Figure 24 shows that homework can have either positive or negative effects on student outcomes, it is imperative that schools provide teachers with clear guidance about the qualities that make homework educationally effective. Box 19 suggests some guidelines:

Box 19. Some guidelines for a policy on educationally effective homework

1. Since interactive homework has particularly large positive effects, some homework activities, especially for younger children, should be of this type. To optimise the effectiveness of such activities:
   - the roles of the student and the family partner should be carefully planned;
   - parents should be aware of the objectives of the homework task;
   - parents should be given practical strategies, appropriate to the task and year level, with which to support their child's homework;
   - feedback should be sought from the student and family partner about their enjoyment of the task and the student's ability to complete it;
   - the teaching team should meet specifically to review feedback and use it to revise the task.
2. Tasks that require materials that are not likely be available in the home should be avoided, or the materials should be supplied by the school. This will ensure that all students can access the task.
3. Since timely, descriptive teacher feedback on homework is associated with positive educational effects, homework should be scheduled so that teachers can give students quality oral or written feedback.

Taken as a whole, the outcomes-linked research on homework suggests that homework has considerable potential to improve student outcomes, particularly for older students. That the findings are variable across the research literature is not surprising, however, given the likely mediating effects of quality, purpose, time allocated, family practices, supports available (for students and families), and opportunity costs (in terms of leisure, sport, fitness, and other activities). The potential is more likely to be realised when teachers form pedagogical partnerships with parents to ensure appropriate and effective homework tasks. Purposeful, interactive homework activities require open school–home communication that provides both teachers and parents with useful information.

7.5 Creating educationally powerful connections through school–home relationships

We have discussed particular ways in which schools can effectively involve parents and families with the classroom curriculum and homework. We now turn to other ways of building relationships that serve the interests of students.

For leaders, the growing evidence base relating to school–home connections is an important resource for ensuring that the limited time and money of both schools and families are invested in ways that promote valued outcomes. The importance of such knowledge is underscored by evidence that suggests that schools can waste a lot of time and effort trying to harness parental engagement in ways that have minimal impact on student outcomes. As one principal noted:

> Real parental involvement in this school has been zilch. We have tried everything—reading mornings, maths mornings, free computer courses—some of these worked at first, but nothing really worked. They turn up for festivals and so on, but you can't get them involved in planning or curriculum sessions (pp. 25–26).[404]

Figure 24 helps us to identify the particular types of school–home involvement that are most powerful. In general, the largest positive effects were found when schools—usually in association with an external researcher—develop the capacity of parents to support their children's learning through programmes that are designed to teach them specific skills (for example, the skills to promote reading and language development). Less powerful, but still important, is the quality of teacher–parent relationships: good relationships have a small positive effect, and poor relationships have a small negative effect.

7.5.1 Joint school–home interventions to improve student achievement and/or behaviour

In the high effect category were a series of two-pronged interventions designed to help parents support their children's learning and assist teachers with in-class tutoring[405]. At first, the researchers found that teachers were often unaware of the gains the children were making at home so were unable to support those gains at school[406]. In some cases, it turned out that the students' reading had improved greatly but their teachers had failed to recognise this and had continued to teach at the previous, much lower level. This led the researchers to expand the intervention by training teachers and other school tutors to complement the tutoring at home. With this further intervention, even stronger reading gains were achieved—showing the power of simultaneous interventions with both parents and teachers.

Also in the highest effect category are the interventions generated by the Poutama Pounamu Research and Development Centre (see Appendix 7.1). Figure 25 provides an overview of the approach taken by this Centre to the iterative development and evaluation of smart tools to support language, reading, and writing achievement in te reo Māori. These tools include a phonological awareness programme (TATA) that has resulted in effect sizes for reading achievement across six schools of 1.72 to 4.48; an intervention in which elders record te reo Māori on tapes to be used at home and school (RĀAP), resulting in effect sizes of .52 to 1.91 across 28 schools; an intervention designed to assist parents and tutors to help children with their reading (Tataari, Tautoko, Tauawhi), resulting in effect sizes of .70 to 1.01 across three schools; training for parents and whānau designed to help them address behavioural and learning difficulties (Hei Awhina Mātua), resulting in effect sizes across two schools of 1.36 for

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[404] Benseman, J., & Sutton, A. (2005). *Summative evaluation of the Manukau Family Literacy Project (2004).* Wellington: City of Manukau Education Trust (COMET).

[405] Glynn, T., & McNaughton, S. (1985). The Mangere home and school remedial reading procedures: Continuing research on their effectiveness. *New Zealand Journal of Psychology, 14,* pp. 66–77.

[406] McNaughton, S., Glynn, T., & Robinson, V. M. (1981). *Parents as remedial reading tutors.* Wellington: New Zealand Council for Educational Research.

behavioural improvements, with associated achievement improvements of .80 and .86; a 10-week programme in which elders in the community correspond with individual children in te reo Māori (Tuhi atu tuhi mai), resulting in effect sizes of .92 to 1.47 across six schools.

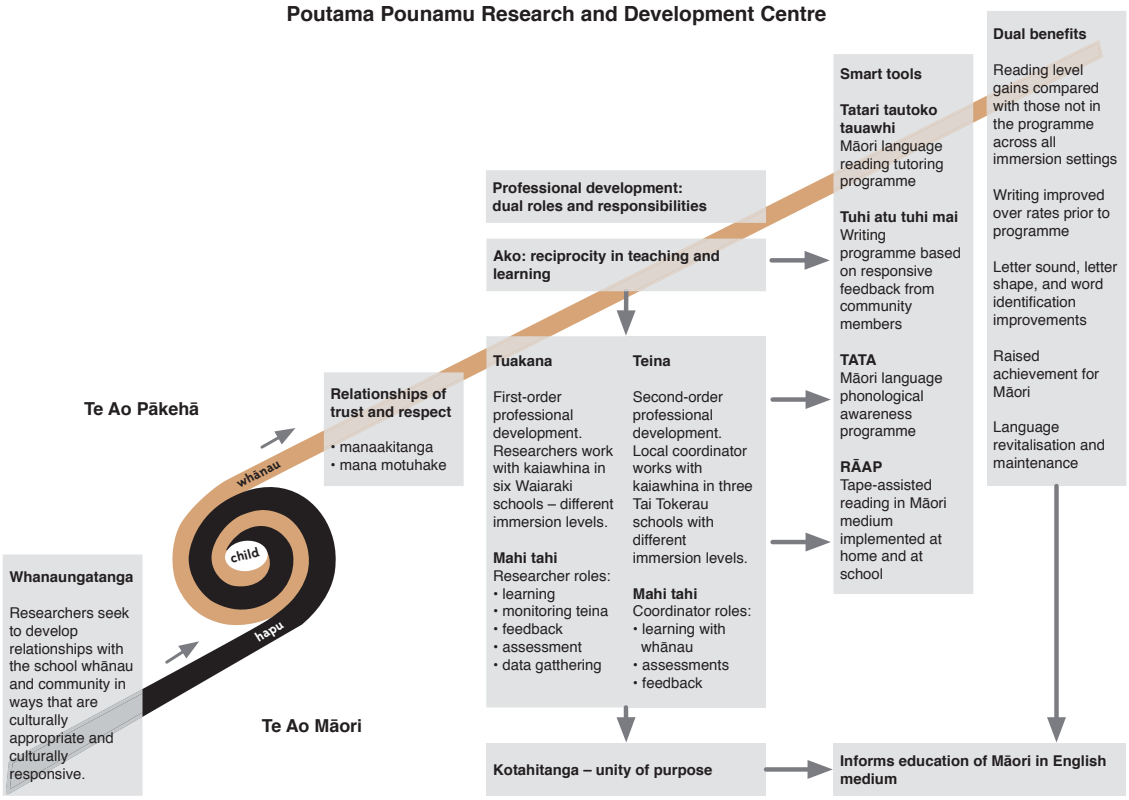

Figure 25. Ako: Reciprocal benefits within culturally responsive relationships—the work of the Poutama Pounamu Research and Development Centre

In a literacy intervention involving nine schools, parents and whānau completed two one-day training sessions with the research team. Professionals, family, whānau, and community were taught how to use the smart tools, and their learning was systematically evaluated. This evaluation helped the researchers refine the tools and ensure that the accompanying processes would support effective, independent use of the tools at home and at school. Researchers, teachers, and kuia emphasised that the success of school–whānau connections and the learning designed to support them was dependent on mahi tahi (collaborative) processes that fostered relational trust.

Central to the work of Poutama Pounamu is the focus on ako (reciprocity in learning and teaching). By making the learning of parents and teachers a deliberate focus—paralleling the children's learning—and by creating effective models for facilitating adult learning, the researchers have attended to the *how* of leadership. These findings about the importance of aligned interventions with parents and teachers further emphasise the important role that leaders have in promoting the kind of school–home and community learning that enables effective educational connections.

7.5.2 Programmes that enhance the capacity of families to support student achievement

Overall, interventions with parents were found to have a high effect, although less so than joint school–home interventions. The research reveals wide variation in the nature and scope of programmes designed to help parents support their children's school learning. At the one end are complex, expensive, multi-focused interventions aimed at developing school–home

partnerships; at the other are small-scale, low-cost workshops aimed at helping parents support learning in specific curriculum areas.

Design characteristics that appear to be important include: having learning as a primary focus; providing parents with information and training (for example, modelling and reinforcing appropriate strategies) that enhance their skills in a specific curriculum area; supplying materials for use at home; helping families access resources such as books; raising families' awareness of the benefits of working with their children; aligning school–home practices so that parents' actions support school learning; raising parents' expectations for their children's achievement; and helping to propagate a supportive approach to parenting.

New Zealand has a tradition of research and development in literacy interventions involving parents. In the early 1980s, researchers collaborated to develop and evaluate an approach designed to help parents help their children with reading at home[407]. This approach emphasised meaningful reading, contingent use of positive feedback, and the use of self-correction as a self-regulation strategy. Three tutoring strategies known as 'pause, prompt, and praise' had a powerful effect on the reading of low-progress 8- to 12-year-olds. Higher effects were obtained and improvement trajectories sustained when complementary in-school tutoring was included.

While large effects were obtained for this programme, it had a major weakness in terms of school–home involvement: the initial interventions were implemented and managed by external researchers without the active collaboration of schools. This may help explain why the gains were not sustained for many children: schools provided access to students and families but did not work with the external researchers to learn how to improve literacy teaching in the home and the classroom.

Reading Together has proven to be a cost-effective intervention to support parents in assisting their children with reading[408]. This programme was initially developed by a New Zealand reading advisor who, as part of her postgraduate degree, subsequently evaluated it using a randomised control trial[409]. The vignette in Box 20 describes the original intervention.

Box 20. Enhancing parental capacity to support student achievement

Reading Together, developed by Jeanne Biddulph, was an intervention that consisted of a series of four 75-minute workshops designed to give parents the knowledge and skills to help children with reading difficulties. By participating in this programme, parents were able to:

- develop basic understandings of the reading process and how children learn to read;
- learn strategies to constructively support their children's reading at home;
- reflect on and discuss their experiences with their children's reading;
- access and select reading material at an appropriate level from school and local libraries.

In developing and delivering the programme, particular emphasis was placed on the creation of educational partnerships that utilised the strengths of both family and school. Strategies included: (a) fostering genuine, collaborative, and non-threatening relationships between parents, children, and the workshop leader; (b) building a sense of community among parents, children, teachers, and local librarians involved in the workshops; (c) seeking

[407] McNaughton, S., Glynn, T., & Robinson, V. M. (1981). *Parents as remedial reading tutors*. Wellington: New Zealand Council for Educational Research.
Glynn, T., McNaughton, S., Robinson, V., & Quinn, (1979). *Remedial reading at home: Helping you to help your child*. Wellington: New Zealand Council for Educational Research.

[408] Biddulph, L. J. (1983). *A group programme to train parents of children with reading difficulties to tutor their children at home*. Unpublished master's thesis, University of Canterbury, Christchurch.

[409] Biddulph, L. J., & Tuck, B. (1983). *Assisting parents to help their children with reading at home*. Paper presented to the annual NZARE conference, Wellington.

parents' views, by using humour, reassurance, and personal contact, and (d) addressing barriers to involvement by addressing parental transport and childcare needs.

Biddulph found that, after three months, students whose parents had participated in the training made significantly greater gains in reading achievement than a matched control group, some of whom were receiving ongoing specialist assistance at school. Follow-up data collected 12 months later showed that these gains were sustained over time, with the students continuing to improve their reading at a rate similar to that of the average reader[410]. The effect size was .44 for gains on a standardised GAP test and 2.25 for gains in reading levels.

The programme was also found to have a range of additional positive effects, including improved student attitudes to reading, enhanced parental tutoring skills, parents using similar strategies with siblings, more positive family relationships, and ongoing high-trust school–parent relationships.

Over a period of two decades, through informal and professional learning networks, a specialist advisor supported school leaders to implement the programme in primary, intermediate, and secondary schools.

In 2004, based on research and development trials in two low-decile schools, the developer created a handbook for leaders[411] and a set of resources to support wider implementation of the programme. This scaling-up tool, the workshop leader's handbook, is a smart tool for leaders who want to forge cost-effective, school–home connections that will support children's literacy development. See Figure 26.

The school leadership team (principal, deputy principal, and assistant principal) of one particular low-decile school made very effective use of this smart tool, and an evaluation of how they went about it was commissioned to inform this BES[412]. Because the processes that this team used to build relational trust were so crucial to the success of the intervention, Case 5 explores them in greater depth.

In addition to establishing relational trust, other leadership practices highlighted by the evaluation included: involving the whole leadership team in the decision to adopt the programme; carefully aligning the programme with the school's reading programme; balancing use of external expertise with developing staff capability; providing whole-staff professional learning as a means of achieving staff ownership and positive engagement with parents; responding to parental evaluation feedback; and putting strategies and supports in place to make such intervention business-as-usual within the school. The principal decided that, in the first instance, the programme would be monitored via the school's regular assessment processes to avoid making implementation burdensome or heightening parents' anxiety about their children's achievement. A further reason for the impact of this programme is that it provides families with ongoing access to books through a relationship with the local librarian.

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[410] ibid.

[411] Biddulph, J. (2004). *Reading Together: A workshop leader's handbook.* Hamilton: The Biddulph Group. www.readingtogether.net.nz

[412] Tuck, B., Horgan, L., Franich, C., & Wards, M. (2007). *School leadership in a school–home partnership: Reading Together at St Joseph's School Otahuhu.* Report prepared for the Iterative Best Evidence Synthesis Programme, Pasifika Schooling Improvement and St Joseph's School. Wellington: Ministry of Education. www.educationcounts.govt.nz/goto/BES

Need

Leaders of self-managing schools need access to a cost-effective approach to supporting parents to effectively assist their children's learning.

Process

Research and development by reading advisor as postgraduate research. Original randomised controlled trial in and between schools with pre-, post-, and long-term testing and student case studies.	Informal sharing of the programme through informal and professional networks. Spread to primary, secondary and intermediate school through word-of-mouth. Some schools continue to use for two decades.	Collaborative research and development trials of the original programme in two low-decile schools by original developer with experienced literacy specialist to inform development of a smart tool.

Smart tool

Workshop leaders' handbook—underpinned by sound theories

Sound literacy theory and evidence:

- informs content and sequencing of activities;
- anticipates and addresses misconceptions;
- summarises for leaders information to support professional learning;
- makes opportunities for alignment with school programme transparent.

Adult education and learning theory informs design of the programme.

Theory and evidence regarding effective school–home partnerships inform the handbook.

Workshop leaders' handbook—fit for purpose

- Cost-effective for school and parents/whānau
- Is perceived by leaders to be viable and useful
- Enables student achievement gains in the large effect size range
- Guides leaders through organising and preparing workshops
- Provides supports for a carefully sequenced, reflective approach
- Attends to the practical aspects of managing the four workshops for parents/whānau
- Provides templates, samples, stories, poems, joke sheets, and additional resources to support parents and school staff
- Results in strengthened school–home relationships focused on student learning.

Figure 26. A smart tool is developed to meet a specific need

7.6 Connecting school and home to address antisocial behaviour

Antisocial behaviour in children and young people is an area of particular concern for families, schools, and communities. The long-term consequences of such behaviour are often serious:

> Children identified during childhood as children who engage in high rates of antisocial behaviour are at considerable risk for a large number of adverse outcomes as adults. These adverse outcomes include unemployment, psychiatric disorders, alcoholism and other forms of substance abuse, early pregnancy and early fatherhood, drunk driving convictions and loss of licence, criminal offending, higher rates of domestic violence, separation and divorce, higher rates of injury and hospitalisation, and a shortened life expectancy (p. 3)[413].

Effective pedagogy is an early port of call for preventing antisocial behaviour and for intervening where students are at risk. Where behaviour is so antisocial that teaching strategies fail, contingency management procedures based on behavioural analysis research are often effective. If leaders know what contingency management procedures involve, they are able to seek appropriate help and understand how their teachers can assist the specialist leading the intervention. A resource is available that outlines these procedures and provides New Zealand examples and evaluative data[414].

Leaders often need to manage the challenge that contingency management procedures can pose to the 'commonsense' of existing practice. For example:

> The research on antisocial development indicates that the first and primary aim of intervention work with antisocial children will usually be to reduce the frequency of punishment (for both inappropriate behaviour and academic failure) to a level comparable with that being experienced by normally developing age-mates—and to accomplish this as quickly as possible. This is because excessive punishment (and failure) is one of the main drivers of antisocial development (pp. 3–4).

An approach of this kind requires positive and trusting relationships between the child, the child's parents, and the teacher. Such relationships require a systematic, knowledgeable, and intensive intervention designed to develop prosocial behaviour. It begins with the teacher, guided by a specialist, carrying out careful observations to assess:

- what the child can do (that is, the skills that the intervention will build upon);
- what the child cannot yet do;
- the environmental conditions that reinforce and maintain antisocial responses;
- the conditions that hinder or prevent acquisition and mastery of the prosocial skills and academic skills that are critical for future development (p. 158).

The contingency management procedures are introduced and monitored by a trained specialist who assists teachers in:

- selecting specific behaviour-change goals;
- teaching skills that the child needs in order to achieve these goals;
- identifying rewards (for example, small privileges) that will give the child an incentive to achieve the goals;
- using a small, predetermined penalty (for example, a three-minute time-out or the loss of a privilege) for antisocial behaviour;

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[413] Church, R. J. (2003). *The definition, diagnosis and treatment of children and youth with severe behaviour difficulties.* Report to the Ministry of Education. Christchurch: Education Department, University of Canterbury. www.educationcounts.govt.nz/publications/special_education/15171

[414] ibid.

- carefully monitoring and recording the child's achievements and antisocial responses from hour to hour (p. 4).

Church highlights the importance of explicitly teaching antisocial students the skills they need and of integrating them into the peer group through a structured process in which everyone is aware of the goals and helps the students practise the desired behaviours in the context of everyday peer interactions. An important message for leaders is that all staff must share responsibility for monitoring the target student's behaviour throughout the school day and ensuring consistency in their approach.

The parents' part of the intervention involves them learning how to:

- monitor their child's whereabouts and behaviour;
- participate actively in their child's life;
- use encouragement, praise, and rewards to manage their child's behaviour at home;
- ensure that discipline is fair, timely, and appropriate for the misbehaviour;
- use effective, positive, conflict-resolution and problem-solving strategies (p. 4).

Hei Āwhina Mātua is a programme developed by the Poutama Pounamu Research and Development Centre to address concerns about teasing, taunting, stirring up trouble, shouting, yelling, not listening, and not following instructions. The range of collaborative problem-solving strategies utilised includes students learning to recognise the antecedents of particular behaviours, development of class and school-wide behaviour plans, and replacing a system of punishment for bad behaviour with rewards for good behaviour. An evaluation of pre- and post-programme data revealed high impacts, more instances of appropriate classroom and playground behaviour, and improved reading and writing in te reo Māori. The researchers concluded that factors crucial to the success of the programme included: a kaupapa Māori approach to ownership and control; direct student involvement; cross-generational, marae-based delivery; a school-wide approach to implementation and evaluation that involved parents and whānau; and a continuing research and development process for refining tools and training materials.

7.7 The need for teacher engagement and development

The pivotal role of teachers—in terms of their understanding and involvement—is a recurrent theme in the research on the impact of school–home interventions. Without teacher involvement, schools struggle to alter pedagogy, curricula, and behaviour management processes in ways that will sustain the gains from a school–home initiative. Leaders must carefully plan how the lessons of the initiative will be integrated into school and classroom practices.

If their involvement is to be productive, teachers need appropriate support and professional development. Mercado[415] reviewed a range of studies that highlighted how important it was for teachers to be open-minded and reflective when working with diverse students and their families:

> What teachers know about the lives of children outside of school affects their pedagogical practices. Inquiry needs to become a common pedagogical practice. In the light of the diversity that is inherent in all classrooms, having the means to construct knowledge about differences among learners may be more important and less problematic than having information on learners in pre-packaged forms (p. 690).

[415] Mercado, C. I. (2001). The learner: 'race,' 'ethnicity,' and linguistic difference. In V. Richardson (Ed.), *The handbook of research on teaching* (4th ed.). Washington DC: American Educational Research Association.

There is a body of evidence showing that many New Zealand teachers inadvertently bring deficit thinking to their understanding of cultural difference[416]. There is also evidence that pre-packaged information about 'other cultural groups' or 'other people's children' in teacher education can contribute to stereotyped teacher views that impede the effective teaching of diverse students[417]. The increasing diversity of New Zealand students in terms of ethnicity, language, mix of heritages, recency of immigration, and family structure means that teachers need to understand a wider range of families and cultural contexts[418]. Since teacher understanding is so important, leaders need to ensure that the work done by cultural brokers, such as visiting teachers and community workers, does not usurp the role of the teacher.

The Flaxmere Project was a large-scale intervention involving the families of children in low-decile schools on New Zealand's East Coast. It aimed to address a shortage of educational resources in homes (including access to computers) and to increase understanding of the work of schools. This three-year schooling improvement initiative[419] was designed to "introduce the language of schooling into the homes" by involving parents in their children's education in order to improve student outcomes (p. 5). The project consisted of numerous strategies, ranging from instructional activities in numeracy and literacy through to attitude and social skills development. The main strategies were provision of computers in homes, before- and after-school homework centres, and use of home–school liaison persons (HSLPs) to implement many of the activities.

The evaluators attributed the Flaxmere Project's comparatively low impact on student outcomes to its focus on families and on activities outside the classroom and a consequential failure to gain the support and involvement of teachers. From the outset, teachers felt that the project was outside their sphere. It was not until the third year that they understood the purpose of the project and the role of the HSLPs. They then began to experience some benefits. (For example, they said that HSLP feedback about their students' home lives had altered how they saw them in the classroom.) The evaluators concluded that the future of the Flaxmere Project should be aimed specifically at finding ways to help the teachers capitalise on the major family and child changes and to convert these positive attitudes into enhanced achievement.

Several positive examples of the use of cultural brokers, where they collaborate with rather than supplant the role of teachers, are available. For example, the elders who acted as school–home liaison workers in the highly effective literacy project developed by the Poutama Pounamu Research and Development Centre supported both teachers and parents at different stages of the process[420]. Cultural brokers who mediate between schools and recent-immigrant and refugee families have contributed to improved school–home communications, relationships, and student outcomes for these groups[421].

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[416] Alton-Lee, A. (2003). *Quality teaching for diverse students in schooling: Best evidence synthesis iteration*. Wellington: Ministry of Education.

[417] Epstein, J. L. (2001). *School, family, and community partnerships: Preparing educators and improving schools.* Boulder, CO: Westview Press.
Lawrence, S. M., & Daniel Tatum, B. (1997). Teachers in transition: The impact of antiracist professional development on classroom practice. *Teachers College Record, 99*(1), pp. 162–178.

[418] Biddulph, F., Biddulph, J., & Biddulph C. (2003). *The complexity of community and family influences on children's achievement in New Zealand: Best evidence synthesis iteration.* Wellington: Ministry of Education.

[419] Clinton, J., Hattie, J., & Dixon, R. (2007). *Evaluation of the Flaxmere Project: When families learn the language of school.* Report prepared for the Ministry of Education. Wellington: Ministry of Education. www.educationcounts.edcentre.govt.nz/research/index.html

[420] Glynn, T., & Berryman, M. (2003). A community elder's role in improving reading and writing for Māori students. In R. Barnard & T. Glynn (Eds.) *Bilingual children's language and literacy development.* Clevedon: Multilingual Matters.

[421] Hamilton, R., Anderson, A., Frater-Mathieson, K., Loewen, S., & Moore, D. (2000). *Literature review: Interventions for refugee children in New Zealand schools: Models, methods and best practice*. Report prepared for the Ministry of Education. Auckland: University of Auckland.
Abdi. A. (2003). *Enhancing educational access for the Somali community through positive school management and parental involvement.* Unpublished master's dissertation, University of Waikato, Hamilton, New Zealand.

7.8 Gaps in research and development

Our meta-analysis revealed that all the highest-impact interventions were informed by cycles of research and development (R & D) that optimised their usefulness and effectiveness.

From an R & D perspective, the positive story of this chapter is that school leaders wanting to build better, more productive relationships with their community can turn to a worthwhile evidence base for effective strategies. With the exception of homework practices, strategies can be found that have been developed and evaluated in New Zealand. In most cases, the R & D has been conducted by universities and schools working collaboratively; in others, individual teachers have used graduate study opportunities to develop strategies for promoting effective school–home partnerships.

This means that school leaders do not have to start from square one or engage in blind trial and error when seeking strategies to engage parental help with reading, address behaviour problems, ease transitions for refugee or immigrant students, or increase the educational impact of homework. Given the depth and complexity of the knowledge that underpins effective school–home strategies—and the possibility of negative impacts—it is neither effective nor efficient for schools to address these challenges on their own.

From an R & D perspective, the negative story of this chapter is that there is little in the New Zealand system to ensure that school leaders, teacher educators, and policy makers are able to access and use this knowledge base. Pasifika students may not be benefiting from powerful curriculum change of the kind described in McNeight's study, parents may not know how to effectively help a child who is struggling with reading, and schools may not know how to develop homework policies that actually work, even though New Zealand evidence is available about how to address each of these challenges. This evidence may be inaccessible if those with the understanding have moved on, if funding has dried up, or if there is no continuing, expert-informed R & D adapting and refining strategies for different contexts and different groups of students.

Our analysis in this chapter identifies a number of major areas where new R & D would be of value to school leaders. Homework policy and practice is one of these. Given the evidence that homework, when informed by R & D, can have a high positive impact and, when not, may have a negative effect, there is a case for a national strategy to develop and trial quality homework policy and practice. R & D is needed on initiatives to forge educationally powerful connections between English-medium schools and whānau, iwi, and communities. R & D is needed to show how schools can draw on school–industry links in ways that impact positively on student outcomes. O'Sullivan[422] highlights the potential value of such relationships but warns that there is a risk they may compromise educational purposes. R & D is also needed on how electronic media and the Internet can mediate effective connections between schools and homes, whānau, and communities.

Even where there are powerful examples of R & D, it can be hard to find relevant expertise within the research sector. We found, for example, that there was a dearth of published or recent, accessible reports relating to school–home interventions using contingency procedures of the kind described by Church[423] (see section 7.6). The challenges posed by antisocial behaviour in schools merit wider R & D and greater support from expertise in the tertiary sector.

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[422] O'Sullivan, G. (2001). *Technology education and industry links: An exploratory case study*. Unpublished master's thesis, Massey University, Palmerston North.

[423] Church, R. J. (2003). *The definition, diagnosis and treatment of children and youth with severe behaviour difficulties.* Report to the Ministry of Education. Christchurch: Education Department, University of Canterbury.

Research has also paid little explicit attention to the role of school leaders in mediating educationally powerful connections with family/whānau and communities. Case 5 indicates how useful such research can be in terms of providing practical support for leaders in their work.

7.9 Summary

The purpose of school–home involvement is to connect in-school and out-of-school learning in ways that will support valued outcomes for students. If effective connections are to be developed, teachers need to value the educational cultures of their students' families and communities, and parents need to learn about and value the educational culture of the school. The principle of ako—reciprocal learning and teaching—is therefore fundamental to developing connections that work.

Making connections is part of good pedagogy. Evidence from a variety of contexts shows that effectively integrating community resources into lessons can lead to major gains in achievement, enhanced learner identities, and reduced disparities across different curriculum areas. What is needed is pedagogical leadership that is committed to creating connections between schools and family, whānau, and communities—connections, that is, to the core business of teaching and learning.

Where the gap between the educational cultures of home and school is wide, bridging it requires careful planning on the part of teachers. Large effects have been obtained for units of work in which students mediate the use of community resources, parents contribute to units, and curriculum resources are based on indigenous knowledge. There is evidence that research and development can play a significant role in developing curricular/teaching resources and practices that promote strong links to the communities of diverse learners.

Although most parents attempt to help their children with reading, this can be a frustrating and negative experience for both parents and children. This chapter has illustrated how brief, well-designed interventions to support parents can have dramatic, positive impacts on students' achievement and their enjoyment of literacy. Further, such interventions can counter the adverse effects associated with parent help, negative controlling, and (to an extent) lack of parental involvement. Effective strategies have been developed for both English- and Māori-medium literacy.

Homework is educationally beneficial when it is properly integrated into lessons and receives timely teacher feedback. Carefully planned homework that includes activities that require student–caregiver interaction is especially powerful. There is need for leadership in the whole area of homework: particularly in reviewing and developing homework practices (especially for young children) to ensure that it is not actually harmful, that time spent on homework is beneficial, and that effective supports are available for parents.

Ensuring that policies and practices promote productive parent involvement and good teacher–parent relationships is an important leadership responsibility. The negligible effect obtained in this meta-analysis for teacher–parent interactions suggests that such interactions are often a response to problems rather than proactive engagement in support of student success. The finding that large effects are associated with proactive strategies designed to establish good school–home relationships signals an alternative approach. Workshops for parents and students that are designed to encourage young people to aspire to tertiary study and to support their planning have been found to be very effective.

There are helpful messages that schools can give parents and communities about the ways in which they can support their children's learning. These include the importance of high aspirations, providing encouragement, communicating about school, getting involved with the school, supporting homework, and providing emotional and other support. All these can have continuing, small-to-moderate effects on student outcomes. Early access to a computer at home

makes a difference to achievement, over and above the effects of family income and mother's education. Leaders can also communicate to parents that unhelpful 'help' with homework and surveillance are associated with poorer outcomes.

No matter what the strategy, teacher attitudes and skills are crucial for its educational effectiveness. Parents will not come into the school and teachers will be reluctant participants if the level of mutual trust is low. Building respectful relationships—which may involve challenging disrespect (on the part of either teachers or parents)—is part of any leader's work. In the next chapter, we say a lot more about the relationship-building skills needed for developing school–home partnerships that will serve the education of students. Case 5 illustrates these relationship skills at work in the context of a school–home literacy project.

8. The knowledge, skills, and dispositions involved in effective educational leadership[424]

The purpose of this chapter is to identify the leadership knowledge, skills, and dispositions (KSDs) that make a difference to student outcomes in both Māori- and English-medium classrooms and schools.

There are two possible evidence-based approaches to identifying the KSDs that underpin effective leadership, where effectiveness is measured in terms of impact on students. The first is to search for studies that have directly tested the relationship between selected KSDs and student outcomes. This is the familiar, forward mapping strategy. As we were able to find very few studies relating leadership practices to student outcomes, it was predictable that the evidence base on the relationship between KSDs and student outcomes would be even smaller. The second approach is to extend the backward mapping strategy by asking what knowledge, skills, and dispositions leadership needs to engage in the practices associated with the dimensions summarised in Figure 27. This second approach enables us to draw on studies that link particular leadership capabilities with one or more of the dimensions, even if the studies concerned do not include student outcome data. In this way, we can make tentative links between leadership knowledge, skills, and dispositions and student outcomes. We have used both forward and backward mapping approaches in this chapter, though the latter has supplied the majority of our evidence.

8.1 Theoretical explanations of the knowledge, skills, and dispositions

Lists of leadership knowledge, skills, and dispositions are helpful only if accompanied by discussion of the theory that helps explain why and how each is important. Take problem solving, for example. When we describe research that suggests problem-solving skills are important, we need to explain what we mean by problem solving and why this skill is important for effective school leadership. In short, our aim is not only to identify which skills, knowledge, and dispositions are important but also to provide the theory that explains how they work. Recent evidence shows that it is this combination of practical insight (what works) and underpinning theory (why it works) that changes professional practice in ways that make a difference for students[425].

This approach to theory is very different from that traditionally found in courses in educational leadership and administration. These typically present learners with a range of leadership theories and then ask them to apply them to particular contexts. Instead, we start with sets of powerful leadership practices (dimensions) and then explicate the theory and principles that support both a deep understanding of those practices and the ability to adapt them to a range of contexts.

In our discussion of the dimensions in chapters 5, 6, and 7, we provide general guidance about the types of leadership activity that are most likely to deliver improved student outcomes; that is, *what* leaders should focus on. In this chapter, we address the *how* question that is implicit in the dimensions. As explained in section 3.3, Taking account of context (page 71), we cannot

[424] We use the term 'educational leadership' rather than 'educational leaders' because our concern is to identify effective *educational leadership practices* rather than effective *educational leaders*.

[425] Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best evidence synthesis iteration*. Wellington: Ministry of Education.

provide detailed, situation-specific answers to this question. Rather, we focus on the KSDs, which enable leaders to figure out how to apply the different dimensions in their own schools.

8.2 Diverse skill sets and knowledge bases underpin each dimension

We introduce our approach to the identification of leadership KSDs by discussing Table 15, which summarises our analysis of the KSDs that underpin Dimension 1: Establishing goals and expectations. While not exhaustive, this analysis nevertheless indicates the range of knowledge and skills involved in just one leadership dimension:

(i) Leaders need to be able to explain to staff why they want to set goals and how they believe obstacles can be overcome. This requires some knowledge of goal-setting theory and the empirical evidence for the value of goal setting (see Dimension A: Setting educational goals, page 106).

(ii) Social psychological theory and research on goal setting tells leaders *how* to set goals but says nothing about *which* goals to set. The knowledge needed to answer this question is educational; it relates to national curricula and overarching philosophies, learners, how disciplines are structured, and pedagogical content knowledge[426]. Since the New Zealand curriculum requires community input into school curriculum design, it is also important to know what the community values and why[427].

(iii) The evidence on goal setting showed that teachers in high-performing schools reported greater clarity and consensus concerning school goals than those in otherwise similar, low-performing schools. This suggests that the ability to prioritise, resolve conflicts, and settle on clear, specific goals is very important for the purposes of gaining commitment to goals.

Table 15. The knowledge, skills, and dispositions embedded in the goal-setting dimension

Goal setting	
Dimension name	**Methodology**
1. Establishing goals and expectations	Forward mapping dimension
A. Setting educational goals	Backward mapping dimension
Knowledge, skills, and dispositions required for effective goal setting	
Knowledge area	**Expanded meaning**
(i) How to set goals	Knowledge of goal-setting theory, including: why goal setting is important, the conditions under which it works, and how to overcome potential pitfalls.

[426] The term 'pedagogical content knowledge' was first coined by Lee Shulman who described it as the combination of the deep knowledge of subject matter, combined with knowledge of how to teach it and knowledge of how students learn its specific concepts and content. Schulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review, 57*(1), pp. 1–22.

[427] Ministry of Education (2007a). *The New Zealand curriculum.* Wellington: Author.

(ii) What to set as a goal	Ability to make decisions about the *relative* importance of various learning outcomes; that is, what students will learn, in the light of: • knowledge of what is valued in the national curriculum and in relevant overarching philosophies (for example, the special character of integrated schools, the philosophy of kura kaupapa Māori operating in accordance with Te Aho Matua); • knowledge of what is valued by the local community; • knowledge of what your students currently know in relation to a set of valued learning outcomes. Ability to envisage and expect achievement of more challenging goals: • knowledge of how to sequence learning outcomes (social and academic learning progressions); • knowledge of the conceptual structure of the relevant disciplines/competencies so that learning outcomes can be framed in ways that induct students into those disciplines or competencies (for example, mathematics, critical thinking).
(iii) How to gain goal commitment	• Explain/demonstrate how the alternative, more challenging, learning outcomes are credible and attainable. • Identify/listen to barriers to goal attainment and strategise how to overcome them. • Gain sufficient agreement about goals to ensure a coordinated teaching approach. • Clearly communicate the agreed goals and provide non-defensive explanations for their prioritisation. • Lead the teacher learning that is necessary to help teachers meet the goals.

This brief analysis of the KSDs for goal setting is indicative of the scope, depth, and diversity of the knowledge bases and skill sets needed for effective school leadership. If we now multiply it by the remaining dimensions, we have a powerful argument for focusing on distributed rather than positional leadership, because the reality is that the required expertise is far greater than could be acquired by any one head of faculty or department, assistant or deputy principal, or principal. *It is crucial, therefore, that this chapter is not read as a statement of the competencies required by any one person. Rather, it is a statement of the total leadership capacity that needs to be available to every New Zealand school.* The challenge is to make this breadth and depth of expertise available to all schools—in the form of smart tools and knowledgeable people, sourced from within or outside the school. This is a particular concern for teaching principals, who may have limited access to the range of expertise implied by the leadership dimensions we have identified.

Appendix 8.1 comprises an analysis of the KSDs for all eight dimensions. It reveals considerable overlap. For example, pedagogical content knowledge and relationship skills are associated with nearly every dimension. These overlaps have made it possible for us to organise the remainder of the chapter around the common KSDs instead of repeating material under multiple dimensions. The appendix can be used to cross reference the KSDs against the various dimensions.

It is important to restate the fact that the KSDs listed in Appendix 8.1 are, on the whole, derived from a logical analysis of the leadership dimensions. They are not derived from empirical research showing that leaders with more of a particular knowledge, skill, or disposition are more likely to engage in the practices described by the dimensions. Smylie and Bennett, writing about the state of research on leadership training, say:

> We contend that knowledge of effective leadership practices is not the same thing as knowledge of the capacities required for enactment. Our understanding of effective school

leadership practice has grown tremendously in recent years … However, our understanding of the knowledge, skills, and dispositions required for school leaders to be effective is much less well developed[428].

8.3 An introduction to four sets of knowledge, skills, and dispositions

Figure 27 provides an overview of this chapter, showing the KSDs (centre) that are the focus of the remaining sections and the dimensions to which they relate.

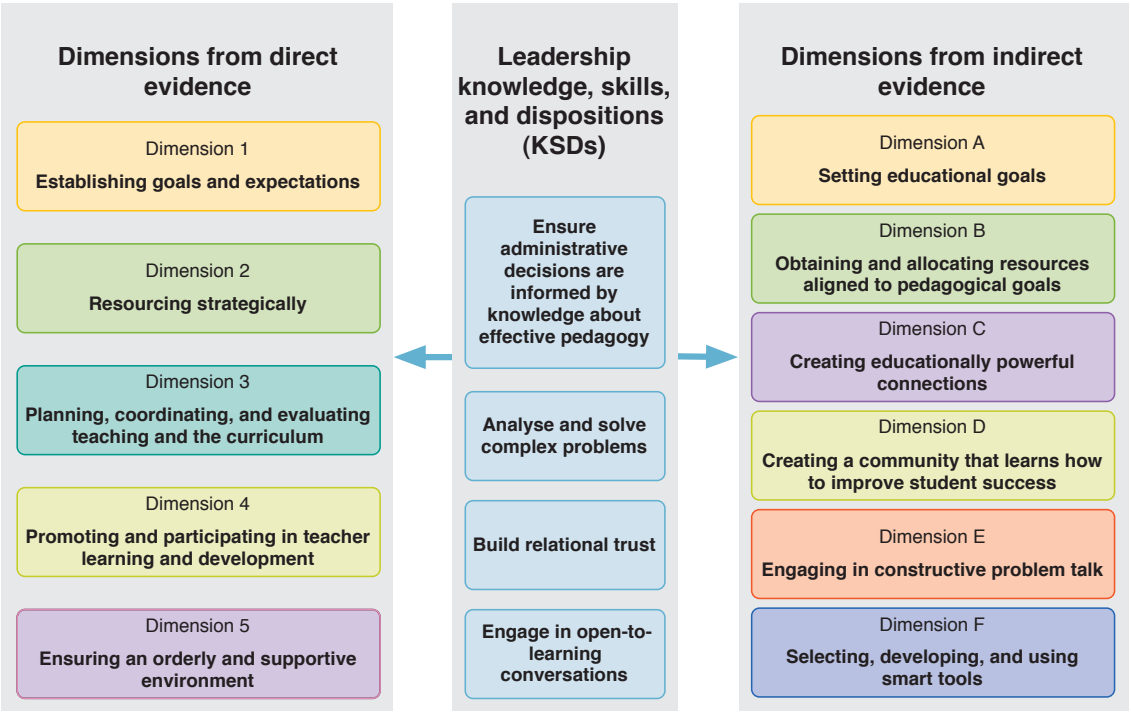

Figure 27. Leadership knowledge, skills, and dispositions that support effective leadership

The following four sections on pedagogically informed decision making, problem solving, relational trust, and open-to-learning conversations are all based on our earlier analysis of the dimensions of effective leadership. In order to maintain a holistic, practice-based perspective, we have avoided trying to draw firm distinctions between what counts as knowledge, skills, or dispositions. Instead, we have tried to capture the complex, overlapping, and embedded nature of each of the four KSDs—each requires seamless integration of knowledge, skills, and dispositions.

It is likely that additional KSDs may also be important for school leadership. But the four that we have named do have an evidence base, and they are broad enough to subsume many of the qualities that are generally believed to be important for successful school leadership. We refrain from stating which are most important, because the task-embedded nature of leadership means that different emphases are required for different tasks.

[428] Smylie, M. A., & Bennett, A. (2005). What do we know about developing school leaders? A look at existing research and next steps for new study. In W. A. Firestone & C. Riehl (Eds.), *A new agenda for research in educational leadership*. New York: Teachers College Press, p. 141.

8.3.1 Ensure administrative decisions are informed by knowledge about effective pedagogy

The evidence reviewed so far shows how important it is that school leaders get directly involved with their staff in improving teaching and learning, and in the teacher learning on which the achieving of agreed goals depends. But what do leaders need to know to get productively involved? First, they need a working knowledge of how students learn and of the research evidence on quality teaching, where quality is judged by impact on student outcomes[429]. Second (and even more importantly), they need to know how to use this knowledge to make administrative decisions that both support and require effective teaching and learning. In short, leaders need not only to be knowledgeable about pedagogy, curriculum, and assessment, but also to be skilled in using this knowledge to make pedagogically sound administrative decisions in areas such as student grouping, reporting to parents, teacher appraisal, and homework.

One of the goals of the BES Programme is to make evidence about effective pedagogy accessible to practitioners. In Appendix 8.2, we provide a summary of the main findings from the *Quality Teaching for Diverse Students in Schooling BES* and subsequent BESs. This appendix should prove a useful resource for school leaders wanting to update their pedagogical knowledge so that it can better inform their administrative decision making. It could also be used for teacher professional development and discussion.

In Chapter 5, we discussed a study (page 101) that showed that principals in high-achieving primary schools were more likely to be nominated by their staff as sources of advice about teaching than the principals in otherwise similar, lower-achieving schools[430]. The authors suggest that pedagogical knowledge can be an important source of principal influence on teachers. Box 21 illustrates knowledge-based influence at work in a New Zealand school.

Box 21. Decision making based on sound knowledge wins respect

The principal of a South Auckland primary school serving a mainly Pasifika community did a thorough investigation of the effectiveness of a parent reading programme before deciding with her senior management team to trial it in the school. She researched the programme, its suitability for the school community, and its alignment with the school's current reading programme before discussing it with her associate and deputy principals. Knowing that she did not make decisions 'on a whim' gave these colleagues great confidence in their principal:

"Liz wouldn't waste our time … that is the trust we have … we know she would have researched things … She would have thought about it … seen the value"[431].

Most school leaders sincerely believe that they make administrative decisions that are in the best interests of students. But in this section, we offer a detailed, research-based account that reveals the depth of pedagogical understanding that may be required to discriminate between pedagogically sound and unsound administrative decisions. In addition, we explain how different pedagogical goals require different types of pedagogical knowledge. For example, what leaders need to know to help teachers lift the computational fluency of students is very different from what they need to know if the goal is greater understanding of maths concepts,

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[429] The Iterative Best Evidence Synthesis Programme provides a number of resources that draw together the evidence on quality teaching from New Zealand and international studies. www.educationcounts.govt.nz/goto/BES
We include a summary of some of this material in Appendix 8.2 to give leaders a quick entry into this knowledge base. The summary is in a form suitable for use in teacher professional development and discussion.

[430] Friedkin, N. E., & Slater, M. R. (1994). School leadership and performance: A social network approach. *Sociology of Education, 67*(2), pp. 139–157.

[431] Tuck, B., Horgan. L., Franich, C., & Wards, M. (2007). *Reading together at St Joseph's Primary School: School leadership in a school–home partnership.* Wellington: Ministry of Education, p. 16.

expressed as improved problem solving. As we will see, different pedagogical purposes also require different types of administrative practice.

The evidence on which this discussion draws comes from a US research and development programme in which primary and secondary principals from schools engaged in a national mathematics improvement project attended workshops designed to enhance their pedagogical leadership[432]. The research programme addressed the question, "What should school administrators know and be able to do to develop maths instruction where children become skilled in mathematical reasoning in addition to mathematical computation and procedures?"[433]

The researchers conducted a series of school-based observations of the five participating principals, documenting how their knowledge of mathematics and the way it was learned shaped their classroom observations. All were committed to a constructivist[434] approach to the learning and teaching of mathematics and were in various stages of determining what this meant for their administrative practice. Table 16 summarises how the leaders' understandings shaped what they observed and what they discussed with the teacher. While this research focused on principals, its findings are equally applicable to maths curriculum leaders and heads of department.

Table 16. The relationship between leaders' understanding of maths pedagogy and their conduct of classroom observations

Nature of leader's pedagogical understanding	Implications for leader's conduct of classroom observations
Behaviourist pedagogy	Leader focuses on the observable features of the lesson; for example, notes that the teacher begins with a short review and gives clear and detailed instructions.
Constructivist pedagogy—knowledge of surface features only	Leader notices and gives teacher feedback on the observable aspects of constructivist pedagogy; for example, does teacher ask sufficient open-ended questions? Do they check for a variety of answers? Leader is not able to engage with teacher concerning the intellectual content of lesson; for example, the validity and sophistication of students' mathematical thinking and how the teacher is promoting that thinking.
Constructivist pedagogy—knowledge of deeper features	Leader observes and evaluates how well the teacher is extending the students' mathematical reasoning. This requires attending to and recording the whole teacher–student exchange to judge how well the teacher's questions connect with the students' reasoning. To make such judgments, the leader observer must think through the relevant mathematical ideas.

The first row describes a principal who, although committed to a constructivist view of how students learn to reason mathematically, did not understand it well enough to judge how the teacher supported such learning. His classroom observations were restricted to the teacher's behaviours and did not focus on the mathematical understandings of either the student or the teacher.

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[432] Nelson, B. S., & Sassi, A. (2000). Shifting approaches to supervision: The case of mathematics supervision. *Educational Administration Quarterly, 36*(4), pp. 553–584;
Stein, M. K., & Nelson, B. S. (2003). Leadership content knowledge. *Educational Evaluation and Policy Analysis, 25*, pp. 423–448;
Nelson, B. S., & Sassi, A. (2005). *The effective principal: Instructional leadership for high quality learning*. Columbia, NY: Teachers College Press.

[433] ibid.

[434] The authors define constructivism as "the idea that children actively construct mathematical knowledge … through interaction with the social and physical environment and through the extension and reorganisation of their own mental constructs." ibid., p. 32. For an excellent, accessible, evidence-based, New Zealand resource on a constructivist view of student learning, see Nuthall, G. (2007). *The hidden lives of learners*. Wellington: NZCER.

The second row describes a principal who, having progressed to a surface-level understanding of constructivist pedagogy, focused on the observable aspects of constructivist teaching. This leader did not have enough mathematical knowledge to engage with teachers about how they were promoting the mathematical reasoning and conceptual understanding of their students.

The third row describes a principal whose deeper knowledge of constructivist pedagogy and mathematics enabled her to evaluate the extent to which the teacher's questions were linked to and extended the students' mathematical understandings. Her feedback went beyond generic teaching activity and into discussion of the mathematical understandings of teacher and students. Her knowledge of constructivist pedagogy also led her to change her observation method. She recognised that, by using a checklist of teacher behaviours, she could inadvertently be encouraging unresponsive teaching because she was not attending to how the teacher was responding to student thinking. Using a more narrative form of recording, she found that she could focus better on how the teacher's activity was linked to her students' understandings and misunderstandings.

Nelson and Sassi[435] discuss several other ways in which shifts in what they call 'leadership content knowledge' lead to changed administrative practice[436]. As one principal learned more about maths and maths pedagogy, he changed the process by which textbooks were selected. Pragmatic considerations (such as cost, coverage of content, ease of use for teachers, and attractiveness to students) gave way to one overriding consideration: 'What kinds of mathematical thinkers are produced by this text?' This key consideration meant that those involved in selecting a new textbook had to discuss the mathematical ideas in prospective texts. The principal's mathematical and pedagogical content knowledge enabled him to make text selection a mathematical as well as an administrative decision; write a series of questions to ensure that the selection committee considered the mathematics being promoted in the various alternatives; and notice when the committee was lending too much weight to practical, rather than mathematical, considerations.

Another example of leadership content knowledge shaping administrative practice concerns a series of staff meetings in which teachers discussed how students should be grouped for mathematics. The principal in this situation had a growing knowledge of mathematics and mathematical pedagogy and a strong commitment to equity. As a result, he was able to lead his staff to think seriously about grouping in terms of its implications for pedagogy and equity. This decision-making process is the subject of Case 3.

Nelson and Sassi describe how some of the principals involved in their research began to see connections between the development of mathematical reasoning and the wider intellectual culture of their schools: if students develop the capacity to reason mathematically by engaging with alternative solution paths, then they and their teachers need to listen deeply to one another. Probing each others' ideas takes time. This has implications for the pace of classroom dialogue and the time devoted to developing key concepts. Norms of intellectual risk taking also need to be established so that the classroom becomes a place where students expose their own ideas to scrutiny and engage with the ideas of others.

In summary, Nelson and Sassi have shown how leaders with a conceptual understanding of (i) mathematics and (ii) how students become mathematical thinkers were able to talk directly with teachers about their approaches to maths teaching and the mathematical understandings of their students. The same knowledge enabled them to talk more confidently with parents about how their children learned mathematics and what teachers were doing to support that learning. Leaders who had strong pedagogical content knowledge were able to recognise that teaching involved more than didactic skills or general facilitation of student discussion. They could use their pedagogical knowledge to evaluate and discuss a teacher's attempt to deepen a

[435] Nelson & Sassi (2005), op. cit.

[436] Leadership content knowledge is defined as "that knowledge of subjects and how students learn them that is used by administrators when they function as instructional leaders." Stein, M. K., & Nelson, B. S. (2003). Leadership content knowledge. *Educational Evaluation and Policy Analysis, 25*, pp. 423–448, see p. 445.

child's mathematical understanding. Some used their growing knowledge of mathematics and maths pedagogy, together with what they already knew about creating professional community and strengthening intellectual culture, to change their schools in ways that supported the improvement project's overaching goal of deeper mathematical reasoning and understanding. With such knowledge, leaders were no longer restricted to managing the organisational processes around teaching—they could work directly with teachers to improve it.

This innovative research and development programme raises a number of questions about the scope and depth of curriculum and pedagogical knowledge needed to lead pedagogical improvement across the curriculum. Can leaders whose mathematical content knowledge is weak not lead pedagogical improvement in maths? What are the implications for principals of large schools, who delegate improvement of maths teaching to a head of department or faculty? Is it realistic to expect a principal to be an expert across several curriculum areas?

There are few research-based answers to these important questions. Stein and Nelson, however, offer some tentative advice[437]. First, they argue that principals need in-depth and up-to-date knowledge of at least one curriculum area. By in-depth knowledge they mean (i) knowledge of the subject matter (including understanding of the rules of evidence, modes of inquiry, and key concepts) and (ii) pedagogical content knowledge (comprising a detailed understanding of how students develop knowledge of the subject and how to present content in ways that promote their learning). If principals have depth of knowledge in one curriculum area, they will appreciate the depth of knowledge required to lead improvement of teaching and learning in the others.

Second, Stein and Nelson argue for developing and recruiting staff to grow the fund of pedagogical expertise available to the school. The knowledge base concerning effective teaching for diverse learners is now so extensive and complex, it cannot possibly be mastered by one person. Much of the leadership and expertise described in the New Zealand research reviewed for this synthesis has come not from principals, but from external facilitators working in partnership with school curriculum leaders. We have already recognised the importance of recruiting expertise from outside the school (see page 112–113), but this raises another question: how much knowledge does a principal need to recruit appropriate expertise and evaluate the work of those who share responsibility for leading pedagogical improvement?

Stein and Nelson propose that principals who have in-depth knowledge of at least one curriculum area are in a much better position (than those without such knowledge) to recruit, support, and evaluate pedagogical leadership in their non-specialist areas. Their specialist knowledge, while often not directly transferable to other learning areas, will indicate the kinds of expertise to look for and the kinds of evidence that will help them recognise it.

Leaders need opportunities to deepen and update their knowledge of teaching and learning and to discuss the shifts in school culture and teaching culture that will support the achievement of valued outcomes. As Spillane and Seashore Louis note[438]:

> Without an understanding of the knowledge necessary for teachers to teach well—content knowledge, general pedagogical knowledge, content-specific pedagogical knowledge, curricular knowledge and knowledge of learners—school leaders will be unable to perform essential school improvement functions such as monitoring instruction and supporting teacher development (p. 97).

Principals and heads of curriculum areas who do not understand constructivism, for example, may inadvertently create administrative procedures (such as classroom observation checklists) that are in conflict with the kinds of teaching needed to achieve valued outcomes[439].

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[437] ibid.

[438] Spillane, J. P., & Seashore Louis, K. (2002). School improvement process and practices: Professional learning for building instructional capacity. In J. Murphy (Ed.), *The educational leadership challenge: Redefining leadership for the 21st century* (pp. 83–104). Chicago: University of Chicago Press.

[439] Prestine, N. A., & Nelson, B. S. (2005). How can educational leaders support and promote teaching and learning? In W. A. Firestone & C. Riehl (Eds.), *A new agenda: Directions for research on educational leadership* (pp. 46–60). New York: Teachers College Press.

There is evidence from a US study[440] of primary schools involved in whole-school reform initiatives that professional development that focuses on instructional leadership can increase the levels of such leadership in schools. The correlation was particularly strong where the professional development challenged leaders to reflect upon their current practice. Also, leaders whose university studies had included more courses on literacy and numeracy engaged in more pedagogical leadership than those who had taken fewer such courses[441]. The suggestion is, therefore, that pedagogical leadership can be strengthened by professional development courses and qualifications that specifically teach the knowledge, skills, and dispositions that underpin it.

The findings of chapters 4–7 all pointed to the fact that the more pedagogically focused leadership is, the stronger will be its indirect impact on valued student outcomes. This section on pedagogically informed administrative decision making has revealed just a little of what is involved in increasing this type of leadership. Quantity and quality are both issues. Increased pedagogical leadership that involves, for example, more classroom observations that merely evaluate teachers' conformity to a behavioural checklist will do nothing to create the conditions that they need to help their students develop such competencies as critical thinking or problem solving. The challenge is to ensure that increased pedagogical leadership is informed by sound pedagogical thinking.

8.3.2 Analyse and solve complex problems

Appendix 8.1 lists many of the skills, types of knowledge, and dispositions that are relevant to effective school leadership. Yet there is at least one respect in which it is incomplete. Take, for example, the task 'Understands and uses student data to collaboratively diagnose and resolve teaching problems and to set future goals' (see page 266, under Dimension 3: Planning, coordinating, and evaluating teaching and the curriculum). Leaders who have mastered the knowledge and skills required for collaborative, evidence-based teaching improvement may still be unprepared to lead such work in their own schools because they are unable to overcome the challenges that their own particular contexts present.

These challenges might include lack of a good infrastructure for collecting and recording student data and staff concern about how assessment information will be used. In such situations, the question is how to strengthen evidence-based assessment practices in conditions that are not altogether favourable for the achievement of this goal. For each task listed in Appendix 8.1, the same is true: it must be accomplished in a manner that takes local conditions fully into account. This will involve a problem-solving process, which is why we view problem solving as central to all leadership dimensions.

The most important part of problem solving is specifying the problem's constraints—the things that must to be taken into account when coming up with an adequate solution. The more clearly the constraints are specified, the easier it is to identify the best possible solution. Constraints come in many guises. These include values and beliefs, regulatory requirements, material conditions (such as the financial and human resources available), and school practices with which any proposed solution must articulate. By specifying the constraints, one is interpreting or formulating the problem.

For an illustration, we return to the task of developing collaborative, evidence-based teaching practice. Imagine that a principal has led a discussion on the need to strengthen the collaborative use and reporting of assessment information. The left-hand column of Table 17 is a summary of issues raised by staff in preliminary discussions on the type of collective assessment practice they wish to develop. The right-hand column lists the constraints that are implied by their

[440] Camburn, E., Rowan, B., & Taylor, J. E. (2003). Distributed leadership in schools: The case of elementary schools adopting comprehensive school reform models. *Educational Evaluation and Policy Analysis, 25*, pp. 347–373.

[441] This variable was defined as the number of post-secondary courses the leader reports having taken in English or a related language arts field, methods of teaching literacy, mathematics, and methods of teaching mathematics. ibid., p. 371.

comments. For example, the comment 'In this political climate the information will be used to further bash teachers' implies that to be acceptable, a solution must protect teachers from misuse of test information. Those who feel this to be a genuine constraint may not accept any form of collective assessment practice if they believe the risk of misuse cannot be reduced to an acceptable level. As the list of constraints shows, there is much more to solving this problem than mastering the knowledge and skills associated with collective interpretation and use of assessment data.

Table 17. A hypothetical staff discusses constraints on collective assessment practice[442]

Staff comments	Implied constraints
'The Board will misinterpret the information.'	Accuracy of interpretation
'It must be useful for my teaching.'	Usefulness to classroom teachers
'As director of curriculum, I need to know whether our programmes are effective.'	Usefulness for programme evaluation
'We are legally required to inform the Board and the government.'	Accountability to external stakeholders
'In this political climate the information will be used to further bash teachers.'	Need to protect teachers from misuse of information
'It must be computerised to be manageable.'	Efficiency

Problems are solved by discovering or designing practices that adequately take account of the constraints. For our hypothetical scenario, this will involve developing procedures that provide reliable information, have utility for both classroom teaching and programme evaluation, satisfy external accountabilities, protect teachers from possible misuse of information, and are efficient. It is obvious that there is tension between the different constraints. Indeed, it could be argued that they are irreconcilable. Achievement data that can be easily aggregated and reported to external stakeholders may tell teachers that improvement is needed but provide little diagnostic information about student difficulties. If more detailed diagnostic data are collected, this will address the constraint that data must be useful for classroom teachers but may unacceptably violate the requirement for efficiency. While this example may seem extreme, it is precisely this kind of tension between competing constraints that makes so many educational problems intractable and subject to repeated reform attempts.

Successful problem solving involves discerning the constraints that impinge on the focus problem and understanding them in sufficient depth to craft a solution that takes them into account. Put another way, leaders need to be able and willing to take on board *all* the factors relevant to a problem and to make decisions that balance *all* relevant considerations (rather than privilege one or two). To do this, they must have the ability to understand the interests of different stakeholders without being captured by any one of them, to see the big picture, and to put students' interests first. We consider these attributes in greater depth in our discussion of relational trust (see page 182).

While the above approach has been widely used for professional inquiry and problem solving in New Zealand schools[443], there has been no systematic study of the problem-solving practices of New Zealand school leaders. For empirical evidence about its usefulness, we rely on a Canadian research programme conducted by Leithwood and Steinbach[444].

[442] This section and Table 17 are adapted from Robinson, V. M. J. (2001). Embedding leadership in task performance. In K. Wong & C. Evers (Eds.), *Leadership for quality schooling: International perspectives* (pp. 90–102). London: Falmer Press. For further theoretical background to the constraint inclusion account of problems, see Robinson, V. M. J. (1993). *Problem-based methodology: Research for the improvement of practice*. Oxford: Pergamon.

[443] Robinson, V. M. J., & Lai, M. K. (2006). *Practitioner research for educators: A guide to improving classrooms and schools*. Thousand Oaks, CA: Corwin Press.

[444] Leithwood, K., & Steinbach, R. (1995). *Expert problem solving: Evidence from school and district leaders*. Albany, NY: State University of New York Press. The study referred to is in Chapter 5.

Empirical research on the problem solving of educational leaders

Leithwood and Steinbach's research was based on comparisons between expert and typical principals. Ideally, the two groups would be classified, at least in part, on the basis of measures of the value that their schools had added to valued student outcomes. As is often the case, such data were not available, so the groups were selected on the basis of measures of reputation and their scores on a test of leadership. Of the 10 or so studies generated by this research programme, we focus on one that involved principals addressing a real problem in a staff meeting situation[445]. Four expert and five typical principals were interviewed prior to the staff meeting. The meeting was then recorded on tape, and the principals were interviewed a second time to discover the thinking that had guided their leadership of the meeting.

Differences in the problem solving of the two groups of principals are summarised in the following table.

Table 18. The problem solving of expert and typical principals

Expert principals *are more likely to ...*	**Typical principals** *are more likely to ...*
A. Problem interpretation and formulation	
explicitly check their own assumptions about the problem	assume others share the same assumptions
actively seek the interpretations of others	not seek others' interpretations
relate the problem to the wider mission of the school	treat the problem in isolation from other problems and goals
give a clear statement of their own interpretation of the problem, with reasons	have difficulty explaining their view to staff
be concerned to develop goals that are widely shared	be concerned with meeting own goals
make value statements, especially those concerned with participation	make fewer value statements
anticipate obstacles and how they could be overcome	anticipate fewer obstacles and see them as major impediments
B. Problem-solving process	
carefully plan a collaborative problem-solving process	do less planning of the process
openly disclose their own view without foreclosing or restraining other views	do not disclose their own view, or disclose it in a controlling manner
overtly manage the meeting process (for example, summarising and synthesising views)	less actively manage the meeting process
experience and express little or no negative emotion and frustration	experience unexpressed negative emotion and frustration

The findings summarised in Table 18 can readily be interpreted in terms of the account of problem solving given in the prior section. What Leithwood and Steinbach call 'problem interpretation' corresponds to what we have referred to as specifying the constraints. The expert principals were more open to alternative formulations of the problem: they checked their own assumptions and sought out the interpretations of others. Instead of treating problems in isolation, they linked them to wider school goals and important values.

[445] ibid. The study referred to is in Chapter 5.

The second part of the table shows that the expert principals were more active in their facilitation of discussion and concerned to reach a shared solution (rather than manipulating discussion to try to get the staff to accept a preconceived solution). Although these findings are derived from a very limited study, their similarity to those that have emerged from a rich research tradition on expert problem solving supports their credibility.

In a related study, Leithwood examined the cognitive flexibility of groups of expert and typical primary principals[446]. He found that the expert group avoided such errors as giving too much weight to particularly vivid or dramatic examples, over-generalising from small or biased samples of events or people, and missing opportunities to interpret problems in terms of important goals and values.

What accounts for the difference between the problem-solving practices of expert and typical principals? Experts bring a richer, task-specific knowledge to problems. By better understanding constraints and the principles behind them, they are better positioned to see possibilities for integrating them. Readers will recall from our earlier assessment discussion that we argued that whether school-wide assessment practices can inform classroom teaching, serve management purposes, and still be efficient depends on the subtle detail of their design. Staff who have a superficial (rather than detailed) knowledge of assessment are unlikely to recognise or be able to design practices that can satisfy all three requirements. Discussing the process of constraint integration, Robinson notes that:

> [C]ompeting tendencies, or constraints, are fulfilled, not by crass compromise or trade-offs between them, but by understanding their underlying principles and values so that more possibilities are revealed about how they may be satisfied. Inseparable from this knowledge is an attitude of commitment to the whole problem, which motivates problem-solvers to search for solutions that as far as possible satisfy the whole constraint set rather than maximize those they initially favoured. Such integrative contributions are more likely to be made by those who are skilled at recognising and creating common ground than by those who more readily perceive conflict and opposition. [447]

Oppositional and binary thinking—for example, believing that assessment can never serve both formative and summative purposes—is particularly inimical to constraint integration.

There is probably also a creative element involved in constraint integration. In his recent article on educational leadership, Sternberg includes creativity, along with wisdom and intelligence, as a key component of his model[448]. One of the manifestations of creative leadership is an ability to generate ideas that solve problems. Writes Sternberg, "Creative leaders do not hit their heads against the wall when they cannot solve problems. Rather, they redefine and reformulate problems they cannot solve" (p. 348). This is akin to skill in constraint integration.

Sternberg reminds us of the interdependence of leadership knowledge, skills, and dispositions when he states that creative skills are domain-specific and that experts are at an advantage in creative thinking because of the greater size and scope of their knowledge base. He warns, however, that leaders may fail to recognise the limits of their expertise and, as a result, incorrectly assume that a current problem is the same as one they have previously encountered.

8.3.3 Build relational trust

There are few studies that empirically examine the links between leaders' relationship skills and the social and academic outcomes of their students. One exception is a research programme conducted in urban Chicago elementary schools in the 1990s[449]. These schools were part of

[446] ibid., Chapter 9.

[447] Robinson, V. M. J. (2001). Embedding leadership in task performance. In K. Wong & C. Evers (Eds.), *Leadership for quality schooling: International perspectives* (pp. 90–102). London: Falmer Press, p. 98.

[448] Sternberg, R. J. (2005). A model of educational leadership: Wisdom, intelligence, and creativity, synthesised. *International Journal of Leadership in Education, 8*(4), pp. 347–364.

[449] This research is reported in Bryk, A. S., & Schneider, B. L. (2002). *Trust in schools: A core resource for improvement*. New York: Russell Sage Foundation.

a radical reform programme that devolved school governance to local school councils, whose members were mostly parents. Like New Zealand's boards of trustees, these governing councils were responsible for appointing and appraising principals. For seven years, the outcomes of the reforms were tracked in more than 400 Chicago elementary schools, through assessments of students' reading and mathematics. The accumulated data, supplemented by extensive field work in a selected sample of schools, provided the basis for an examination of how 'relational trust' in the school community impacts on school improvement (as measured by gains in student achievement).

Trust is critical in contexts where the success of one person's efforts is dependent on the contribution of others. In the context of a school, gaining significant shifts in student achievement and well-being requires the collective efforts of many teachers, and each one's success will be partly dependent on the effort and skills of others. This interdependence creates risk and vulnerability. Teachers can ask themselves, 'If I go the extra mile, will others do the same?' Relational trust involves a willingness to be vulnerable because one has confidence that others will play their part. It should not be mistaken for feelings of warmth or affection[450].

Trust is needed for all school relationships, including those between teacher and principal, teacher and parent, and teacher and teacher. Parent–teacher trust is diminished when a parent considers that a teacher has treated their child unfairly or when a teacher believes parents are failing in their obligation to send their child to school. Trust between parents and school trustees is diminished when the latter are thought to be acting in the interest of their own children instead of in the interest of all children in the school. Trust is also relevant to adult–student relationships, but these were not included in the Chicago research.

The authors tested the proposition that relational trust was a key resource for school improvement by examining, over a four-year period, the correlation between changes in relational trust and gains in student learning. This study compared changes in the levels of trust in the 100 schools showing the most improvement in reading and math scores with the changes in the 100 schools showing the least improvement[451]. The authors found a strong statistical link between trust and student improvement. All 200 schools began with similar baseline levels of trust, but three years later, levels were trending upwards in improving schools while they were stationary or declining in non-improving schools. This divergence was not explained by differences in school context, student composition, or teacher background.

How relational trust works in schools

Given this evidence about the impact of relational trust on student achievement, it is important to understand how trust works in schools. Figure 28 summarises the leadership qualities that build relational trust and shows how increasing levels of trust between the adults in a school change student outcomes via shifts in culture and organisation.

What qualities or behaviours engender trust? Respect for others, personal regard for others, competence in role, and personal integrity are all factors. Of these, the most basic is respect. The minimum condition for a functioning school community is that members maintain a modicum of civil regard for each other. Respect involves recognising the importance of each person's role and that each person must depend on their colleagues to play their parts. The

[450] Tschannen-Moran, M., & Hoy, W. K. (2000). A multidisciplinary analysis of the nature, meaning, and measurement of trust. *Review of Educational Research, 70*(4), pp. 547–593.

[451] To measure gains in student learning, achievement data for each student was recorded at entry to a grade and at exit; the difference between the scores was then calculated. Students who shifted schools during the year were dropped from the sample for that grade so that gains could be attributed to a particular school. The average gains in test scores for each school at each grade level over a six-year period were plotted and improvement trends calculated. These trends were adjusted to account for any changes in school factors that might otherwise have invalidated the effectiveness determinations. Further adjustments were made so that schools that started in the same place and experienced the same input trends over time were compared with one another (pp. 103–104). This final, composite school productivity figure was used to identify the top 100 improving schools and the bottom 100 non-improving schools.

most elementary way of demonstrating respect is to listen to people's ideas as if they have value. Parents have increased respect for teachers when they have genuine opportunities to influence their work; teachers have increased respect for their leaders when they feel their workplace concerns are heard and taken into account. "In each case the process of genuine listening fosters a sense of personal esteem for participants and cements their affiliation with each other and the larger institution."[452]

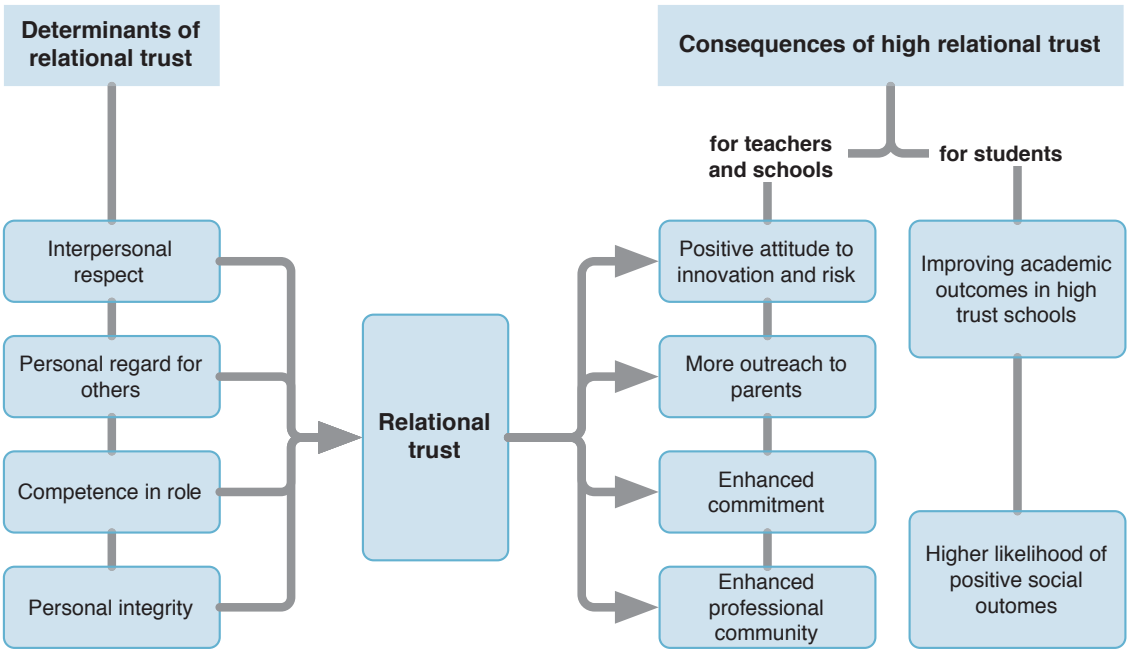

Figure 28. How relational trust works in schools

Leaders who demonstrate personal regard are likely to be thought trustworthy. Personal regard involves caring about others—in both their professional and their personal capacities. For example, a head of department who meets with a teacher for career planning and professional development purposes is likely to grow that colleague's trust. Knowing that others care reduces a teacher's sense of vulnerability, strengthens social affiliation, and invites reciprocal regard. Teachers need personal support as much as anyone else.

Box 22. The significance for kaiako learning of personal regard and support

A case study of four kaiako from three different kura kaupapa Māori with wharekura programmes suggests how important it is for leadership to provide encouragement and personal support in situations where staff are taking what one kaiako described as "a step into the unknown". The study explored the impact of teacher collaboration to improve reading and writing in te reo Māori. The teachers concerned were learning to systematically assess and analyse student learning in relation to NCEA requirements. For the kaiako, who had had no previous experience of preparing students for NCEA qualifications, the task seemed enormous. They variously described the business of learning to manage teaching, learning, and assessment within an NCEA framework as "horrendous and exciting at the same time", "nerve wracking", and "[sometimes,] planning blind".

Throughout the process, however, they were supported and encouraged by tumuaki, who affirmed the role they were playing—along with the students and their families—in the regeneration of te reo Māori. They talked with their tumuaki on a regular, if not daily, basis. The tumuaki "communicated a shared vision and philosophy of high expectations for students" and helped ensure that kaiako "worked in a climate of trust and openness" as

[452] Bryk & Schneider (2002), op. cit., p. 23.

they developed the knowledge and skills to effectively address the NCEA requirements of the students and the kura.

Assessment data collected during the study revealed an upward trend in the results for pānui; for tuhituhi, the upward movement was less obvious. It may be that the NCEA grading system was not sufficiently sensitive to pick up a trend that was apparent upon closer analysis[453].

When determining whether a leader is trustworthy, the competence they demonstrate in their role is an important criterion for staff. Teachers must be able to count on others, particularly their leaders, if they are to succeed in their work, so they care about their competence. In education, it is unfortunately true that it is often easier to discern incompetence than competence. It is hard to judge which leaders or teachers are adding value in terms of student learning or which person's reading programme is better than another. But the evidence of incompetence is often unambiguous, public, and widely communicated. For example, "negative judgments about principal incompetence are quick to form when buildings are not orderly and safe, and when individuals interact in a disrespectful manner"[454].

Allowed to persist, gross incompetence corrodes trust and undermines collective improvement endeavours. This may help explain why a study found that teachers' perceptions of their principal's ability to identify and deal with conflict were strongly correlated with student achievement[455]. Leaders who are conflict avoiders or conflict escalators are unlikely to deal with competence issues in a timely and effective manner. Since school improvement requires sustained, collective endeavour, teachers become demoralised and reduce the level of their commitment if they discern that their leaders cannot deal with those who (wittingly or unwittingly) undermine their efforts.

Integrity, a fourth criterion used to judge leader trustworthiness, is about consistency between what a leader says and does. In Maōri, the term is 'he tangata kī tahi': 'person of a single word'. But integrity is also about values. Teachers want to know whether moral and ethical principles underpin their leaders' actions and how such principles are used to decide the many conflicts of interest that arise in schools. Bryk and Schneider write, "integrity demands resolutions that reaffirm the primary principles of the institution. In the context of schooling when all is said and done actions must be understood as advancing the best interests of children" (p. 26). To be considered a person of integrity, a leader also needs to keep their word.

Increased relational trust leads to changes in school culture and organisation that are of benefit to students (see Figure 28). In the Chicago study[456], teachers in schools where trust had increased over the three-year period reported a greater willingness to try new things; a greater sense of responsibility for their students; more outreach to parents; and a stronger professional community (more shared work, more conversations about teaching and learning, and a stronger collective focus on student learning). Increased trust led to better coordinated, mutually supportive, and more effective efforts to engage students in learning.

As mentioned earlier, the authors of this same study found a strong correlation between levels of trust and gains in maths and reading achievement. This relationship was apparent even with rigorous control of student and community background variables. A second, related study of relational trust found that social outcomes were also more positive in high-trust schools, with students reporting that they felt safer, more cared for by their teachers, and more academically challenged.

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[453] Williams, N. (2002). *The conversation lives: Investigating practices and approaches in the teaching and assessment of te reo Māori.* Unpublished Master of Education thesis, University of Auckland.

[454] ibid., p. 24.

[455] Eberts, R. W., & Stone, J. A. (1986). Student achievement in public schools: Do principals make a difference? *Economics of Education Review, 7*(3), pp. 291–299.

[456] Bryk & Schneider (2002), op. cit.

Contextual influences on relational trust

A number of contextual factors can make it easier or harder to build relational trust. These fall into two categories: those that are open to the influence of school leaders and those that are not. We discuss a number of these factors before giving some guidance in the next section about developing relational trust.

Community diversity

Developing trust is more difficult in diverse communities because people find it easiest to trust people who seem similar to themselves[457]. This is not cause for guilt or blame, simply a reflection of the way social perception works. But it does mean that developing relational trust is a particularly complex task when a community is of mixed race and class, because the similarities of race, ethnicity, and class that provide an initial basis for trust are not there. For this reason, school leaders in culturally heterogeneous contexts need to actively take the initiative in overcoming mistrust. When the teachers are relatively much better off than parents, or when the board is Māori but the principal and staff mostly Pākehā, growing trust will take greater effort. This will mean working to strengthen the four determinants of relational trust (see Figure 28) and taking care to avoid leniency bias—the tendency to be too trusting of people who belong to one's own social group.

School size

The Chicago study[458] found that trust was more likely to develop in smaller schools (those with rolls of fewer than 350 students). In smaller schools, much communication and coordination can be managed face to face. People tend to know more about each other and to have greater opportunity to work together and develop social affiliation. While it is true that low trust can also develop and fester in small communities, it is easier to address. In larger schools, teachers' primary affiliation may be with a subgroup of staff rather than with the school as a whole, and individuals have fewer opportunities to revise negative opinions about the trustworthiness of others.

Roll stability

Trust building requires repeated social exchanges in which people meet or exceed one another's expectations. Such exchanges are disrupted when families and staff leave a school community. This may explain why stability had an independent, positive effect on teacher–parent trust in the Chicago study.

Building positive relationships with a constantly shifting parent community is hard work: staff and parents may never get to know each other well enough to forge an educational partnership. Families that are new to a community can find themselves isolated and without access to the informal parent networks that could reassure them concerning the trustworthiness of the teachers. Occasional acts of disrespect are unlikely to be repaired if parents and teachers see relationships as temporary.

It is usually assumed that residential mobility drives school mobility. A study of mobility in Chicago elementary schools, however, found that while 60% of school changes were due to residential factors, 40% were due to school-related factors. The majority of the latter "were exit moves associated with safety concerns or conflict at the school. Rather than resolving such issues with the school, families chose to transfer. Consequently the opportunity to build social trust for students and parents must begin again in a new context."[459] Similar figures were

[457] Tschannen-Moran, M., & Hoy, W. K. (2000). A multidisciplinary analysis of the nature, meaning, and measurement of trust. *Review of Educational Research, 70*(4), pp. 547–593.

[458] Bryk & Schneider (2002), op. cit.

[459] ibid., p. 199, footnote 13. The elementary school study is found in:
Kerbrow D. (1996). Patterns of student mobility and local school reform. *Journal of Education for Students Placed at Risk, 1*, pp. 147–170. The California high school study is found in:
Rumberger, R. W., Larson, K. A., Ream, R. K., & Palardy, G. J. (1999). *The educational consequences of mobility for California students and schools.* Berkeley: Policy Analysis for California Education, University of California.

obtained in a study of mobility in Californian high schools, which found that as many as 40% of school changes were not due to residential factors. These studies found that mobility had an independent effect on achievement and that this effect could be explained by the disruption of children's peer relationships and the social networks that bind teachers and parents together in a common educational endeavour.

Voluntary association

Relational trust in a school is greater when both staff and students feel they have some choice in the matter. When parents and students are able to choose a school based on what they value, this choice provides an initial basis for goodwill and commitment. Similarly, when staff have chosen to work at their school, they are likely to commit to it and subscribe to its shared values. Voluntary association provides a much firmer foundation for relational trust than the suspicion and wariness that can accompany the forced assignment of either students or staff.

In Chapter 5 (see page 98), we mentioned that a study involving 20 US high schools[460] found a moderately positive correlation between the proportion of staff appointed by the current principal and student achievement. While this suggests that it is important for principals to be able to hire their own staff, the same study found that such discretion works for students only when exercised by principals who give priority to academic goals. In schools where there was little emphasis on academic achievement, greater discretion to appoint staff was actually associated with lower achievement.

Capacity to deal with incompetence

We have explained how relational trust develops as people discern, in repeated interactions, that others are ably fulfilling the expectations and obligations associated with their roles. In the highly interdependent environment of a school, any serious shortfall in meeting these expectations and obligations (through failure to show respect, personal regard, competence, or integrity) creates mistrust and vulnerability. People who feel vulnerable adopt self-protective strategies such as reducing their commitment to the collective effort, lowering expectations, and narrowing their sphere of influence. In an environment of reduced relational trust, staff cease to put in the energy and effort required to sustain a programme of school-wide improvement. It is critical, therefore, that leaders address any staff incompetence in a timely, fair, and effective manner. New Zealand principals have the power to remove incompetent staff, but the process is involved and risky. Some limited evidence on how principals exercise this power is discussed in the next section (Engage in open-to-learning conversations, page 190).

Imbalances of power

Since schools are heirarchical in nature, power is necessarily unevenly distributed. Teachers can feel vulnerable to their principal's decisions, including, for example, those that relate to class allocation and supervisory duties. Such decisions have psychological as well as instrumental consequences. Whether a teacher is assigned to a relocatable classroom or one in the new teaching block can affect their perceptions of status and self-esteem—as well as determining how far they have to walk in wet weather. Opportunities for staff to influence decision making on such matters and to hear the reasons for decisions can reduce feelings of vulnerability and increase trust.

Power imbalances are particularly salient for parents in lower-socio-economic communities. Such parents can feel alienated from schools and need considerable encouragement before they will risk meeting teachers, who they fear may well view them or their children as inadequate. Box 23 describes how the principal of an integrated school in Auckland, serving a largely Pasifika community, built relational trust by addressing parents' feelings of inferiority and

[460] Brewer, D. J. (1993). Principals and student outcomes: Evidence from US high schools. *Economics of Education Review, 12*(4), pp. 281–292.

powerlessness when inviting them to join a programme in which they would learn how to support their children's reading[461].

Box 23. A principal builds relational trust by attending to imbalances of power

When interviewed by an independent researcher, the principal, the two teachers who led the 'Reading Together' workshop, and the developer of the programme gave similar, independent accounts of the sensitivity with which parents had been invited to participate.

The developer recalled how she was invited to the school by the principal to discuss how it might work. She explained, "We discussed the importance of reassuring parents that they will not have to read or write anything by themselves, that it doesn't matter if they can't read and write very well, etc. The emphasis was on partnership. There was also a discussion about the ways in which 'stigmatising' of children is avoided throughout the whole process—e.g. when contacting parents there is no mention of 'reading difficulties', etc."

When the principal herself approached parents, she indicated her respect for them as parents and "… tried to make it as personal as possible … I talked to them about the programme … (made them aware) that I was asking them because I knew they were interested in their children."

The sensitivity to imbalances of power was also evident in how the workshops were run. The two teacher leaders described the reasons for avoiding a school-like approach. "We were conscious not to make it too schooly … we didn't want OHPs and teacher jargon. I'm sitting down … together … we don't know what sort of experiences they had at school … we didn't want to bring back those old emotions."

How leaders develop relational trust

Having discussed the interpersonal and contextual conditions that shape relational trust, we now turn to a brief discussion of some practical steps that school and departmental leaders can take to build relational trust in their school communities.

First, it is important to acknowledge the interdependence, and therefore the vulnerability, of the members of the school community and to recognise how important trust is for building commitment and cohesiveness. Without it, leaders have to rely far more heavily on costly bureaucratic rules and external accountabilities to achieve their goals.

School leaders build trust by modelling and expecting the four qualities on which it is based. Such modelling is critical. While team building and relationship training may help, trust grows primarily through daily encounters in which expectations are validated in action. People feel treated with respect when their concerns gain a genuine hearing and when they are given opportunities to influence school decisions.

Modelling by school leadership is, however, insufficient to build trust. Leaders need to follow through on their expectations for others by confronting social disregard, uncivil acts, and incompetence. This can be very challenging, especially in contexts where such actions have seldom been called to account or where there is a litigious culture.

Integrity is demonstrated by walking the talk and by actions that say the interests of students are paramount. A whakataukī referred to by Sharples expresses the idea of giving priority to the needs of children:

> He kai poutaka me kinikini atu, he kai poutaka me horehore atu. Mā te tamaiti te iho.
> *Pinch off a little bit of the potted bird, peel off a little bit of the potted bird, but give the best part to the child*[462].

[461] The vignette is drawn from Tuck, B., Horgan. L., Franich, C., & Wards, M. (2007). *Reading together at St Joseph's primary school: School leadership in a school–home partnership.* Unpublished manuscript.

[462] Sharples, P. (2007, July). *The welfare of the children ensures the future strength of the people*. Keynote presentation at the 44th Annual Conference and AGM of Te Tari Puna Ora o Aotearoa / NZ Childcare Association, Paihia.

Integrity is critical when the interests of staff and students appear to be in conflict:

> The key task for school leadership involves getting the balance right. This entails a constant moderation between demonstrating a personal regard for faculty while steadfastly advancing the primary mission of the school … Ultimately adult behavior must be understood as directed toward the betterment of children[463].

There are particular challenges to be faced in building trust in low-trust, dysfunctional school communities. On the basis of their cases, Bryk and Schneider warn that "one does not build relational trust in a troubled school community simply by assuming its existence"[464]. A new principal may need to make significant use of his or her positional authority to challenge dysfunctional social relationships, address incompetence, and require collective responsibility and accountability. Box 24 describes how a new principal strongly challenged his staff to either join him in radically changing the school or leave.

Box 24. A principal uses positional authority to confront a dysfunctional staff culture

In 1998, Chris Sarra became the first Aboriginal principal of Cherbourg School in south-east Queensland. The school, described by authorities as a disaster area, had major problems of absenteeism, bullying, drug abuse, and staff incompetence. In an ABC interview, he recounted how, very early on, he confronted staff about their attitudes and low expectations:

"And when I asked the staff that I'd inherited, you know, why is it that I'm seeing such dramatic underachievement in our school? Why is this school such an awful place? Their response was, oh, well, the Department doesn't support us, or, there's many social complexities. And I sat in this room here a long time ago and said, look, what I believe, what the elders in our community believe, is that our children can leave here with academic outcomes that are just as good as any other school in Queensland. And that they can leave here with a very strong and very positive sense of what it means to be Aboriginal. And if you don't believe it, then it's time for you to go. And half the teaching staff got up and left."[465]

Principals may need to use their position to reshape the composition of the staff before trust will grow, by counselling out those not committed to the hard work of improvement and by recruiting people who are committed to serving the families in that particular school community.

Principals can take specific steps to increase parental trust and stabilise the student population. They can acknowledge the dependence of parents on teachers and give teachers the resources and the support they need to build relationships that will provide a foundation for pedagogical partnership. Training and support for this relationship-building role is particularly important in communities where there is a wide social and ethnic divide between parents and teachers. Relationship building cannot be left to specially appointed home–school liaison persons, however useful they may be. It is the parents' trust of their child's teacher (not the community or liaison worker) that is predictive of his or her educational progress. Bryk and Schneider conclude that teachers should be expected to develop the skills and dispositions required to engage parents effectively—and that they should be supported to do so. They conclude:

> Such capacities should be formally acknowledged in teachers' role responsibilities and included in annual personnel evaluation procedures. Professional development supports need to be provided as well, through both preservice and continuing education programs so that teachers can acquire the necessary skills and dispositions. In our view, these needs are too important and too central for school improvement to be left to chance.[466]

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[463] Bryk, A. S., & Schneider, B. L. (2002). *Trust in schools: A core resource for improvement*. New York: Russell Sage Foundation, p. 136.

[464] ibid., p. 137

[465] The vignette is based on the transcript of an interview with Chris Sarra on *Australian Story*, ABC October 4, 2004. Downloaded August 27, 2007 from http://www.abc.net.au/austory/content/2004/s1212753.htm

[466] Bryk & Schneider (2002), op. cit., p. 139.

School leaders can begin to address mobility issues by providing quality opportunities for parents to address concerns before they consider taking their child away. Procedures for gaining and responding to both informal and formal feedback from parents are critical to winning parent–teacher trust. Leaders can also educate parents about the negative social and academic consequences of frequent changes of school.

To conclude this section, we summarise in Table 19 some of the do's and don'ts of increasing relational trust.

Table 19. Relational trust as a resource for school improvement

Involves	Does not involve
Integrating the needs of adults with advancing the best interests of students	Meeting the needs of adults
Putting the needs of students first when their needs and the needs of staff are in conflict	Putting the needs of staff before those of students
Making critical decisions collectively on the basis of a unifying focus on what is best for students	Staff doing their own thing with mutual indifference or tolerance
Giving transparent explanations of reasons for differential treatment of staff	Giving similar affirmation and voice to staff, regardless of their commitment or breaches of trust
Explaining respectfully what is and is not acceptable and why	Tolerance of and collusion with a negative status quo (for example, high rates of staff or student absence)

8.3.4 Engage in open-to-learning conversations

We have stressed throughout this synthesis that interpersonal skills and values are critical to every leadership dimension identified in both the New Zealand and international research. (An analysis of Appendix 8.1 will reinforce their importance.) Leaders need to be able to disclose their views and the reasons for them, listen to other's views and be open to reciprocal influence, give and receive tough messages, and detect and challenge their own and others' problematic assumptions. These skills and values are crucial to the development of relational trust; the ability to initiate and engage in constructive problem talk; and the capacity to reveal, evaluate, and revise theories of action. We use the 'open-to-learning' model of interpersonal effectiveness, based on the work of Argyris[467], as a framework for our discussion of the evidence relating to these skills and values. At the heart of the model is openness—the key to improving the quality of the information and reasoning that guide practice. We use this particular model because, in its various incarnations, it has been the predominant model of interpersonal effectiveness used in New Zealand research and development relating to school leadership[468].

There is limited evidence about how New Zealand school leaders utilise these interpersonal skills. We have some evidence about the difficulties of exercising them in certain contexts and about what happens when things go wrong. We also have some useful New Zealand examples of professional development that has successfully developed the skills of engaging in open-to-learning conversations. But this evidence seldom includes evaluations of actual change in leaders' on-the-job practice.

First, we discuss some evidence concerning what New Zealand school leaders say about 'people problems'. We go on to outline the dilemmas involved in tackling such problems and follow this with a discussion of how these dilemmas can be reduced through the use of the open-to-learning model. We complete the section with a more detailed look at some New Zealand reports of sustained professional development in open-to-learning conversations.

[467] See footnote 476
[468] See footnote 476 for an explanation.

Evidence of people problems

When New Zealand school leaders were asked in a recent study[469] to identify the issues that challenged them, they nearly always indicated people problems. The author divided the issues into three categories: "firstly *managing people issues*; secondly, *managing resources for people issues*; and thirdly, *managing personal issues*." Leaders indicated that many of their people problems were longstanding, difficult to resolve, and had negative consequences that spilled over into other areas of school life.

Dealing with dilemmas

In our earlier discussion of problem solving (page 179), we discussed how it involves finding solutions that sufficiently satisfy all the relevant constraints. Tough problems are those where there is considerable tension, if not incompatibility, between the constraints. Performance management problems often seem to be in this basket. Leaders typically want to address performance issues but believe they cannot do so without unduly risking increased stress and conflict: they feel caught between addressing staff performance and taking care of relationships[470].

In a pioneering study of how school leaders address such dilemmas, Bridges surveyed the ways in which Californian administrators dealt with cases of teacher incompetence[471]. He found that the most common response was to tolerate, protect, and avoid direct confrontation. When principals or district administrators did intervene, they generally took an 'easing-in' approach, in which the issues were understated or distorted. For example, their reports would include highly generalised, positive comments about teachers' performance (a strategy that Bridges calls 'ceremonial congratulations') and double-talk (criticisms couched as suggestions for change). Teacher ratings were inflated to the extent that even those who were eventually induced to resign were initially rated 'satisfactory'. When such softly-softly strategies proved ineffective and administrators found themselves under pressure to take further action, they would then move into a more direct, 'salvage' phase.

During this phase, administrators abandoned their previous strategies. They no longer sprinkled their observation reports with glowing generalities, dressed their criticisms up as constructive suggestions, or generally inflated evaluations. Straight talk replaced double-talk. In some cases, teachers had experienced years of double-talk and ceremonial congratulation. Not surprisingly, they reacted defensively to this 'out-of-the-blue', negative feedback[472].

More recent US research[473] suggests that this pattern may have changed little. Both teachers and administrators believe that the number of teachers receiving unsatisfactory evaluations is far less than the number of unsatisfactory teachers.

According to Cardno's research, dilemma management in New Zealand schools is not so very different. The evidence shows that, while leaders are aware of the need to take a direct approach with staff implicated in a dilemma, only a very small proportion suggest this option. Most of the responses obtained by Cardno were consistent with what is already known about how leaders typically face up to complex problems: they ponder them at length, they may seek advice, they may provide support—but, for whatever reason, they delay action or avoid it altogether[474].

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[469] Cardno, C. (2007). Leadership learning—the praxis of dilemma management. *International Studies in Educational Administration, 35*(2), pp. 33–50.

[470] ibid.

[471] Bridges, E. M. (1986). *The incompetent teacher*. (Stanford Series on Education and Public Policy). Lewes: Falmer Press.

[472] ibid., pp. 48–49.

[473] Pajak, E., & Arrington, A. (2004). Empowering a profession: Rethinking the roles of administrative evaluation and instructional supervision in improving teacher quality. In M. A. Smylie & D. Miretzky (Eds.), *Developing the teacher workforce* (103rd yearbook of the National Society for the Study of Education, pp. 228–253). Chicago: National Society for the Study of Education.

[474] Cardno, C. (2007), op. cit., p. 41.

Before offering some research-based guidance on how to effectively address dilemmas, we need to explore why there is often conflict between the task-related and people-related aspects of an issue. Figure 29 provides some clues.

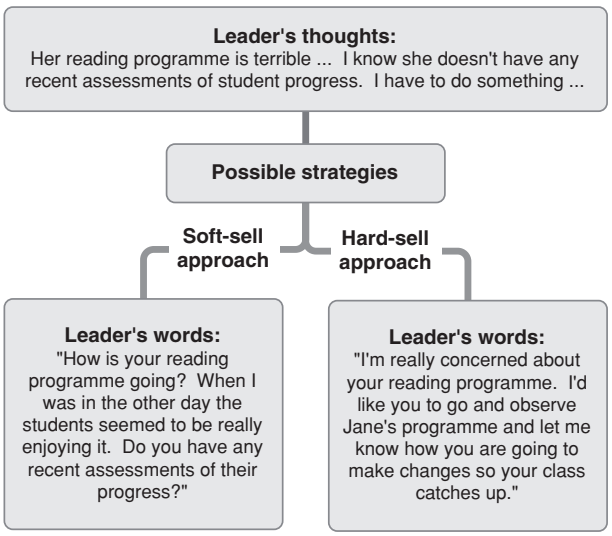

Figure 29. Two ineffective strategies for dealing with performance problems

Both the soft-sell and the hard-sell strategies are based on the same conclusion: the reading programme is terrible. Using the soft-sell strategy, the leader withholds her evaluation, expects the teacher to disclose her own, and offers 'ceremonial congratulations' (about student enjoyment). This strategy addresses the person–task dilemma by giving greater weight to the emotional risk facing the adults than the educational risk facing the students. Using the hard-sell strategy, the leader is more forthright; she makes it clear that she expects her views to be accepted and her recommendations followed. Taking this approach, the adult relationship is risked in the interests of addressing the educational concern. Undoubtedly the hard-sell strategy is more likely to result in the teacher getting the message, but it is also likely to provoke defensiveness and resentment. If this is the case, there may be little progress on the task issue.

The tension between concern for the person and concern for the issue cannot be resolved by either approach, because neither allows for co-constructed evaluation of the reading programme—co-construction was a central tenet of the theory-engagement change strategy discussed in Chapter 6 (see Engaging teachers' theories of action, page 128). In the example, the leader has made up her mind and discourages any debate of her views. Using the soft-sell strategy, she does this by failing to disclose her own evaluation. Using the hard-sell strategy, she assumes that her evaluation is valid and, therefore, beyond discussion: all that remains is for the teacher to carry out her directives. Neither strategy will lead to the kind of dialogue that will discover whether change in the teacher's theory of action is warranted and, if so, what that change should be.

When leaders seek to impose their views, they face the dilemma of how to do so without creating negative emotional reactions. Hiding their own views and hoping that the other party will express them is not a solution. This soft-sell strategy is just as controlling as the hard-sell strategy because the goal is the same: to have one's own views accepted without question. The alternative to imposition is to change the thinking that produced the dilemma in the first place. This means changing the thinking that presumes the validity of one's own point of view.

Open-to-learning conversations: the model

We now turn to theory and practice that can help change the thinking that creates the dilemmas that so often confront leaders when they try to deal with performance issues. The theory that we draw on is based on the work of Argyris, a social and organisational psychologist who has done extensive research on the interpersonal effectiveness of leaders in actual, on-the-job situations[475]. Argyris's work has formed the theoretical and practical foundation for several research and professional development approaches used with New Zealand school leaders[476].

Table 20. The guiding values and key strategies of an open-to-learning conversation

Guiding values	Key strategies
Increase the validity of information. (Information includes: thoughts, opinions, reasoning, inferences, and feelings.)	Disclose the reasoning that leads to your views. Provide examples and illustrations of your views. Use the ladder of inference[477]. Treat your own views as hypotheses rather than taken-for-granted truths. Seek feedback and disconfirmation.
Increase respect. Treat others as well-intentioned, interested in learning, and capable of contributing to your own learning.	Listen deeply, especially when views differ from your own. Expect high standards and constantly check to see how you are helping others reach them. Share control of the conversation, including the management of emotions.
Increase commitment. Foster ownership of decisions through transparent and shared processes.	Share the problems and the problem-solving process. Require accountability for collective decisions. Foster public monitoring and review of decisions.

The three guiding values in Table 20 are widely espoused but hard to put into practice in conversations that involve giving and receiving tough messages[478]. We call conversations in which they are put into practice 'open-to-learning' conversations because, in them, each party gets to express their views openly (rather than defensively), increasing the chance that faulty assumptions—about each other, the problem or task, or what to do—will be detected and corrected.

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[475] For school leaders, the most useful of Argyris's many writings are:
Argyris, C. (1990). *Overcoming organizational defenses: Facilitating organizational learning*. Boston, MA: Allyn and Bacon;
Argyris, C. (1991) Teaching smart people how to learn. *Harvard Business Review, 69*(3), pp. 99–109;
Argyris, C. (1993). Education for leading learning. *Organizational Dynamics, 21*(3), pp. 5–17.

[476] The work of Chris Argyris was introduced to New Zealand by Viviane Robinson in 1976 and incorporated into research and development on interpersonal effectiveness through her work on learning conversations and collaborative practitioner research. See V. M. J. Robinson (1993), *Problem-based methodology: Research for the improvement of practice*. Oxford: Pergamon Press and V. M. J. Robinson & M. K. Lai (2006), *Practitioner research for educators: A guide to improving classrooms and schools*. Thousand Oaks, CA: Corwin Press. Eileen Piggott-Irvine and Carol Cardno subsequently incorporated Argyris's work into their professional development workshops on productive reasoning, dilemma management, and teacher appraisal. See C. Cardno & E. Piggot-Irvine (1997), *Effective performance appraisal: Integrating accountability and development in staff appraisal*. Auckland: Longman. Michael Absolum has incorporated Argyris's theory and practice into his work on formative assessment through his emphasis on learning-focused relationships with students. See Chapter 2 in M. Absolum (2006), *Clarity in the classroom.* Auckland: Hodder Education.

[477] For an explanation of the ladder of inference and examples of its use, see Robinson, V. M. J., & Lai, M. K. (2006). *Practitioner research for educators: A guide to improving classrooms and schools*. Thousand Oaks, CA: Corwin Press.

[478] For evidence about the capacity of many different types of leader to hold such conversations see Argyris, C. (1983). *Reasoning learning and action.* San Francisco, CA: Jossey Bass, pp. 41–81.

Validity is especially critical for school leaders, because their decisions have important implications for others' lives. Leaders have an ethical obligation to base their decisions on quality information and quality thinking. Only by showing respect for others can they build the relational trust needed to get good feedback about their thinking and build the sense of collective responsibility and commitment needed for improving teaching and learning. With valid information and with processes in place that allow them to be heard and exercise influence, staff are more likely to feel personally committed to and accountable for decisions.

We now return to our task–person dilemma (Figure 29) and see how, by initiating an open-to-learning conversation, a leader is able to address the performance issue while minimising negative emotions. The principal in this case unwittingly created the dilemma by being highly judgmental about the teacher's performance ('her reading programme is terrible'). Convinced of the validity of her views, she is left with only two unsatisfactory choices—be diplomatic (soft sell) or brutally frank (hard sell). Table 21 presents a third, more effective approach that allows both parties to share the problem and co-construct a solution.

Table 21. An effective strategy for communicating performance concerns

Leader's thoughts	Leader's words	Analysis
When I came into the class, I was shocked to see the book levels being used. I suspect the students are well behind where they should be. I must talk to Joanne about how to check this.	"When I came into your class the other day, I got the impression from the book levels being used that many of your students were well behind where I would expect them to be. So I thought I should tell you that and check it against your understanding of their current and expected levels …"	The leader's concerns are disclosed. The grounds for the concern are disclosed. The leader indicates that the concern needs to be checked rather than assumed to be valid.

In this third approach, the leader avoids the hard sell by disclosing her concerns without presuming their validity. She also avoids the soft sell by putting the issue on the table and inviting the teacher to give her point of view. Provided that the principal continues to disclose, check, listen, and co-construct the evaluation of the programme and any requisite revisions, the outcome should be a teacher who feels challenged yet respected. By thinking in this way, the leader does not have to choose between tackling an educational issue and damaging a relationship.

Examples of open-to-learning conversations

In this section, we discuss three examples of open-to-learning conversations. All three are drawn from studies of New Zealand interventions in which school leaders have had intensive on-the-job training in open-to-learning conversations.

Clear and open disclosure

Our first example illustrates the importance of clear and open disclosure of one's point of view. The context is a literacy leader working with her colleagues to examine the reading progress of their year 1 students[479].

[479] This vignette is derived from Timperley, H., Smith, L., Parr, J., Portway, J., Mirams, S., Clark, S., Allen, M., and Page, J. (2004). *Analysis and use of student achievement data (AUSAD).* Final evaluation report prepared for the Ministry of Education. Wellington: Ministry of Education, p. 7.

Box 25. From tentative to confident communication of expectations

The literacy leader in a Mangere primary school participating in the Early Childhood Primary Link intervention programme regularly convenes her fellow year 1 teachers to review the reading achievement of their students. In a quest to discover the qualities of professional learning communities associated with greater student progress, the formative evaluators transcribed meeting excerpts. Part A presents this author's analysis of an excerpt from the leader's introduction to a meeting that took place in the third year of the intervention. The literacy leader's words are in the right-hand column; the analysis is in the left-hand column. Part B presents the author's analysis of an excerpt from the same leader one year later after the formative evaluators had discussed their report with her. These discussions made her realise what an impact the serious examination of data could have on student achievement.

Part A: Literacy leader's meeting introduction prior to training	
Language is tentative	"I just wanted to just …"
This may not deserve much time	"… very quickly go through the latest bit of data"
Serious engagement with the data is voluntary	"If you don't want it, just give it back to me."
The data represent yet another piece of paper	"I know it's a paper war …"
Work on your part is not required	"You don't have to file it or anything like that at this stage … it's just handwritten."
Part B: Literacy leader's meeting introduction after training	
This is important	"This is a valuable time …"
It involves work for teachers, but it is crucial work	"Although it is a pain getting it ready for me, it is the only way we are going to make a difference."
Provides direction about what to do	"I will give it out to you in a minute and you can have a look and see in your class who is below and who is above …"
Makes personal connection with teacher—the data is about and has implications for you	"You can see in your class …"
You may need to do something differently	"and you look especially at the 'just below' ones and think, 'What am I going to do to make sure that they are not just below next time?'"

In part A, the leader acts as if she has not yet accepted that she *is* the leader and that it falls to her to provide direction. Her tentativeness may reflect a concern that the others in the group will not accept her leadership. In part B, after discussing the findings with the formative evaluators, the leader discloses her expectations much more clearly. Subsequent interviews with the teachers showed that they appreciated the clearer focus of the meetings and the help they received in deciding what to do next to help the target children.

Explicit checking and requests for feedback

The vignette in Box 26 is sourced from a year-long intervention involving a secondary school principal who was seeking greater staff ownership of and commitment to appraisal and professional development policies[480].

[480] The vignette is drawn from Robinson, V. M. J. (1993), *Problem-based methodology: Research for the improvement of practice,* Chapter 7. Oxford: Pergamon Press.

Box 26. A principal seeks to change staff perceptions by seeking explicit feedback

The context is a meeting of the principal and her heads of departments at which the draft of a new appraisal policy is being discussed. The principal begins by reading out a summary of staff feedback and suggesting a next step.

Principal: The question is, where do we go from here? After asking the question, what I've tried to do is to present a possible answer.

The principal clearly identifies her answer as a possibility, not as the answer. She then discloses her hope that, by involving numerous staff in the development of a new policy, she can change their perception that the programme belongs to her rather than to the staff as a whole.

Principal: I would like to believe that staff's assumptions that PDC [Professional Development Consultation] and appraisal structures being my ideas and initiatives alone have changed to some extent. That really is the assumption I'd like to check, so please help by letting us have some feedback and I'm going to welcome that in a very open and honest way. If people are still feeling that if they approach me with something difficult I'm being difficult about accepting or hearing what you're trying to say, I need to know that.

The principal seeks feedback here on two levels. On one level, she wants to know whether staff see the programme as 'hers'; on the other, she acknowledges that past patterns of interaction may be making it difficult for them to give her honest feedback and asks if this is the case. She has disclosed her wishes for the task in hand—and her concern about how staff perceive her. After a second request for feedback, two heads of department say what they think.

HOD 1: From my point of view, it doesn't matter to me very much where the statement comes from initially. I mean, if you've written it that's fine, that doesn't concern me at all, what only concerns me is two things: first of all what's in it, and secondly what sort of influence we can have upon it if necessary. I think those are the key questions for me. So the fact that you may or may not have written it, that's not an issue for me personally.

Principal: Can I then check, picking up from what John has said, how do people feel about the influence that they may have on the processes?

HOD 2: I think the process is such that I can contribute to it by just coming and discussing it with you, and whatever views I was concerned about, I could explain to you knowing that either they would be answered or they would be taken further.

Principal: Right.

HOD 2: I feel that I have been consulted.

The exchange in Box 26 illustrates how valid information is sought thorough a combination of open disclosure and explicit requests for feedback. In this case, the explicitness was necessary to disrupt possible residual conceptions about the principal's openness to influence. The case from which this vignette was extracted goes on to discuss how openness and consultation need to go hand-in-hand with a challenge to staff views that, accepted without question, might undermine the educational purpose of the policy under debate. Again, the problem solving involves integration of multiple constraints: the goal is not just increased staff ownership and commitment, but commitment to a policy that meets its educational objectives.

Detecting and checking assumptions

In Chapter 6, we wrote at length about the importance of probing people's theories of action to detect and check taken-for-granted assumptions. If leaders are to consistently value valid information and respect, they need to involve others in this checking because it is very difficult

to detect and correct one's own mistaken assumptions and faulty reasoning. Due to the limitations of our information-processing capacities, we tend to interpret the world in the light of existing assumptions rather than engage in the more demanding process of seeking out information that might disprove them. We frequently act, therefore, as cognitive misers—biased towards whatever confirms our prior conceptions.

This built-in bias explains why it can be so difficult to be open with family or longstanding staff—our preconceptions about them and their behaviour shape how we select and interpret information relating to them, and those interpretations further strengthen our preconceptions. We notice the things that confirm our preconceptions and are blind or deaf to those that challenge them, unless trained or cued to do otherwise. The vignette in Box 27 illustrates how preconceptions can obstruct problem solving.

Box 27. The power of assumptions [480b]

The senior management team of an Auckland secondary school took part in a series of workshops designed to help them better integrate the values of valid information, interpersonal respect, and accountability in the context of teacher appraisal discussions. At one of the workshops, the deputy principal (Roger) practised communicating with a teacher (played by Jan) who he believed was not taking sufficient responsibility for behaviour problems arising in her classroom. He was frustrated by her expectation that she could send misbehaving students to him to deal with. In the role play, Jan has left her class to see Roger about such a student.

Jan: Tom here, was um—ust chucking bits of paper up at me as I turned around to write on the whiteboard. Now this has happened time and time again as you are well aware of. Um, I sent him out of class last time he had science and this time he's doing it all over again. I just don't know what to do next. And I want him—I want you to deal with him. Um, and maybe to have a word with him and talk to him about the dangers, you know the dangerous aspect of his behaviour in the classroom.

Roger: He's outside now is he?

Jan: Yes he's just waiting outside your door.

Roger: Mmm. You don't want to bring him in now and um, go over what's happened with him and me?

Jan: Well I don't have time, (Roger: Mmm). I've got a class, and they're waiting for me now, so I'd better go back before (Roger: Mmm, you better get back to your class) before something happens.

Roger: Mmm. Well, I'll certainly get him in and um, hear from him. He's a bit of an evasive character. We might have to get together later and together go over what's happened with him, just to get him to own it.

Jan: Well, I've written lots of things in the um—in the Form Book about him. I don't know—you know I'm really at the end of my tether as to what strategies to use for him. And it's just not him in the class; it's the rest of the class as well. The boys in particular.

Roger: Mmm. So um, Frank's been involved—the dean—Frank's been involved with—working with this student as well. Yeah I'll—maybe I need to talk with Frank. Um, yeah. OK, I'll certainly, yeah, talk with him and um, talk with Frank and come back to you so that we can decide what should be done.

[480b] Timperley, H., Halliday, J., & Robinson, V. M. J. (1996). *Facilitating organisational learning in schools: Report of phase 3: Organisational learning for self-managing schools.* Auckland: Education Department, University of Auckland.

Jan: OK.

Roger: Is that all right?

The extract includes information that both confirms and disconfirms Roger's view of Jan. She confirms his expectations by once again hauling a disruptive student out of her lesson and asking him to deal with the problem. But she acts contrary to his expectations by admitting that she was 'at the end of her tether' and having difficulties with the 'rest of the class as well'—admissions that suggest that she saw herself as part of the problem, even if she had little idea of how to contribute to a solution.

In reviewing the videotape, Roger asked himself whether his preconceptions about the teacher had led him to ignore, or even not hear, her admissions.

Roger: Mmm, yeah. It's just this phenomenon of having almost a cued, self-cued, low-key response. In other words, she's—I tend to categorise her along the lines of someone who will refer students too readily. I have a predisposition—I'm predisposed—might be thinking that this is ah—yeah I've categorised her. I've labelled her. I might be thinking now this is something you should be dealing with yourself. This is something—not that I actually was thinking that during the interview—but I have a predisposition that way.

Instead of noticing the information that would disconfirm his preconceptions, Roger selectively attended in ways that strengthened them. By doing so, he was contributing to the problem. There is nothing unusual about this—his actions are easily explained in terms of confirmation bias. As we have seen, the outside researcher was able to help him see how his preconceptions were effectively undermining his goal of getting Jan to take more responsibility for the behaviour of the students in her class.

While assumptions can be tested through teacher research, it is also important that teachers develop the skill of detecting and correcting assumptions 'on the run' through the use of open-to-learning conversations. The most effective training for this skill consists of analysing recordings of conversations, assisted by someone who does not share your preconceptions. The aim of the analysis is to compare what one thinks has happened (or will happen) with what actually happened.

In important situations, leaders need to be aware of what they expect and then—because it is so much easier to spot confirmatory data—deliberately look for disconfirmatory data. It is easiest to do this with a trusted partner who has less at stake in the outcome. The leader should write down what they expect to happen and why. During the subsequent postmortem, the way the situation played out is compared with the prior expectation. In this way, the leader uncovers expectations that then become available for future monitoring. The leader then reformulates expectations, practices this reformulation, and repeats the testing. The postmortem should also explore how leader expectations might have predestined the outcome; in other words, the leader tries to spot any self-fulfilling prophecies[481].

Emotionality and learning conversations

The earlier sections on constructive problem talk (page 128), engaging teachers' theories of action (page 128), and the power of assumptions (Box 27) should help explain why we have dwelled so much on the detection and analysis of errors and problems. We need to acknowledge, however, that such learning poses very personal challenges; it is natural that we find examination of our errors, problems, and failures threatening and embarrassing. This is likely to be particularly true for successful senior leaders, who, precisely because they are successful, may have limited experience of reflecting with colleagues on their own contribution to problems. To effectively

[481] Weick, K. (1995). *Sense-making in organizations*. Thousand Oaks, CA: Sage Foundation Publications, pp. 190–191.

lead learning—their own as well as others'—leaders require the emotional maturity to handle the anxieties that learning can occasion.

Emotionally mature leaders are willing and able to enter anxiety-arousing situations in the interest of the learning to be had, instead of escaping from them as quickly as possible. Such leaders are also able to withstand the impulse to act before sufficient data are available or before colleagues are open to the contemplated action[482].

How do leaders develop emotional maturity? This is a question with no easy answers. In the opinion of Hackman and Wageman:

> [E]motional maturity may be better viewed as a long-term developmental task than as something that can be systematically taught. Emotional learning cannot take place in the abstract or by analysing a case of someone else's failure. Instead, it involves working on real problems in safe environments with the explicit support of others. Only to the extent that leader development programmes take on the considerable challenge of providing such settings are they likely to be helpful to leaders both in developing their own learning habits and in providing models for those they lead to pursue their own continuous learning[483].

Given the power of leaders' theories and assumptions, the critical question for leadership development is not what should be taught in leadership courses but what learning processes do current and aspiring leaders need if they are to discover, evaluate, and revise their theories of action, drawing on the help of skilled facilitators and quality, evidence-based resource materials?

8.4 Summary

In this chapter, we discussed four broad areas of expertise that underpin the dimensions of effective leadership identified earlier in the synthesis:

Ensure administrative decisions are informed by knowledge about effective pedagogy

Effective leaders have a practical understanding of teaching and learning that informs their administrative problem solving in such areas as student grouping, teacher appraisal, resource selection, and teacher supervision. We explained how the depth and breadth of a leader's pedagogical content knowledge influences their administrative decision making and how administrative decisions (about, for example, the kind of template to be used for classroom observations) can support or inhibit quality teaching.

Analyse and solve complex problems

To improve quality teaching and learning, effective leaders not only need relevant pedagogical content knowledge, they need to be able to use it within the constraints of a given school context. In applying their knowledge, expert leaders uncover and understand all the requirements relating to the task in hand and then integrate them to identify an adequate solution.

Build relational trust

No matter how good a leader's pedagogical knowledge and problem-solving ability may be, their impact will be limited if relations within the school are characterised by lack of trust. Relational trust influences the effort, risk taking, and collective commitment that staff bring to the complex task of increasing student achievement and well-being. We discussed the interpersonal and contextual factors that shape relational trust and used this information to identify practical steps that leaders can take to develop trust relationships in their communities.

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[482] Hackman, J. R., & Wageman, R. (2007). Asking the right questions about leadership: Discussion and conclusions. *American Psychologist, 62*(1), pp. 43–47. Quote from p. 47.

[483] ibid., p. 47.

These include establishing the following as norms: respect for others, personal regard for others, competence in role, and personal integrity. This is done by modelling appropriate behaviour, following through when expectations are not met, ensuring that talk and action are consistent with each other, and challenging dysfunctional attitudes and behaviours.

Engage in open-to-learning conversations

The skills and values that underpin open-to-learning conversations are crucial determinants of relational trust; indeed, they are crucial to all the leadership dimensions identified in chapters 5, 6, and 7. The 'open-to-learning conversations' model of interpersonal effectiveness provides the theoretical framework for strategies that leaders can use to effectively deal with difficult issues. Using examples that involve New Zealand school leaders, we illustrated the importance of three key aspects of open-to-learning conversations: clear and open disclosure of one's point of view, explicit checking and requests for feedback, and detecting and checking assumptions.

In Appendix 8.1, we list some of the skills, knowledge, and dispositions that underpin the leadership dimensions we have identified. We recognise that this is not an exhaustive listing of the qualities of effective leadership but argue that we have captured skill sets that are critical to engaging in the kinds of leadership that make a positive difference for students.

9. Contributions, implications, reflections

9.1 Contributions

We begin this final chapter of the Leadership BES by summarising what we see as its four most important contributions to school leadership.

9.1.1 This BES confirms that leadership matters

While the evidence has been sparser than we would have liked, of varying methodological quality, and difficult to integrate, our different analyses have consistently found that quality leadership makes an educationally important difference to student outcomes. This is true for both Māori-medium and English-medium schools. The meta-analyses in chapters 4 and 5 confirm the relationship between leadership and achievement: the leadership of those schools where the students achieved at or above expected levels looked quite different from the leadership of otherwise similar schools where the students consistently performed below expected levels.

Every New Zealand school needs skilled leadership so that it can meet the increasingly complex challenge of educating young people. More than ever before, young people need a quality education if they are to live satisfying and productive lives. At the same time, the students in our schools are increasingly diverse. Teachers cannot be expected to meet this double challenge unless appropriate conditions are in place—it is the job of educational leaders at all levels of the system to ensure that they are.

9.1.2 This BES defines the types of leadership that impact on student outcomes

While our finding about the overall impact of leadership is important, practitioners want to know what *types* of leadership have the most impact. This BES answers this question. In a nutshell, the closer leaders get to the core business of teaching and learning, the more likely it is that they will have a positive impact on their students.

The first of our two analyses used two influential leadership theories—pedagogical (instructional) leadership and transformational leadership—to define what was meant by 'leadership type'. It showed that the impact of pedagogical leadership is three to four times that of transformational leadership. The reason for this is that transformational leadership is focused on the relationship between leaders and followers rather than on the educational work of the school. This is not to say that relationships do not matter; indeed, every leadership dimension identified in this BES includes an important relationships component. But the quality of leader–staff relationships is not predictive of the quality of student outcomes. This is because there is more to educational leadership than building collegial teams, establishing a loyal and cohesive staff, and developing a shared and inspirational vision. Educational leadership is about focusing such relationships on specific pedagogical work. Pedagogical leadership theory more successfully captures the practices involved.

The same message emerged from our second analysis, in which we estimated the magnitude of the impact on student outcomes of five different leadership dimensions. The bigger effects were obtained for those types of leadership most closely associated with teaching and learning or with teacher professional learning that was focused on improving student outcomes (dimensions 1, 3, and 4 in Figure 30).

In addition to the five dimensions that emerged from our meta-analysis of studies that directly tested the relationship between leadership and student outcomes, a second set of dimensions was derived from indirect New Zealand evidence. This evidence concerned the role played

by leaders in interventions that had positive outcomes for students. Of the six dimensions derived in this way, three had clear equivalents in the earlier set[484]. The three that had no clear equivalents are dimensions 6, 7, and 8. It should be remembered that the evidence for these three dimensions is not as robust as for the first five[485].

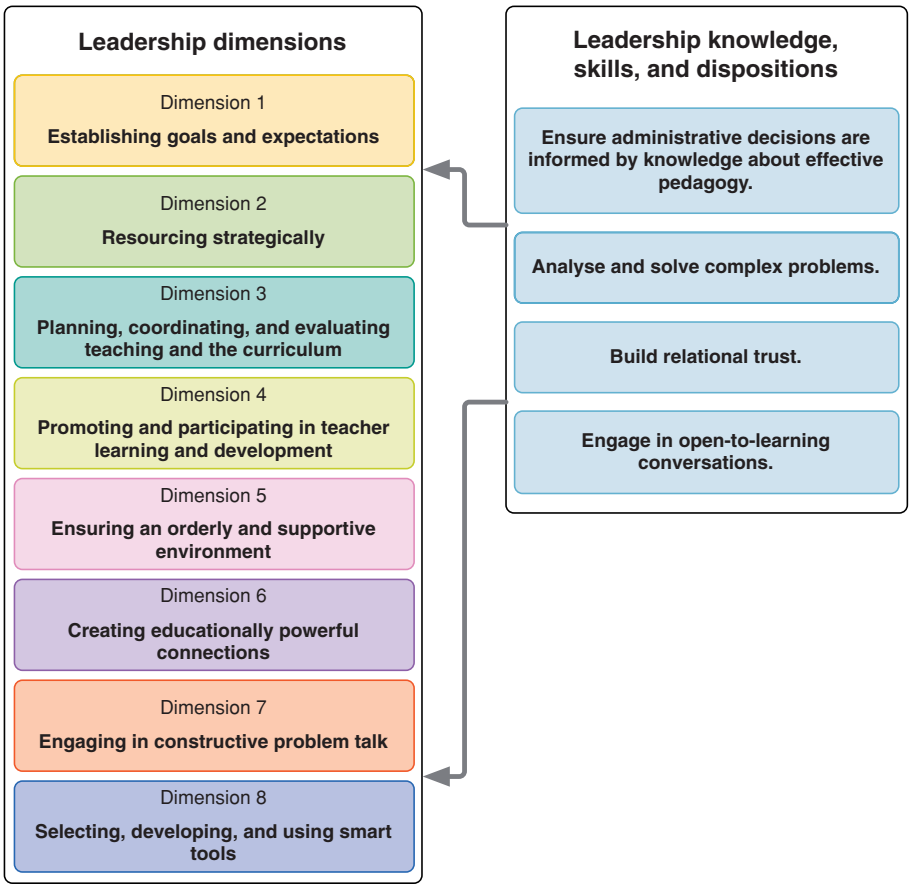

Figure 30. The knowledge, skills, and dispositions underpinning the leadership dimensions

With this caveat in mind, we turn now to a discussion of the eight dimensions included in Figure 30. What picture do they (together with the underpinning KSDs) convey of the type of leadership that makes a powerful difference to student outcomes?

First, such leadership involves *the determined pursuit of goals*—goals that are linked to wider purposes, are unambiguous, and are attractive to those who are to pursue them. Goal setting is a powerful leadership tool in the quest for improving valued student outcomes. It is through goals that leaders signal to staff that some activities and outcomes are more important than others. For Māori-medium leadership, this includes signalling that Māori culture and language learning are fundamental to the achievement of valued student outcomes. In the absence of clear goals, it is likely that multiple agendas and conflicting priorities will dissipate the efforts and initiative of staff, leading potentially to burnout, cynicism, and disengagement. Even the most goal-focused leaders, however, need to skilfully manage the continual distractions that threaten to undermine their best intentions. These include school crises, new policy initiatives,

[484] Those that have equivalents in the dimensions derived from the meta-analysis are: setting educational goals, obtaining and allocating resources aligned to pedagogical goals, and creating a community that learns how to improve student success. The equivalent dimensions from the direct evidence are: establishing goals and expectations, resourcing strategically, and promoting and participating in teacher learning and development.

[485] Methodologically speaking, the dimensions derived from the indirect evidence are not as firmly grounded as those derived from the direct evidence because the research from which the indirect dimensions are derived did not test the relationship between leadership practices and student outcomes. The indirect dimensions are derived from careful, qualitative analyses of the types of leadership practices reported in successful New Zealand initiatives to improve teaching and learning.

calls for goal revision or abandonment, and the maintenance of routines that are not directly goal related. A shared focus on agreed goals enables leaders and staff to recognise that they are being distracted and to deliberately decide what to do about it. Without goals, there is no distraction to recognise, and routines and crises come to dominate leaders' work[486].

Note that we have deliberately emphasised goals rather than vision or mission. We have done this because the evidence is clear that unless these latter, more abstract pursuits are translated into actionable activities, they amount to little more than wordsmithing. The New Zealand interventions that have been successful in raising student achievement have been goal driven and supported by repeated cycles of data-based inquiry focused on closing the gap between what is happening now and what is wanted for the future. These goals have moved beyond the written and spoken exhortations of leaders and have been embedded in the routines of teaching and teacher learning.

New Zealand schools are currently required to set and report annually against self-determined school targets[487]. For this reason alone, it should be a priority to research schools' capacity to do this. A starting point would be to determine the validity of the Analyses of Variance section of the reports submitted to the Ministry of Education. This could be done by studying the relationship between what is said in the reports and the school activities and evidence to which they refer. Efforts to develop the goal-setting capability of leaders should be integrated into existing school improvement efforts (rather than taught separately) because the effective setting and pursuit of goals also requires sound curriculum and pedagogical knowledge (see Appendix 8.1).

Second, it is clarity of educational goals that makes *strategic resourcing* possible. While this leadership dimension had a small impact on student outcomes, resourcing the pursuit of goals is a condition for achieving them. In schools where students performed above expected levels, staff reported that their leaders made appropriate teaching resources available and that they were sources of advice about teaching problems. There is an obvious connection between resource selection and leaders' knowledge of curriculum, curriculum progressions, and pedagogy. Since New Zealand school leaders have considerable discretion in the selection of teaching resources, every school needs leaders who are able to make good choices. In the only available New Zealand study, school leaders had difficulty stating how the ready-made literacy packages they were using met the learning needs of the target groups. The study also found that there was a strong tendency for leaders to see additional material resources, rather than improved teaching, as the way to meet learning needs[488].

Third, *planning, coordinating, and evaluating teaching and the curriculum* lies at the heart of pedagogical leadership. In larger secondary schools, much of this leadership will normally be provided by subject specialists such as heads of department and curriculum leaders. In schools where students were performing above expected levels, leaders were more likely to be involved with their staff in curriculum planning, visiting classrooms, and reviewing evidence about student learning. Staff in such schools welcomed their leaders' involvement in teacher appraisal and classroom observation because it resulted in useful feedback. Once again, this dimension is strongly linked to all the KSDs: if leaders are knowledgeable, they are more likely to give useful feedback, and their feedback is more likely to be taken seriously if given in the the context of an open-to-learning conversation.

Fourth, *Promoting and participating in teacher learning and development* is the dimension most strongly associated with positive student outcomes. Since the possible agenda for teacher professional learning is endless, goals should be used to narrow it down. By getting directly involved in teacher learning, leaders gain a deep understanding of the conditions necessary

[486] For more on managing goal distractions, see Levin, B. (2009). *How to change 5000 schools: A practical approach for leading change at every level.* Cambridge, MA: Harvard Education Press.

[487] See National Administration Guideline 2 http://www.minedu.govt.nz/index.cfm?layout=document&documentid=8189&indexid=8186&indexparentid=1012

[488] Parr, J., Aikman, M., Irving, E., & Glasswell, K. (2004). *An evaluation of the use and integration of readymade commercial literacy packages into classroom programmes* (Final report). Wellington: Ministry of Education.

for substantive, sustained change. It is leaders' responsibility to create those conditions. We have reviewed many New Zealand studies in which school leaders transformed existing staff, syndicate, and departmental meetings into highly effective professional learning opportunities. By changing norms and routines, these leaders were able to give regular meetings the qualities of effective professional communities. The most important of these are an intensive focus on the teaching–achievement relationship and collective responsibility for student achievement and well-being.

Fifth, by *ensuring an orderly and supportive environment*, leadership makes it possible for staff to teach and students to learn. A critical part of this consists of protecting teaching time from administrative and student disruption. Another consists of creating classroom and playground environments in which both students and staff feel respected and cared for.

Sixth, alignment and coherence are constant themes in the literature on improving teaching and learning. We have captured them in the dimension we call *creating educationally powerful connections*. We know that curricula characterised by shared and planned assessments, common themes, and guiding principles produces greater student gains than less coherent curricula. Such curricula have strong connections between units of work, year levels, and subject departments. These connections cannot be achieved if teachers work in silos. Alignment is important because it relates to how we learn important ideas: we need to be exposed to them in repeated and varied ways within a short timeframe. In-depth, cognitive engagement of this kind is not possible for students who experience a fragmented curriculum in which similar ideas are communicated using different terminology and where teachers do not have the time to identify and correct misunderstandings.

School leaders can build educationally powerful connections with families, whānau, and communities through teaching, through homework, and through school–home relationships. Leadership in making such connections and building trust is particularly important where the gap between the educational culture of the school and the culture of the home is wide. This evidence suggests to leaders how they can make real progress on our leadership challenges. Certain kinds of school–family connections can have large positive effects on the academic and social outcomes of students, especially for those who have been under-served or who are at risk. Leaders can use educationally powerful connections and the diversity of the school community to resource the work of the school.

This evidence is also important for the moral purpose that is implicit in an educational leadership role. We need a 'first do no harm' principle in education as in health. Some kinds of engagement with families and communities can be counterproductive. Schools may invest considerable time, energy, and resources in activities that have minimal or even negative impact on student outcomes and end up frustrating students, families, and staff. The evidence about homework is important for school leadership because homework can support or undermine student achievement. There is research and development that can support schools with highly effective approaches, interventions, and smart tools. Leaders can make use of these to align their support to student learning and to assist both teachers and parents to engage in reciprocal teaching–learning processes (ako).

Seventh, the dimension *engaging in constructive problem talk*, in association with the skills of open-to-learning conversations, provides an account of the leadership of change. Conflict and resistance are concomitants of change. Leaders who make their own theories of action explicit and help others to do the same can transform conflict and resistance into constructive debate. Such leaders are open-minded, committed to testing the validity of their own views, and skilled at challenging their staff to do the same. The ability of leaders to name (rather than avoid) problems and to frame them as learning opportunities is critical to continuous, evidence-based school improvement. Once problems have been opened up for discussion, skilled leaders model a thoughtful problem-solving process that questions taken-for-granted assumptions, gathers relevant evidence, and avoids a rush to judgment. The empirical evidence, illustrative examples,

and theoretical explanations presented in this section show how the process of naming, analysing, and resolving problems—far from being a negative experience—can strengthen relationships and improve teaching and learning.

Eighth, we know of no other review of the literature that includes *selecting, developing, and using smart tools* as a dimension of educational leadership. We identified it in our analysis of the indirect evidence because our conception of distributed leadership was inclusive of the tools that structure some leadership tasks. This conception reflects recent theories on distributed cognition[489] and distributed leadership[490], which have not yet influenced the design of leadership surveys. That is why this dimension does not feature in the dimensions derived from the direct evidence. Investment in the development of smart leadership tools is particularly important for New Zealand, where our self-managing system means that high levels of expertise are required in every school.

It should not be concluded, based on our findings, that the leaders in every school should be pouring all their energies directly into teaching and teacher development and ignoring, for example, the need to ensure an orderly and supportive environment. Schools go through stages, and different stages are likely to require different leadership priorities. In some situations, leaders may need to focus on orderliness, safety, and civility before they can give fuller attention to the curriculum and teacher professional learning. Because the direct evidence from which the eight dimensions were derived was cross-sectional in nature, our analysis did not capture changes in their relative importance over time. Nevertheless, our general conclusion from this BES and the BESs that focus on effective pedagogy[491] is that school leadership is likely to have the greatest positive impact on student achievement and well-being when it prioritises the quality of learning, teaching, and teacher learning in ways that attend to both academic and social outcomes.

The evidence reviewed for this BES is inclusive of both formal and informal leadership. The dimensions and KSDs in Figure 30 are broadly applicable, therefore, to principals, holders of senior and middle management positions, and teacher leaders. While the focus of people in these positions will always vary, it is important to recognise that school size will play a crucial role in determining who is responsible for what. For example, in New Zealand's smallest schools, where there is no leadership 'team', most professional leadership functions are carried out by the principal.

9.1.3 This BES offers explanations for the power of the leadership dimensions

Figure 30 lists eight leadership dimensions that are associated with positive student outcomes. However, if leaders are to use these dimensions effectively in their own contexts, they need to understand how and why they work[492]. Without such explanations, our synthesis would be little more than another list of effective leadership characteristics—albeit evidence-based. A third major contribution of this BES, therefore, is the use of theory to explain how and why each dimension has the power to positively impact on student outcomes.

If the dimensions are disseminated and discussed without the accompanying explanations, the likely outcome will be either no change or counterproductive change. For example, greater emphasis on the leadership of teacher professional learning and development (Dimension 4) could be counterproductive if done without an understanding of the characteristics of effective professional development (discussed at length in the section Creating a community that learns how to improve student success [page 120]). Similarly, increased evaluation of teaching

[489] Hutchins, E. (1995). *Cognition in the wild*. Cambridge, MA: MIT Press.
[490] Spillane, J. P. (2006). *Distributed leadership*. San Francisco, CA: Jossey-Bass.
[491] www.educationcounts.govt.nz/goto/BES
[492] Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best evidence synthesis iteration*. Wellington: Ministry of Education.

(Dimension 3) is likely to be counterproductive if it involves using classroom observation tools that do not capture teacher responsiveness to student understanding of lesson content. We emphasise that to apply the dimensions, leaders need to understand the qualities that are responsible for their impact. They cannot gain this understanding from a stand-alone list or a series of bullet points describing the dimensions.

We have noted the extent to which our theoretical explanations have been drawn from outside the general educational leadership literature. To understand why a particular leadership dimension makes a difference to student outcomes, we have often had to draw on theory and evidence that provide greater detail about the various leadership tasks. For example, once our meta-analysis confirmed the importance of goal setting, we turned to the literature on goal setting to understand goal theory and the conditions required to make it work. Since the practice of leadership is task-embedded, leadership theory and research needs to be much more closely integrated with theory and evidence on the tasks involved in leading a particular type of group or organisation[493].

9.1.4 This BES identifies some of the KSDs needed for effective leadership

Chapter 8 and parts of Chapter 6 come close to offering an account of the actual practices and constituent knowledge, skills, and dispositions that underpin the leadership dimensions. We say 'come close' because the situated nature of leadership means that it will never be possible to fully specify them.

One of the big messages of Chapter 8 is that pedagogical leadership requires deep knowledge of the core business of teaching and learning. While generic business and leadership skills may be important, if they are not integrated with the professional knowledge base of teaching, they will not advance the educational agenda of improving teaching and learning. For example, leaders cannot productively discuss with teachers their classroom practice when all they have is expertise in facilitative questioning or generic problem solving. They must understand the content of the discussion in order to be able to evaluate teachers' answers to the questions they ask.

Boards of trustees also need educational expertise because they are increasingly being held accountable for the quality of curriculum delivery and the monitoring of student outcomes. Principals and teacher trustees can advise on such matters, but the essence of accountability is that trustees are able to make independent judgments about the accounts provided. While some small-scale research suggests that lay trustees in low-decile communities lack the expertise to do this, further research is needed to determine the extent to which trustees generally have the capacity to monitor curriculum delivery and student outcomes[494].

Educational expertise is a necessary but not sufficient condition for forging the kinds of relationships that are required for sustained school improvement. Leaders who are able to build trust relationships are in a position to foster the inquiry, risk taking, and collaborative effort that school improvement demands. As discussed in Chapter 8, a precursor of trust is the perception that leadership is competent[495]. Teachers tend to trust leaders who they think are knowledgeable and able to help them solve problems in their teaching[496].

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[493] Robinson, V. M. J. (2001). Embedding leadership in task performance. In K. Wong & C. Evers (Eds.), *Leadership for quality schooling: International perspectives* (pp. 90–102). London: Falmer Press.

[494] For a discussion of the issue of educational expertise in lay governance, see Robinson, V. M. J., Ward, L., & Timperley, H. (2003). The difficulties of school governance: A layperson's job? *Educational Management and Administration, 31*, pp. 263–281.

[495] Bryk, A. S., & Schneider, B. L. (2002). *Trust in schools: A core resource for improvement*. New York: Russell Sage Foundation.

[496] Friedkin, N. E., & Slater, M. R. (1994). School leadership and performance: A social network approach. *Sociology of Education, 67*(2), pp. 139–157.

9.2 Implications for leadership assessment and development

This BES affirms that educational expertise is at the heart of educational leadership and that all educational leaders, including policy makers, need to be given rich opportunities to update and extend that expertise. Throughout the synthesis, our emphasis has been on *leadership* rather than *leaders*, because what matters most is increasing the prevalence, both within and beyond schools, of those practices that are associated with improved student outcomes. It is unreasonable to expect any one school leader to demonstrate high levels of capability on *all* the dimensions and their associated KSDs. The heroic approach to leadership that is implicit in such an expectation is fraught with problems and has discouraged many teachers from taking up more senior leadership roles. It is more reasonable to expect that all New Zealand schools can access high levels of expertise on all the dimensions, and that those who are responsible for appointing and appraising school leaders value and are able to assess such expertise. Where particular expertise is lacking, it should be sourced externally. Small schools will be much more dependent on external leadership expertise than will larger schools.

The development of leadership capability is the responsibility of both schools and government. The Ministry of Education has taken a leading role by instituting the national principal induction programme to prepare new principals for their responsibilities[497]; it also offers programmes for both aspiring and experienced principals[498]. While this BES was being written, the Ministry developed a framework to guide the design and delivery of professional learning opportunities for school principals[499]. Known as Kiwi Leadership for Principals (KLP), it aims to ensure that professional learning opportunities enhance principals' roles as educational leaders. The KLP framework was informed by drafts of this BES and is consistent with it, but it was not intended that the KLP would provide the evidence base, theoretical explanations, and illustrations of effective leadership practices that can be found here. Work is also underway to develop a document, Tū Rangatira, based on te ao Māori, for Māori-medium leaders.

There has been some discussion in the sector about the need for a 'Kiwi leadership' framework for middle managers such as department heads and curriculum leaders. In our view, an outcomes-linked, evidence-based approach to this task would yield leadership dimensions and practices that are broadly similar to those in this BES and the KLP. We say this because our synthesis is inclusive of the leadership of senior and middle managers and because there is considerable overlap in the knowledge, skills, and dispositions that educational leaders require, whatever their particular roles may be. What does differ is the set of tasks for which a leader is responsible. In a small school, however, the principal undertakes all the leadership tasks that would be otherwise distributed among the members of a leadership team.

Principals have a key role to play in increasing the prevalence of pedagogical leadership practices in their schools. They do this by endorsing the leadership of teachers with relevant expertise, creating a culture of collective responsibility for student achievement and well-being, and leading and participating in teacher professional learning that is aligned to the school's priorities. We would argue that the processes involved in pedagogical improvement and in the development of pedagogical leadership have much in common.

Taking a human resource view, leadership is best developed by means of dedicated leadership development programmes. An alternative approach sees the development of educational leadership as an integral part of school improvement activities. The following quote explains the difference between the two approaches:

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[497] This programme, the First-time Principals' Programme, has been provided since inception by a team at the University of Auckland.

[498] Since 2005, experienced principals have been able to attend the Principals' Development Planning Centre. In 2008, regional pilot programmes were started for aspiring principals.

[499] Ministry of Education (2007c). *Kiwi leadership for principals: Informing principals' professional learning*. Wellington: Author.

> What's missing in this [human resource] view is any recognition that improvement is more a function of *learning to do the right things* in the setting where you work than it is of what you know when you start to do the work. Improvement at scale is *largely a property of organizations*, not of the pre-existing traits of the individuals who work in them. Organizations that improve do so because they create and nurture agreement on what is worth achieving, and they set in motion the internal processes by which people progressively learn how to do what they need to do in order to achieve what is worthwhile[500].

Several of the New Zealand studies analysed in Chapter 6 show how development of pedagogical leadership can go hand in hand with school improvement. External facilitators and researchers taught teacher leaders how to build professional communities that achieved improved results for students and, in doing so, they increased the level and quality of the pedagogical leadership in the school[501].

Given the power of tools to shape leadership practice, the development of leadership tools should be part of a coordinated, national leadership development strategy. As we discussed in the context of teacher appraisal policies (see page 137), both smart and dumb tools can have an impact on leadership practice. National appraisal guidelines and indicators have been influential in shaping the appraisal policies of schools, yet they are misaligned with the policy's stated goal of improving teaching and learning and with the evidence about the kinds of teaching that increase students' opportunities to learn[502]. The development of valid tools is a specialist job that requires researchers, design specialists, and practitioners to work together through iterative cycles of development, trialling, and revision.

The development of tools such as leadership exemplars would be a welcome outcome of this BES. Exemplars would illustrate how crucial leadership tasks such as appraisal, grouping, parent reporting, student discipline, and formulation of homework policies can be fulfilled in ways that impact positively on students. Developers and writers would need to be very familiar with the research evidence that identifies the particular qualities responsible for the positive impacts so that, for example, they can select schools with exemplary appraisal policies. Tools will be most effective if they embody the design principles discussed in Chapter 6 (see page 138) and if they are annotated to show how the selected examples incorporate the principles associated with effective task performance.

Consistent with our earlier point about approaches to leadership development, leadership capacity can be evaluated either by assessing leaders themselves or by assessing how well selected leadership tasks are performed. It is appropriate to assess leaders themselves for such purposes as appointment, appraisal, and promotion. This requires tools that are aligned to the dimensions identified in this BES and that, with appropriate training, trustees and external appraisers can use to assess whether current and aspiring leaders demonstrate the practices and KSDs associated with positive outcomes for students.

By assessing collective performance on selected leadership tasks, it is possible to obtain critical, system-wide feedback for policy makers and professional associations concerning the capacity

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[500] Elmore, R. F. (2004). *School reform from the inside out: Policy, practice, and performance*. Cambridge, MA: Harvard Education Press, p. 73.

[501] Examples of the development of pedagogical leadership through processes of school improvement can be found in:
Parr, J., Timperley, H., Reddish, P., Jesson, R., & Adams, R. (2006). *Literacy Professional Development Project: Identifying effective teaching and professional development practices for enhanced student learning. Milestone 5* (Final report). Wellington: Learning Media
and in:
Bishop, R., Berryman, M., Cavanagh, T., Teddy, L., & Clapham, S. (2006). *Te Kotahitanga phase 3: Whanaungatanga: Establishing a culturally responsive pedagogy of relations in mainstream secondary school classrooms*. Wellington: Ministry of Education Research Division, Māori Education Research Institute (MERI), and Poutama Pounamu Research and Development Centre.

[502] Sinnema, C., & Robinson, V. M. J. (2007). The leadership of teaching and learning: Implications for teacher evaluation. *Leadership and Policy in Schools, 6*(4), pp. 319–343.

of current leadership to implement government policies such as the new national curriculum. A consistent message coming out of the school improvement literature is that politicians and policy makers underestimate the magnitude of the learning that is needed to achieve policy goals[503]. The learning agenda for any policy initiative is a function of the match between what the initiative requires leaders to do and their present capacity to perform those roles. Careful research on this match should be used to inform the timing, resourcing, and frequency of the policy initiatives that school leaders are asked to implement.

We have outlined two approaches to assessing and developing leadership: assess and develop the leader or assess and improve the collective performance on selected leadership tasks. The two approaches are complementary. The first is required for human resource purposes; the second for raising system-wide performance. Appropriate tools and training are needed for both.

9.3 Reflections on research in educational leadership

This BES has highlighted an almost complete lack of connection between theories and research on leadership and educational outcomes for students. One indicator of this disconnection is the miniscule proportion of research on educational leadership that focuses on the leadership–outcomes relationship. Our systematic search of the international literature uncovered only 27 published, quantitative studies. We found that, of 127 New Zealand theses that had some relevance to educational leadership, only 12 included anything about student outcomes, and most of these were evaluations of small-scale interventions conducted by the research students themselves[504].

The same disconnection is also apparent in some of the ways that leadership is theorised. Transformational leadership—one of the most influential theories used in educational research and in graduate programmes in educational administration—has its origins in leader–follower relationships, not in the quest to discover how educators can make a difference for students. The educational leadership research community has only recently begun to make links between the organisational and administrative processes of schools and their core business of teaching and learning. This is the very connection that school leaders are asked to make all the time yet, until relatively recently, researchers have provided them with little help in doing so.

Given the extent of this disconnection, it would be fair to characterise research on educational leadership as predominantly adult-centric. The underpinning theories have been concerned with the quality of adult–adult relationships rather than the impacts of leadership on students. The assumption seems to have been that, if leaders enjoy good relationships with their staff and community, the benefits will automatically flow through to students.

The same adult-centric thinking is found in some of the arguments for distributed leadership, which are grounded in theories of power rather than in theories of teaching and learning. For some of its advocates, distributed leadership is desirable because it counteracts concentration of power and authority in the hands of the principal or senior management team[505]. The problem with this argument is that school leadership is not there to run a democratic staffroom or provide opportunities for staff to collaborate or try their hands at leadership. It is there to develop and sustain teaching and learning practices that deliver valued outcomes for all students[506]. Whether distributing leadership in particular ways promotes such outcomes is

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[503] Fullan, M., Hill, P., & Crevola, C. (2006). *Breakthrough*. Thousand Oaks, CA: Corwin Press.

[504] See the New Zealand Education Theses Database. www.educationcounts.govt.nz/goto/BES

[505] Goldstein, J. (2003). Making sense of distributed leadership: The case of peer assistance and review. *Educational Evaluation and Policy Analysis, 25*(4), pp. 397–421;
Harris, A. (2005). Leading or misleading? Distributed leadership and school improvement. *Journal of Curriculum Studies, 37*(3), pp. 255–265.

[506] For a more extended argument about the normative basis of distributed leadership, see Robinson, V. M. J. (2008). Forging the links between distributed leadership and student outcomes. *Journal of Educational Administration*, *46*(2), pp. 241–256.

an open question to be addressed through both context-specific inquiry and research-based generalisation. A more educationally powerful argument for distributed leadership is the one we have used throughout this BES: the breadth and depth of expertise required to meet the challenges outlined in Chapter 2—not to mention the effort entailed—are beyond that of a lone principal or senior leadership team.

To be fair to leadership researchers, most of the published research on teacher professional learning has also been adult-centric. In this latter field, the criterion for effectiveness has typically been teacher change rather than improved outcomes for the students of the teachers involved[507]. As we acknowledged in Chapter 8, trusting relationships between teachers and leaders are critical to effective leadership. The challenge for leaders is to build and maintain positive relationships with staff while working with them to improve teaching and learning. The integration of these two imperatives is not advanced by assuming that good staff relationships automatically lead to benefits for students.

What would it take to build a stronger evidence base in New Zealand about the relationship between school leadership and student outcomes? First and foremost, it would require a database of student outcomes that are identifiable by school so that school-level leadership effects can be investigated. At least half of the 27 international studies reviewed for the meta-analysis in chapters 4 and 5 used student outcome data that was routinely collected by state and regional educational authorities. In some cases, data on selected leadership variables were also available from existing databases. Such a database allows researchers to rigorously sample schools, control for differences in student background, and identify schools that over at least two years outperform otherwise similar schools.

It is a consequence of the lack of such databases in New Zealand, at least at primary level, that very little quantitative, outcomes-linked leadership research has been conducted. In the absence of national databases, surrogate indicators, such as ERO reports, have become the means of identifying good schools and good school leadership. How valid these are is unknown because there are no publicly available studies that examine the relationship between them and student outcomes.

One of the reasons why New Zealand has so little school-linked data on student achievement is that political and professional leaders want to avoid the negative consequences of certain kinds of national assessment. There is, however, a body of research literature available on how to develop large-scale assessment and indicator systems in ways that avoid, on the one hand, the excesses of a high-stakes system and, on the other, the extreme of having no system at all until year 11[508]. A discussion of this literature is beyond the scope of this BES, but we have raised the issue of national databases because we have been repeatedly asked why there is so little New Zealand research on the links between leadership and student outcomes.

A further reason so little quantitative analysis of leadership–outcome links has been done in New Zealand is the critical shortage of educational researchers and analysts with the skills and experience necessary to work with large data sets. This shortage means that even the available data sets are not always analysed in ways that can inform policy decisions[509]. Urgent investment is needed to develop our capacity to conduct such research.

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[507] Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best Evidence Synthesis Iteration*. Wellington: Ministry of Education.

[508] For an account of the development of an indicator system in the UK, to which 6000 secondary schools voluntarily subscribe, see:
Fitz-Gibbon, C. T. (1996). *Monitoring education: Indicators, quality and effectiveness*. London: Cassell;
Fitz-Gibbon, C. T., & Tymms, P. (2002). Technical and ethical issues in indicator systems: Doing things right and doing wrong things. *Education Policy Analysis Archives, 10*(6). Retrieved from http://epaa.asu.edu/epaa/v10n16/

[509] A 2001 report revealed that there were over 100 databases already existing within the Ministry, which, with approriate secondary analyses, could yield valuable information about system performance. The same report also found substantial gaps in the representativeness of data and in cognitive outcomes at primary school level. At the secondary level, there were few measures of non-cognitive outcomes. Harker, R., Nash, R., Johnstone, P. E., & Hattie, J. (2001). *Secondary analysis: Scoping project*. Wellington: Ministry of Education.

At different points in this BES, we have identified specific gaps in the research. Rather than repeat them here, we have focused on the reasons for them. The difficulty of obtaining school-linked student outcomes data is arguably one major factor. A second is the shortage of New Zealand leadership researchers, compounded with the fact that most of them have not pursued questions about pedagogical leadership or its links to student outcomes. Most of the New Zealand evidence we have drawn from comes from researchers on the improvement of teaching and learning—not those who identify themselves as leadership researchers. Even this group is very small: the number of researchers responsible for the evidence on which New Zealand's most successful interventions are based is less than a dozen.

The critical question for policy makers, universities, and professional associations is not 'What are the research gaps?', but 'How can we put conditions in place that will ensure the gaps are filled?' These conditions include training more researchers who will pursue an agenda of educational leadership as leadership of the improvement of teaching and learning[510], constructing school-linked data sets that will support research on the links between school/department leadership and student outcomes, and developing a critical mass of researchers and analysts with the ability to analyse large data sets. Educational leadership research should be encouraged that informs policy makers about (i) the value of alternative policies, (ii) the capacity of leadership to implement particular polices, and (iii) the impact of those policies and initiatives on leadership capacity and student outcomes. In recent times, there has been an increased emphasis on pedagogical leadership in the graduate leadership and management programmes of several of our universities. It is our hope that this will lead to an increase in research into pedagogical leadership.

9.4 System supports for pedagogical leadership

Elmore, a leading scholar on school improvement and education policy, defines educational leadership as "the guidance and direction of instructional improvement"[511]. Improvement, he says, is:

> change with direction, sustained over time, that moves entire systems, raising the average level of quality and performance while at the same time decreasing the variation among units, and engaging people in analysis of and understanding of why some actions seem to work and others don't[512].

The skills and knowledge that matter, he argues, are those that are directly connected to this purpose.

The New Zealand education system lacks the single-minded focus that Elmore insists is the key to raising student achievement. While the Ministry of Education's strategic goals assert the importance of 'raising achievement and reducing disparity' and programmes such as the First-time Principals' Programme and the pilot for aspiring principals all give priority to pedagogical leadership, this priority is not reflected in the way principals spend their time (Chapter 2). Administrative tasks take over the leadership agenda and leave principals with little time to provide pedagogical leadership. The same is probably true of heads of department in secondary schools[513].

There are likely to be a number of reasons New Zealand principals spend so little time on pedagogical leadership tasks. One may be the level of administrative support they are able

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[510] For an account of this type of leadership, see:
Elmore, R. F. (2004). *School reform from the inside out: Policy, practice, and performance*. Cambridge, MA: Harvard Education Press, Chapter 2.

[511] ibid., p. 57.

[512] ibid.

[513] Alison, J. (Personal communication, 24 October, 2007); and Wright, N. 2002. *Stories from the inside: A narrative analysis investigating the professional lives of three New Zealand secondary school heads of English departments.* Unpublished doctoral thesis, University of Waikato, Hamilton.

to access. As outlined in Chapter 2, the principal and board are responsible for every area of school management. Principals, particularly in small rural schools, may lack the support that could relieve them of routine administrative duties. The 1998 TIMSS survey collected information about secondary school principals' use of time. According to their self-report, the principals of rural schools (which are more likely to be small) spent an average of 100 hours per month on administration. This compares with a mean of 79 hours for urban principals. That this data may reflect a resourcing issue is reinforced by the fact that the mean for principals of independent schools (which are likely to be better resourced) was just 51 hours[514]. More recent data from state schools (reported in Chapter 2) suggest that principals may be using too much of their time on activities that, according to our findings, have minimal or no impact on student outcomes.

Another reason some principals allocate time as they do may relate to the confidence with which they approach their different responsiblities. People do what they feel comfortable with; some principals, particularly those who were inducted into the management culture of the early Tomorrow's Schools era, may find it easier to engage with management issues than to provide pedagogical leadership. Principals not only need space in their workloads to provide such leadership, they need opportunities to learn how to do this well.

A similar pattern of management responsibilities overwhelming pedagogical leadership probably exists for other school leaders, such as heads of department and trustees. Trustees say that they want to spend more time on strategic and educational issues (Chapter 2) but that they have had little systemic support in doing so. A look at the New Zealand School Trustees Association's *Trustee Handbook* suggests this may be true. Of its 588 pages, 208 deal with 31 pieces of legislation that are binding on boards [515]. It offers trustees no educational guidance and no illustrations of how they might fulfil their statutory obligation to be accountable for student achievement. This misalignment between the content of the handbook and the educational purpose of schools is to be partly addressed in a revision to be published later this year. Some of the other publications and training[516] that STA provides for board members do offer insight into educational goals and how to measure them, but there remains a tension between the need to help trustees negotiate the procedural requirements associated with working in a Crown agency setting and the need to provide trustees with the educational knowledge that will enable them to oversee the educational performance of their schools.

School leaders make a difference for their students through a determined and sustained focus on priorities for student achievement and well-being, alignment of activities and resources to those priorities, an iterative cycle of inquiry into progress, and ongoing adjustment of the strategies by which priorities are pursued. To achieve their goals, many schools will need to recruit and develop additional expertise, and they will have to make a considerable investment in terms of staff time. The investment is more likely to be made and sustained in a national system in which goals, structures, and regulatory framework are strongly aligned with a pedagogical leadership agenda.

In the last two years, considerable progress has been made in New Zealand in recognising the importance of such leadership development and putting in place a development framework that has pedagogical leadership as its clear priority.[517] The overarching goal of the framework is to embed knowledge about what improves outcomes for every student into the daily practice of school leaders. Resources are being invested in leadership development for middle and senior leaders, aspiring principals, and both new and experienced principals in English- and Maori medium settings. Several of the programmes are designed to integrate school and leadership

[514] These figures are drawn from Chamberlain, M., & Caygill, R. (2002). *The school and classroom context for year 9 students' mathematics and science achievement*. Wellington: Ministry of Education. Table 3.9, p. 45.

[515] These figures refer to the New Zealand School Trustees Association (2004), *Trustee Handbook*. Wellington: Author.

[516] For example, STA's Get on Board professional development programme. www.nzsta.org.nz

[517] Ministry of Education, Professional Leadership Plan 2009–10. www.educationalleaders.govt.nz/Leadership-development/The-Professional-Leadership-Plan

development by supporting participants as they attempt to improve teaching and learning in areas for which they are responsible. With strong formative research in place and sustained dialogue between practitioners, providers, policy makers and researchers[518], these leadership development strategies have the potential for greatly increasing the positive impacts of educational leadership on the social and academic outcomes of New Zealand students.

[518] For an account of the theory and practice of learning-focused partnerships between these four groups, see Annan, B. (2006). *A theory of schooling improvement: Connectivity and consistency to improve instructional practice*. Unpublished doctoral dissertation, University of Auckland, New Zealand.

School leadership cases for professional learning

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5. A senior management team creates educational connections between school and home 236
6. Leadership through the selection and design of smart tools 242

In this section, we present six cases that demonstrate how combinations of the various leadership dimensions (chapters 5 and 6) and associated knowledge, skills, and dispositions (KSDs, Chapter 8) work together in the accomplishment of important leadership tasks. The cases have been selected to show leadership in action across a range of different school and policy contexts. They provide additional insights into the 'how' and 'why' of each dimension and its associated KSDs.

Wherever possible, New Zealand cases were selected. Case 3, from the US, shows the difference that pedagogical knowledge makes to administrative decision making. It was selected because a New Zealand equivalent does not currently exist.

Each case is an accurate representation of the research on which it is based, though much of the content has been rearranged to provide clear links to the dimensions and the KSDs. New tables and figures have also been constructed to make the cases more suitable for professional development purposes.

The questions for reflection at the end of each case are designed to help readers draw on its key features to make links back to their own practice. References are provided for those who wish to do additional reading.

Table 22 is a guide to using the cases for professional development purposes. It lists the dimensions and associated KSDs discussed in each case and the leadership tasks for which the material in the case is likely to be most relevant.

Table 22. A guide to the use of the leadership cases

Title	Leadership dimensions discussed	Leadership KSDs discussed	Relevance to leadership tasks
1. Leading teacher appraisal	Planning, coordinating, and evaluating teaching and the curriculum Establishing goals and expectations Selecting, developing, and using smart tools		Teacher appraisal; formative evaluation of teaching; classroom observation; design of policies and procedures for the above
2. An assistant principal improves teaching in her school	Promoting and participating in teacher learning and development Engaging in constructive problem talk	Engage in open-to-learning conversations	Any task involving the improvement of teaching and learning through interpretation and use of data; leadership of change; conversations with teachers about the need for change
3. A principal uses pedagogical knowledge to lead teacher learning for student success	Promoting and participating in teacher learning and development	Ensure administrative decisions are informed by knowledge about effective pedagogy	Promoting effective teaching in diverse classrooms; decision making about grouping
4. A literacy initiative in a kura	Establishing goals and expectations Resourcing strategically Creating educationally powerful connections		
5. A senior management team creates educational connections between school and home	Creating educationally powerful connections	Build relational trust	School–home partnerships; involving parents in curricula; accessing home resources to reduce disparity
6. Leadership through the selection and design of smart tools	Selecting, developing, and using smart tools		Design of all national and local educational policies intended to change practice, especially curricula

Leading teacher appraisal

Introduction

Appraisal is a *performance management process* aimed at *improving the quality of teaching and learning*. It typically involves (i) identification of performance expectations and appraisal goals, (ii) classroom observations, (iii) teacher self-appraisal, (iv) discussion of the teacher's self-appraisal and the appraiser's evaluation, and (v) the setting of new performance goals.

Leaders at different levels of the education system have responsibility for the quality of appraisal: policy makers set national guidelines; school management teams and boards of trustees develop and approve school policies and procedures. If appraisal is to achieve its aim of improving teaching and learning, it should not function as a compliance-based evaluation of teaching. Instead, it should be an opportunity for leaders and teachers to inquire together into the impact of teaching on student learning.

Much of the New Zealand literature reviewed in Chapter 6 showed that data-based inquiry into the relationship between what is taught and what is learned impacts positively on student achievement. This case describes how a researcher conducted a series of studies to determine if the appraisal policies and procedures operating in primary schools are encouraging inquiry of this kind. She found that educational policy makers and school leaders play a crucial role in determining whether they do.

In this case, we identify three leadership dimensions that influence the extent to which appraisal is used as a tool for improving the quality of teaching and learning:

- Planning, coordinating and evaluating teaching and the curriculum;
- Establishing goals and expectations;
- Selecting, developing and using smart tools.

Research context

Three related studies investigated the appraisal policies and practices of Auckland primary and intermediate schools:

Study 1 investigated what teachers talk about in their appraisal discussions. Eleven teachers (four appraisers and seven appraisees) from three schools were questioned about their most recent appraisal discussions. The schools ranged in size from 358 to 695 students. Two were decile 10 and the third was decile 3.

Study 2 established the extent to which appraisal goals, jointly developed by appraisers and teachers, focused on data-based inquiry into student learning. The findings were based on the responses of 68 teachers from eight primary and intermediate schools to a questionnaire about their appraisal goals.

17 primary schools were involved in **study 3**, which investigated (i) the emphasis on student learning in appraisal policies and (ii) performance indicators developed to assess staff against professional standards. The schools were located in four Auckland regions and included year 1–6, year 1–8, and year 7–8 schools. Their rolls ranged in size from 200 to 1000, and the decile level from 1 to 10.

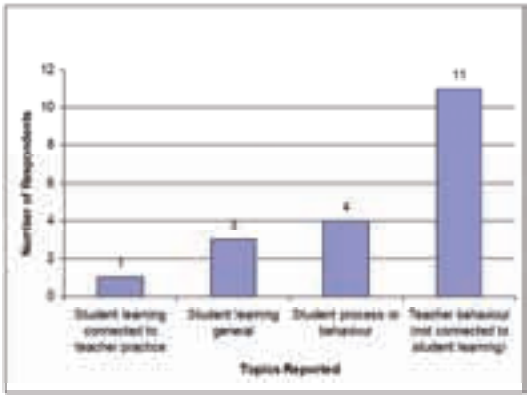
Leadership dimension 3

Planning, coordinating, and evaluating teaching and the curriculum

In Chapter 5, we found strong evidence that a leader's ability to encourage teachers to use student data as a basis for evaluating their teaching is critical to improving student outcomes. Appraisal discussions are a prime time for such evaluation.

What do teachers talk about during appraisal discussions?

Of the 11 teachers interviewed about their appraisal discussions, only one described a conversation that focused specifically on student learning. Three others reported talking about student learning, but only in general terms. They did not discuss either the specifics of what students had learned or the relationship between what was learned and what had been taught. For example, one teacher said she had mentioned that a lesson was really pleasing because "… the art work came out how we wanted it to look". Another recalled talking about "improved numeracy skills" and "children … making progress".



Leadership dimension 3

With limited emphasis on student learning, teachers had few opportunities to engage in evidence-based inquiry into the relationship between how they had taught and what had been learned. Appraisal discussions focused instead on classroom teaching or organisation. All 11 teachers reported discussing teaching approaches, strategies, and techniques (planning, questioning, using resources, managing student behaviour, preparing lessons, modelling, organising the classroom, organising school events, grouping students, etc.). They also discussed various personal qualities, traits, or characteristics (such as confidence, willingness to learn, and openness to new ideas). The relationship between such qualities and student learning was not considered. Furthermore, when describing their appraisal interviews, teachers attached particular weight to the affective dimension; most talked about the positive feelings generated: "It gave me confidence", "It made me feel really good".

The evidence reviewed above shows that appraisal, as practised in these schools, was not being used for data-based inquiry into student learning. By focusing primarily on teacher behaviour and not exploring its impact on student learning, appraisal was not fulfilling its potential to foster student success.

Establishing goals and expectations

In chapters 5 and 6, we discussed the importance of setting and communicating goals for teacher and student learning. In the context of appraisal, 'development objectives' or 'appraisal goals' are agreed on by the teacher and appraiser at the start of each appraisal cycle and then provide the basis for subsequent observations and discussion.

There are two leadership roles in the goal-setting process. First, appraisers exercise leadership as they work with teachers to develop clear and specific goals, which, if they are to promote student learning, must emphasise achievement outcomes and be embedded in classroom routines. Second, principals and senior managers exercise leadership as they support appraisers and teachers in using evidence about student performance as the basis for goal setting.

Appraisal goals

The lack of emphasis on student learning in appraisal discussions does not mean that the teachers were unconcerned about student learning or that they did not want their teaching to have greater impact. Indeed, nearly all responded positively to the researcher's suggestion that they focus on data about student learning during appraisal discussions:

> *I think that's great … so you're using hard data of learning to then get the teacher to focus in on their teaching practice.*
>
> *I actually really enjoy getting that kind of feedback.*
>
> *It would be useful 'cause that's what we're here for, 'cause that's what really matters.*

Leadership dimension 1

Rather, the explanation for the limited focus on student learning lies in the nature of the goals that were developed by the teachers and appraisers. Only three of the 11 teachers had developed goals that were directly related to student learning. Most goals focused only on what was taught, because it was assumed that certain teaching practices would automatically advance learning. One teacher, who had a goal relating to social studies planning and decision making, reported that her appraisal discussion had centred on how she and her team had investigated and implemented learning centres, graphic organisers, and cooperative learning. Her comments reveal big assumptions about the impact of particular teaching practices on students:

> *… 'cause this one [goal] is all about planning, and planning affects students' learning. 'Cause planning obviously, you know, it must, it must connect with the students' learning 'cause it's part of that planning, learning, assessment, teaching cycle.*

These findings were confirmed and extended by study 2, which asked 68 teachers in eight primary and intermediate schools about their appraisal goals. The vast majority of goals (90%) focused on aspects of teaching such as implementing a new arts curriculum, supporting teacher aides with an autistic student, or maintaining a student-focused classroom environment.

Only 11 (4.5%) of the 244 goals identified by teachers were about student learning. These included:

- develop independent learners;
- developing literacy in year 1;
- upskill all the children in my class in the use of ICT;
- improve numeracy skills and teaching and numeracy thru [sic] NUMP;
- upskill literacy at year 1 and 2 level (reading/writing);
- improve written language throughout whole school (school-wide goal).

Leadership dimension 1

Most of the goals in this group were expressed in general terms, so it was not clear what would count as 'goal achieved'. Even though their focus was on enhancing learning outcomes, the extent of improvement was wide open to interpretation.

Fewer than 4% of all goals emphasised inquiry, and none specified the use of data.

A learning goal is a necessary but insufficient condition for improving student outcomes: goals must also be specific and challenging. The small number of goals that focused on student outcomes, and the vague, unchallenging nature of those that did, in large measure explains why the teachers in this study did not inquire into student learning during their appraisal discussions. Indeed, what emerges is a picture of appraisal as a process for helping teachers to engage in practices that are assumed to be beneficial for students, rather than an opportunity for inquiring into the teaching–learning relationship.

Selecting, developing, and using smart tools

In Chapter 6, we identified the role smart tools play in the improvement of teaching and learning. The appraisal policies and supporting documents that schools develop as part of their performance management systems can be such smart tools, influencing every aspect of the appraisal process: goal setting, classroom observations, self-appraisal, and appraisal discussions/interviews.

It is the role of leadership to ensure that appraisal tools are aligned to the core aim of improving teaching quality and student learning. In keeping with a distributed conception of leadership, there are opportunities for alignment at every level of the system, including boards of trustees, where board and principal determine school policy, and senior management, where principal and senior managers develop the supporting documents (performance indicators and appraisal templates)—all of which have a powerful influence on how appraisal is conducted.

Appraisal tools

Leadership dimension 8

The second explanation for the lack of emphasis on student learning in appraisal discussions concerns the tools used to guide the process. When asked why they did not discuss student learning during their appraisal interviews, teachers said that:

- they thought that the purpose of appraisal was to evaluate their teaching, not to develop their ability to promote student learning;
- they assumed that there was a connection between certain teaching practices and student success;
- they discussed student learning in other contexts;
- they viewed appraisal as an opportunity to celebrate teacher success and provide support.

These reasons centre on the teachers' views of the purposes of appraisal and their assumptions about effective teaching. One way in which leaders can use appraisal to promote data-based inquiry is to ensure that appraisal tools are designed to challenge assumptions about effective teaching and develop teachers' capacity to inquire into the impact of their teaching.

Study 3 investigated what emphasis there was on student learning in three appraisal tools: school policy statements, performance indicators, and appraisal templates. The findings demonstrate the potential of tools to promote data-based inquiry into student learning.

Tools of appraisal

A. School policy

Leadership role	Potential for promoting inquiry	
	Strong	**Weak**
Each **board of trustees** approves an appraisal policy that is consistent with Ministry of Education guidelines.	Policy focuses on the improvement of teaching and learning: *"To improve the quality of student learning through classroom observation and analysis of classroom processes";* *"To enable staff to improve teaching effectiveness and enhance student achievement."* Policy emphasises that the appraisal process should focus on data-informed inquiry into the relationship between teaching and learning.	Policy includes, but does not emphasise the improvement of teaching and learning. Policy emphasises completion of appraisal processes (a compliance approach).

Findings. Seventeen schools of varying size and socio-economic status submitted their appraisal policy documents for analysis. Of the statements specifying purpose, only 15% referred to student learning, while 70% made reference to teaching. Once again, the assumption appeared to be that a focus on teaching would be beneficial for students.

B. Performance indicators

Leadership role	Potential for promoting inquiry	
	Strong	**Weak**
School leaders include performance indicators in appraisal policies to guide classroom observations and discussions. Indicators are based on the national Interim Professional Standards.	By asking which students are succeeding, indicators require the appraiser to investigate student outcomes, for example: *"Demonstrates appropriate emphasis and successful learning in the areas of reading, writing, and mathematics";* *"Students are achieving success."*	Indicators assume a causal link between certain teaching behaviours and improved student outcomes: *"Demonstrates an attractive, busy, and challenging physical environment that promotes student achievement and further learning across the curriculum."*

Findings. Only 3% of the performance indicators from the 17 schools (all from just six schools) focused directly on student learning and encouraged evidence-based inquiry by raising questions about student success. A further 3% of indicators (from eight schools) focused indirectly on student learning. This latter group of indicators reflected the assumption that certain teaching behaviours will inevitably improve student outcomes.

The remaining indicators focused on dimensions of professional knowledge, teaching techniques, motivation of students, classroom management, and communication).

C. Templates

Leadership role	Potential for promoting inquiry	
	Strong	**Weak**
Templates are developed by **school principals and senior managers**. They provide frameworks for classroom observations and follow-up discussion.	Templates prompt appraisers to focus on the teaching–learning relationship and to record and consider student learning data.	Template headings are general and do not require or encourage a focus on student learning. For instance: Things seen / Describe Things heard / Impact Suggestions / Coach Focus

Findings. There was no reason appraisers could not record data and comments about student learning on the templates. But the generic headings neither required or encouraged them to do so. Under the heading 'Impact', one appraiser recorded notes about the impact of teaching on students' behaviour, not on learning outcomes. Student engagement, interest, and motivation were assumed to be indicators of cognitive engagement and achievement, and formed the basis of subsequent discussion.

Leaders play a key role in determining the extent to which appraisal is used as a process for enhancing student outcomes. They can ensure that appraisal tools—national and school policies, performance indicators, and appraisal templates—are aligned to the goal of improving teaching and learning. They can do this by selecting, developing, and using tools that require and support inquiry into the relationship between what teachers do and student achievement and well-being. Given the highly contextual nature of teaching, appraisal tools should not reinforce the assumption that particular teaching practices will inevitably impact positively on student learning. This study found that the appraisal tools used by the schools fostered assumptions about, rather than inquiry into, the impact of teaching on students.

Key questions	1. Do your school's appraisal policies and performance indicators require appraisers and teachers to use evidence about student learning as a basis for appraisal? 2. What are appraisal goals in your school based on? Do they arise out of an inquiry cycle in which evidence is analysed and student needs discussed? 3. What professional development might you design to help teachers and appraisers learn how to use student data to inquire into their teaching practice? (Refer to Case 3, page 226).
Source	Sinnema, C. E. L. (2005). *Teacher appraisal: Missed opportunities for learning.* Unpublished doctoral thesis, University of Auckland.
Further reading	Sinnema, C., & Robinson, V. M. J. (2007). The leadership of teaching and learning: Implications for teacher evaluation. *Leadership and Policy in Schools, 6*(4), pp. 1–25. Nuthall, G. A. (2004). Relating classroom teaching to student learning: A critical analysis of why research has failed to bridge the theory–practice gap. *Harvard Educational Review, 74(3).* Cardno, C., & Piggot-Irvine, E. (1997). *Effective performance appraisal: Integrating accountability and development in staff appraisal.* Auckland: Longman.

2 An assistant principal improves teaching in her school

Introduction

This case describes how an assistant principal contributed to student achievement by providing her staff with professional learning in the use of achievement data to improve reading and writing. Although her teachers were collecting achievement data—diagnostic summaries for individual students (based on norm-referenced tests) and reading tracking sheets—the AP believed they were not using it to inform their teaching. She tried two approaches (one unsuccessful, the other successful) to encourage them to do so. The case highlights how important it is, when leading change, to discover the beliefs and assumptions that explain current practice and teacher reactions to proposed alternatives.

Research context

The study took place in a large South Auckland primary school with a high percentage of Māori and Pasifika students. Although the school had participated in a government-funded initiative to improve literacy, no improvement was discerned. The AP, who was responsible for literacy leadership in the junior school, asked a researcher to work with her for a year to help teachers learn how to use student achievement data to improve their teaching. The researcher and an assistant observed four staff meetings chaired by the AP and attended by seven teachers. After each meeting, the researchers interviewed three or four teachers and relayed their feedback to the AP so that she could take it into account when planning the next stage of the intervention. By the end of the year, the students of the participating teachers had doubled their writing vocabulary. In the second year, when the focus shifted to reading, there were significant improvements in student reading levels.

Leadership dimension 4

Promoting and participating in teacher learning and development

Generally speaking, leaders make their most powerful impact on student outcomes through their leadership of teacher learning and development, and much of this impact comes down to how successfully they establish the conditions for effective professional learning communities. In Chapter 6, we identified two such conditions: an intensive focus on the teaching–learning relationship and collective responsibility for student achievement and well-being. Leaders of team, departmental, and syndicate meetings can strengthen these conditions by:

- focusing teacher talk on the teaching–achievement relationship;
- using outcomes data to determine effective teaching practice;
- fostering collective responsibility and accountability for student learning and well-being;
- sharing effective teaching practices and creating opportunities for teachers to learn from each other.

Supported by the researcher, the AP in this case worked with her teachers to develop a shared understanding of how to improve the low literacy levels.

Leadership dimension 7

Engaging in constructive problem talk

When a proposed change challenges teachers' existing beliefs and practices, leaders are more effective when they discover and discuss those beliefs than when they ignore them (Chapter 6). This case clearly contrasts these two different approaches.

1. A first, unsuccessful effort to create a learning community

Bypassing teachers' theories of action

The AP wanted teachers to use the data they had collected about their students' reading as a basis for their planning. She believed that these data (from the Observation Survey and tracking sheets[518]) were the most reliable evidence available and that, by using them, teachers could better align their lessons with the learning needs of their students, leading to enhanced achievement.

The teachers disagreed. They preferred to base their planning on their own, anecdotal observations. They believed that these were more relevant and trustworthy than formal data. In fact, two of three teachers interviewed explained that they did not even look at the formal data that they personally collected:

> *Teacher 1: They [Observation Survey data] go into the file but you don't have time to look at it.*
>
> *Teacher 2: I don't use it [tracking sheet] very often—just fill it in.*

[518] Clay, M. M. (1993). *An observation survey of early literacy achievement.* Auckland: Heinemann Education.

The AP believed that the teachers were dismissive of the formal data for two reasons:

- They did not realise its potential to help them improve their teaching.
- They did not 'own' it.

Her challenge, therefore, was to help them appreciate its value. With this aim in mind, she presented graphs of Observation Survey data at a team meeting and pointed out how their students were achieving in relation to national benchmarks.

When asked by the researchers for feedback on the value of this presentation, the teachers generally agreed that it had not been very helpful. They already knew that many of their students were reading below expectations, and they believed that this was largely due to contextual factors that were beyond their control. They suggested that national expectations were unrealistic for their students.

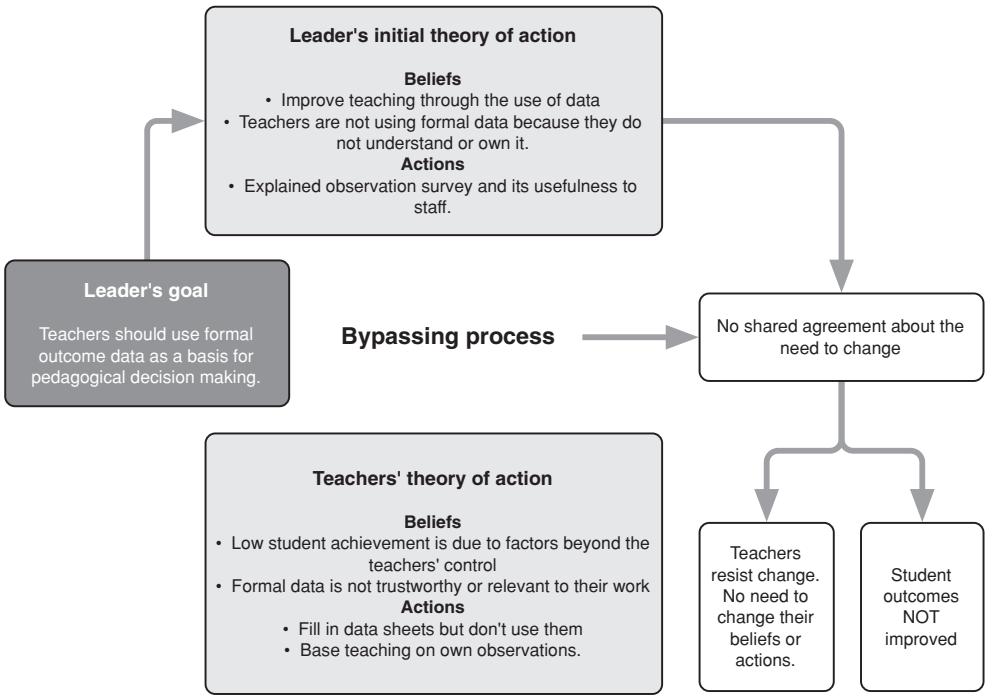
> *Teacher 1: I don't know if I agree on the national averages … There's the ones that don't come to school every day, there's the ones who don't have lunch, there's the ones who are scared when they come to school so they are running round and they're scared when they go home because they won't do their books at home.*
>
> *Teacher 2: I've got a vague idea off the top of my head and I just tend to teach them the best I can and I mean if they're below and I'm teaching as much as I can and to the best of my ability—I don't see that knowing exactly where they should be, or how much below they are, is going to do anything.*

Why were initial efforts to create a learning community largely unsuccessful?

The initial team meeting highlighted a mismatch between the AP's and teachers' assumptions about low achievement and what to do about it. As the diagram shows, the AP's theory of action bypassed rather than engaged the teachers' theories of action; the result was resistance.

Leadership dimension 7

Bypassing teachers' theory of action



The AP's attempt to make the issue (low student achievement) explicit by graphing the data did not increase the teachers' ownership of the problem because they did not trust the data, nor did they believe that they could make a bigger difference to student achievement. As the AP bypassed rather than engaged these beliefs, nothing changed for either teachers or students.

2. A second, successful effort to create a learning community

Engaging with teachers' theories of action

After discussions with the researchers, the AP decided to make the relationship between teaching and student achievement more explicit. She would challenge the teachers' view that their students' literacy was constrained by factors beyond their control. At the next team meeting, she presented results from two sub-tests of the Observation Survey. These showed that, while the students' ability to hear and record sounds in words approached national norms, their writing vocabulary was falling far behind. In this way, the AP challenged the teachers' theories, not by directly confronting them, but by giving them a means of testing their validity. She then worked with the teachers to identify why the students' word-writing scores were so low and asked them to consider teaching strategies that might improve them.

The discussion at this meeting was very different from the discussion at the previous meeting. While the teachers still struggled to grasp the meaning of the data, they adopted a problem-solving approach this time. For example, one teacher, struggling with the discrepancy revealed by the data, said, "I don't understand why—they're hearing and recording sounds—and they can't link it to the writing vocab."

Teachers continued to express doubts about whether national benchmarks were realistic for their students. But they now expressed these doubts in ways that could be more constructively challenged in terms of teaching practice.

> *Teacher: … writing the words for themselves, they will never be able to do the work by themselves.*
>
> *Assistant Principal: [After one year at school] … they need to write more words and it is about how do we help them to do that?*

The teachers agreed on some strategies they could use to help their students use their letter-level knowledge to write words.

Agreed evaluation of existing practice

Leadership dimension 7

Despite agreeing to use the new strategies, some teachers still doubted this would improve student achievement. For example, one teacher suggested that progress was unlikely until students "achieved a certain stage in development". To evaluate the effectiveness of the new strategies, the AP suggested that, once each week, the teachers should ask their students to write as many words as they could in five minutes. A month later, the AP collected the data and graphed the difference between the first and second scores for a random sample of students from each class. The graphs showed that the students in some classes made only small gains, while the students in others made large gains. The AP shared these results with her teachers at a team meeting. The group noted that one of their number was particularly successful in raising their students' achievement. The others were very keen to discuss the strategies used by this teacher.

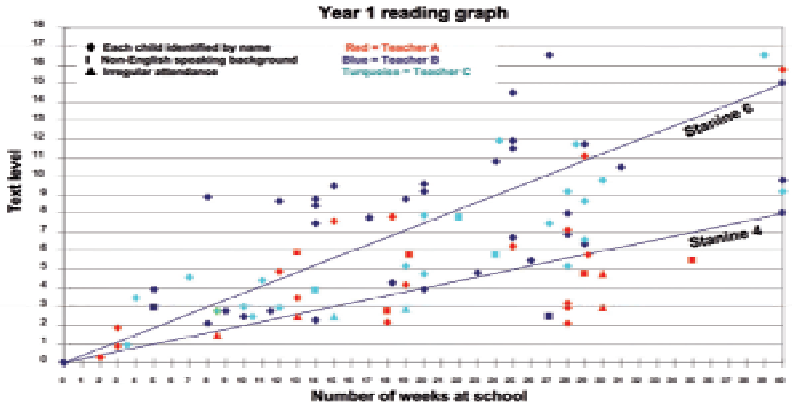
Improved practice

The final round of interviews revealed three key changes in teaching practice:

Change	Example
Data-based inquiry	*I've never really looked at the Observation Survey data before so I didn't really know that it was a problem … You know the performance was actually below average. It didn't click with me that those were the strategies we should be using. Once we started putting strategies into place, we could see it working. (Teacher)*
Evidence-based practices	*Teachers described how they now contextualised the teaching of words in their reading and writing programmes.*
Increased expectations	*One teacher described how, while writing five words was acceptable to her before, she now expected 30.*

The evidence collected by the teachers suggested that the changes they made were effective in improving student outcomes. The students' three-monthly test scores improved considerably. Teachers also reported anecdotal evidence of greater word use in student stories and greater student independence in trying new words.

A follow-up visit to a team meeting one year later showed that the norms and content of team meetings had changed, with the focus now on helping teachers teach particular students more effectively. The teachers plotted each student's text-reading level on a nationally benchmarked graph that was colour-coded so that students' teachers could be readily identified:

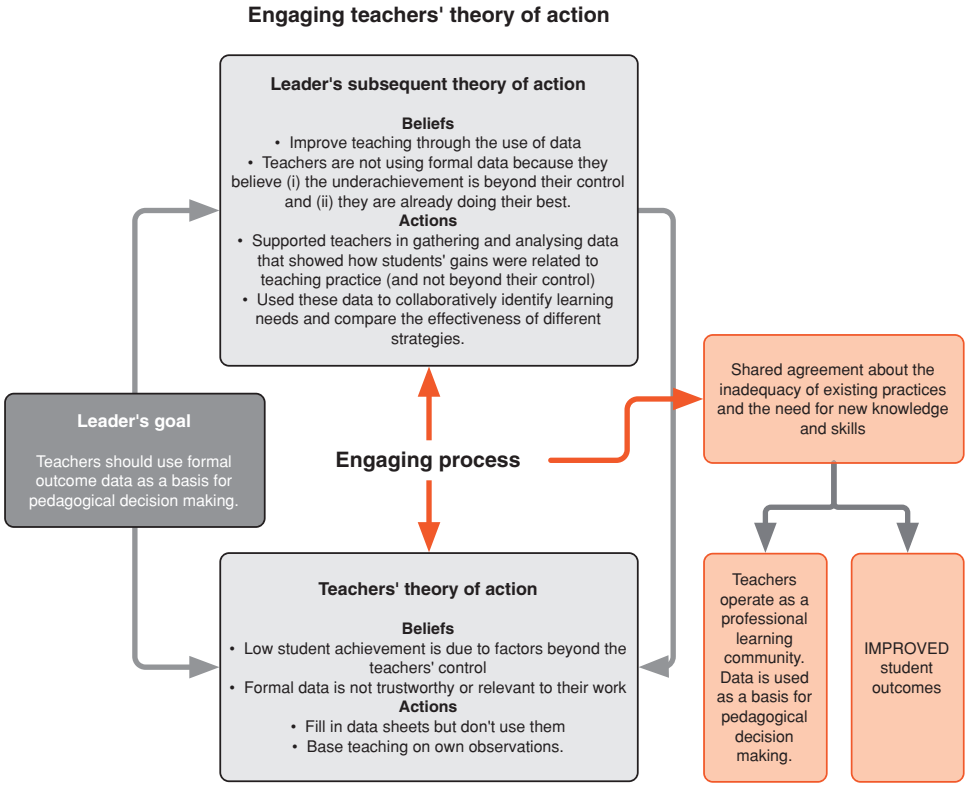


The teachers then discussed how to progress those who had failed to reach that quarter's benchmark. They agreed that it was helpful to be able to identify students they should target and strategies they could use to improve achievement. One teacher explained:

> *You can identify where you need to put more effort in … We all support each other—we ask, "Hey, what are you doing to get yours [text levels] up?" and "What do we need to do?"*

A noticeable shift had occurred in the course of the year. The teachers now focused on what they could do to assist struggling students to reach national benchmarks. The use of student data helped promote inquiry into the teaching–learning relationship. The diagram below summarises this second, more successful change strategy. With the help of the external research partner, the AP had revised her theory about how to promote change. With the help of the AP, the teachers had tested and revised their theories about the usefulness of data—and what they could achieve with their students.

Leadership dimension 7



Leadership dimension 4

Creating a learning community

These findings illustrate the conditions that contribute to the creation of a learning community. By challenging her teachers' beliefs about the use of student data and their low expectations in terms of student achievement and by simultaneously helping them develop relevant knowledge and skills, the AP was able to create a community focused on learning to improve student performance. A summary of her strategies follows:

Strategy	What happened as a result
Shift the focus from discussion of students to discussion of the teaching–achievement relationship	The meetings were organised as opportunities to discuss the links between teaching and student achievement. This discussion was supported by relevant achievement data and the AP's ability to challenge the teachers' low expectations and their tendency to attribute poor student performance to external factors. They began to focus instead on classroom factors that were within their control.
Use student outcomes data to inform decisions about effective teaching practice	The AP created multiple opportunities for the teachers to make connections between their teaching and their students' learning (for example, by identifying the problem with the word-writing scores and getting teachers to agree to track progress). Utilising these opportunities, the teachers were able to test their original beliefs about what they could influence and what their students could achieve. As they learned to use student outcome data to distinguish between more and less effective practices, they started discussing how they might change their teaching in order to raise achievement.
Actively foster collective responsibility by sharing effective teaching practice and creating opportunities for teachers to learn from one another	By setting up opportunities for group discussion of data, the AP helped create an atmosphere of shared responsibility and accountability. In this changed environment, the needs of low-achieving students could be identified and addressed and colleagues who were using more successful teaching practices could be identified.

Key questions

1. Think of an aspect of teachers' practice that you would like to change. How might you find out what beliefs underpin that practice?
2. How do you explain the consequences that flow from engaging or bypassing teachers' theories of action?
3. How is student achievement data currently used by teachers in your school, department, or team? Do leaders and teachers agree that current practice is satisfactory? If not, how might you make your differing views the subject of professional discussion?

Source

Timperley, H. S. (2005). Instructional leadership challenges: The case of using student achievement information for instructional improvement. *Leadership and Policy in Schools, 4*(1), pp. 3–22.

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3 A principal uses pedagogical knowledge to lead teacher learning for student success

Introduction

- What do school leaders need to know in order to support teachers in improving student outcomes?
- How are the management decisions that leaders make on matters such as student grouping, timetabling, and assessment influenced by their knowledge of the discipline concerned and how to teach it effectively?

In this case, we explore the experiences of a primary school principal, Mr Nash, who used his knowledge of mathematics teaching and learning to transform a management issue (student grouping) into an opportunity for teacher professional learning. While it is about a primary principal, we believe the case has relevance for any curriculum leader, primary or secondary.

Nash believed the introduction of a new mathematics curriculum provided an excellent opportunity to critically examine the current policy of separating students into maths ability groups. The principal had clear, and largely sceptical, views about ability grouping. Initially, he didn't share these views with his teachers because he wanted them to consider the issue for themselves. He designed two activities that would help his staff to explore their ideas about grouping and connect these ideas to their own practice:

Activity 1: A discussion, led by himself, of an article describing the implications of heterogeneous grouping for the teaching and learning of mathematics.

Activity 2: A group task in which the staff explored a mathematics word problem that he had designed.

Research context

Nash was one of five principals involved in a study of how school management practices such as student grouping are influenced by changes in leaders' knowledge of subjects and how to teach them. All five were leading schools that were involved in a national initiative to improve the teaching of mathematics. As part of this initiative, principals participated in a series of workshops. This case concerns just one of the five principals and focuses on how his pedagogical leadership was shaped by his knowledge of mathematics and mathematics teaching.

Nash's school was a small, high-decile primary school. At the time of the study, he had been principal for five years. His own early experience of learning mathematics had largely involved mastering the basic facts and procedures for calculation, with a reliance on memorisation. After "getting stumped" by Algebra II, he didn't pursue tertiary mathematics any further. But his knowledge of mathematics did advance to the conceptual level—the point at which he was able to make sense of mathematical ideas and processes—when he first began teaching. He noted:

> *When I first started teaching at the [primary] level, and had to teach mathematics for the first time … I really became interested in it and excited about it … I was seeing the patterns and making connections, and thinking about how a system of knowledge … is put together and how different people put that together.*

Nash's knowledge of elementary mathematics and his ideas about how children constructed mathematical knowledge shaped many aspects of his pedagogical leadership. Added to this, he had a commitment to equity in education and an awareness of how educational practices can advantage some students and disadvantage others.

Leadership dimension 4

Knowledge, skills and dispositions—leadership content knowledge

In Chapter 8, we defined leadership content knowledge as that knowledge of teaching and learning that shapes management practices. The leadership content knowledge that shaped Nash's approach to student grouping included:

- knowledge of the discipline of mathematics;
- knowledge of how to promote teacher learning about the teaching of mathematics;
- knowledge of diverse learners and how diversity can promote learning in mathematics classes.

This knowledge enabled Nash to help his teachers better understand the issues around heterogeneous grouping in mathematics. When leaders are actively involved with their teachers in both formal and informal professional learning, there is evidence of greater impacts on student outcomes. This leadership dimension had the greatest impact of all the dimensions identified in this BES.

Nash's active involvement included:

- leading staff discussions about teaching and learning;
- being an accessible and knowledgeable source of advice on teaching.

Below, we discuss the two activities Nash used to lead the professional learning of his staff.

Activity 1: Discussion

Nash's goal was to provide his staff with concrete examples of maths teaching that was effective with diverse learners. In a staff meeting, he used an article in which a teacher described two examples of mixed-ability grouping in her grade 5 (year 5) maths class:

> *[The teacher, Mrs] Riddle was concerned that the most competent children in her mixed ability math class found it 'too easy' and were missing some of the intellectual richness that mathematics had to offer. She tells the story of the developing partnership between two children in her fifth-grade mathematics class who she had paired together to solve a complex math problem: Nate a 'math star' who could solve maths problems quickly and Brian who struggled in math, but was a strong visual learner. Working together, the students were able to combine Nate's flexible sense of how to work with numbers with Brian's concrete and visual sense of what the problem actually meant. As Nate slowed down and tried to understand what Brian was doing, he discovered conceptual depths to the mathematics that he had not considered before.*

To guide the teachers' reading of the article, Nash gave them a series of questions. These were designed to encourage them to explore and develop their own ideas and to give him insight into their thinking. The questions reflected Nash's own knowledge about effective teaching for diverse learners and his beliefs about student grouping.

The questions	How the questions worked
What are Riddle's underlying assumptions—that appear either explicitly or implicitly in her text—about why 'stars' and 'less able' students are best served by working with each other rather than separately? Which of the experiences Riddle reports appear to confirm her assumptions?	Drew attention to the assumptions underlying the idea that it is good for students of mixed abilities to work together.
According to Riddle, what mathematical skills are often not evident in maths 'stars'? What are the competencies she appears most interested in developing in her students?	Introduced the idea that the criteria teachers use to identify students who excel at maths might mask what these students do and do not know.
How would you characterise the teaching practices that Riddle promotes for heterogeneous maths classrooms? What knowledge and know-how are essential for someone to teach the way that Riddle teaches?	Highlighted the idea that teachers require specific skills and knowledge to teach heterogeneous classes well.

Leadership dimension 4

In the staff meeting, each teacher wrote individual responses to the questions and then shared their thoughts with the rest of the group. They identified Riddle as a teacher who was highly reflective, knew her students' abilities, built upon their strengths, and was able to deepen their conceptual understanding. The teachers wanted to know how Nate became stimulated by Brian's thinking and how to address the different pace at which students worked. The teachers also questioned the extent to which student achievement gains were a product of thoughtful teaching or ability grouping.

The teachers' responses to the article suggest that it had clearly worked in the ways that Nash intended: it gave them the opportunity to discuss important ideas about heterogeneous grouping for mathematics and to consider its pedagogical implications. In the next section, we explore how the principal's pedagogical content knowledge enabled him to lead this learning opportunity for his teachers.

Leadership knowledge, skills, and dispositions

Principal knowledge and skills to promote teacher learning

Knowledge of the discipline

Nash knew that mathematical problem solving is multi-dimensional, requiring the use of a variety of cognitive processes and skills: conceptual understandings, concrete and numerical representations, calculation procedures, etc. This knowledge enabled him to select an article that contained important ideas about teaching mixed-ability classes—and put them across in ways that teachers would find accessible and transferable to their own practice. The article:

- highlighted some of the advantages of mixed-ability groupings by illustrating how students with different strengths can learn from each other;
- provided a window into how teachers' orientation toward mathematics, attention to students' mathematical thinking, and creative approaches support the learning of diverse students.

Nash also drew on his knowledge of the discipline to develop questions that would focus attention on the diverse skills that students bring to maths problems.

Knowledge of how to promote teacher learning

The principal knew that ideas about mathematics and mathematics teaching are embedded in practice. For this reason, he used a story that provided rich images of teaching practice to highlight the ideas he wanted his teachers to explore. The story:

- provided a model of 'good practice';
- made explicit a teacher's decision-making process as it related to the issue of student grouping;
- provided a concrete description of two students with different approaches working together to solve a maths problem.

Nash used the ideas in the story and the set of questions as a basis for discussion at a staff meeting. He also gave teachers the opportunity to think about the grouping issue prior to the meeting. He ensured that the discussion focused on the teaching and learning implications of grouping rather than on the policy itself.

His approach to structuring this staff meeting was open-ended and adaptable. This enabled teachers to develop their own thinking and make links to their own classroom practice. He also knew enough about the relationships between different kinds of mathematical thinking to build upon the ideas the story raised and to facilitate in-depth discussion.

Knowledge of diverse learners and how diversity promotes learning outcomes

The principal believed that ability grouping restricts students' opportunity to explore different ways of solving mathematics problems. In addition, he believed that such grouping contributes to a de-skilling of teachers since it does not help them build the skills they need to teach students of diverse abilities.

He believed that these ideas could be best communicated to teachers via an in-depth, conceptual account of teaching practice that:

- showed students of differing abilities developing their maths problem-solving skills by working together;
- illustrated the limitations of maths teaching that does not support diverse abilities;
- provided a rich description of pedagogical decision making that would extend his teachers' thinking about mathematics teaching.

The structured questions developed by Nash challenged his teachers' assumptions and focused their attention on how diversity within maths groups can promote a range of student learning outcomes. Nash's teachers began to understand the potential benefits of heterogeneous groups.

Activity 2: Teachers working together on a mathematical word problem

Nash designed a second activity, based on what he had learned from his involvement in the first meeting:

> *I felt that I just need to think of this [first] session as time to hear them, listen to them talk about the topic, something related to the topic and to get them to generate some ideas. Now I have something to work with.*

He wanted to extend his teachers' understanding of ability grouping by demonstrating to them that the use of different strategies to solve a problem may reflect different ways of understanding mathematical ideas rather than different developmental stages. He designed an an open-ended mathematics problem that would give teachers themselves experience of working in mixed-ability groups.

A maths problem

> Recently Paul learned how to construct small rafts with Popsicle sticks. Each raft is made with five Popsicle sticks. Paul bought five packages of Popsicle sticks, and there are 11 Popsicle sticks in each package. How many rafts will Paul he able to construct?

The answer to this word problem, which is essentially a factoring problem, is 11 rafts of five Popsicle sticks each. In concrete terms, there are 55 Popsicle sticks altogether, which are first bundled into five packages of 11 sticks each and then into 11 rafts of five sticks each. In abstract terms, 5 x 11 = 55, and 55 ÷ 5 = 11.

As the group shared the strategies they used to solve the problem, they could see that they varied considerably. Some used very concrete, visual methods that involved manipulating the objects (sticks), while others employed more abstract techniques that involved identifying an appropriate calculation (multiplication and/or division).

Having had this experience of working in heterogeneous groups, the teachers were able to discuss the implications of having a classroom in which the students use a range of problem-solving strategies—particularly the implication that students might learn from observing strategies other than their own. Nash ended the discussion by identifying what teachers needed to do to maximise the learning potential of mixed-ability mathematics classes.

Leadership knowledge, skills, and dispositions

Principal knowledge and skills to promote teacher learning

Knowledge of the discipline

Having developed a good understanding of his teachers' views about heterogeneous grouping during the first activity, the principal was then able to design a practical task that would extend their thinking. Given his conceptual understanding of mathematics and his awareness of how children learn, he was able to tailor the task so that it would show teachers:

- that students can learn from each other (as the teachers did in activity 1);
- how learning occurs in heterogeneous groups.

Teachers were given an opportunity to examine the mathematical structure of the problem, explore extensions, and experience what it would feel like to be a student in a heterogeneous group. In doing so, they were able to see that, even though some solutions were more mathematically sophisticated than others, each represented a subtly different way of interpreting the problem, and that these differences had the power to extend the understanding of everyone in the group.

Knowledge of how to promote teacher learning

While Nash's conceptual knowledge of mathematics enabled him to design an appropriate activity, it was his practical judgment that alerted him to the value of having teachers work collaboratively on a problem. By having his teachers work together, Nash strengthened the ideas introduced during activity 1. This allowed them to experience heterogeneous grouping from the perspective of their students. Through subsequent discussion of the strategies that they had used to solve the problem, the teachers could see that:

- ideas embedded in a mathematics problem can be quite complex;
- the basic ideas underlying a mathematics problem can be developed and connected to other mathematical ideas.

By running the staff meeting as a 'doing mathematics' community, the principal encouraged a pedagogical exploration of learning mathematics in a heterogeneous classroom that could then inform discussion of grouping.

Knowledge of diverse learners and how diversity promotes learning outcomes

One of the key ideas Nash wanted to convey to his teachers was that diverse students in heterogeneous classrooms don't simply know more or less than each other, they approach mathematics in different ways. By giving the teachers the opportunity to work in diverse groups, they were able to experience for themselves their potential benefits. As they explored the complexities of a seemingly simple mathematics problem, they saw that different but equally valid solution strategies were possible. In this way, they could see the importance of moving beyond the obvious ('some students work faster') to considering how learning actually occurs ('children have different ways of understanding mathematical ideas'). This discussion gave the principal what he needed to begin helping his teachers develop the skills they needed to support diverse learners in their own classrooms.

Key questions

1. Which management practices in your school could be explored by teachers for their pedagogical implications?
2. How could you design an activity to find out what teachers know about heterogeneous grouping and its implications for student learning? (The activity might perhaps involve a reflective article, guiding questions, or a focused discussion.)
3. If you do not have in-depth knowledge of effective pedagogy in mathematics (for example), how might you, nevertheless, still promote the sort of discussion that occurred in this case?

Source

Nelson, B. S., & Sassi, A. (2005). *The effective principal: Instructional leadership for high quality learning.* Columbia, NY: Teachers College Press.

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4 A literacy initiative in a kura

Introduction

This case documents how the staff of a kura, together with its whānau, students, and a researcher, collaborated to develop a programme that would assist Māori-medium students to make the transition to a bilingual secondary school, the only option available in their community. The students were leaving the kura highly competent in te reo Māori, both culturally and academically.

> *Tumuaki: They had all that potential but I wondered why they were not succeeding when they went to college. I think about all the kids that have gone to college from here. Bright as, top athletes, top musicians, culturally really really high level.*

Few, however, had received any formal instruction in English.

The kura started receiving information from the secondary school that caused alarm amongst the kura whānau.

> *Whānau kura liaison teacher: It was scare tactics in the beginning … What brought that about was the statistics from the college, remember Koro? (Koro nods his head in agreement) … They [the secondary school] do that to all schools, they send the stats back to the school on what the children have got on [English] comprehension and other tests taken at college. I thought that can't be right … I thought, what gives here?*

Although the kura whānau wanted their children to continue succeeding when they got to secondary school, many were not. They attributed this partly to a failure to prepare them for the next phase of their education, which would include English-medium teaching. The whānau wanted to make sure that by the time their children reached secondary school, they would be competent readers and writers of English, but they wanted to do this without compromising their fluency in te reo Māori. The whānau weren't sure how to achieve this, so they sought advice from a Māori literacy researcher.

A 10-week literacy programme involving trained tutors from kura whānau and the wider community was collaboratively developed and then implemented over a period of 12 months. Assessment data showed that, following participation in the programme, year 8 students were able to read and discuss English text at age-appropriate levels and that their rates of writing had improved. Importantly, they had maintained or increased their fluency in Māori, in both reading and writing. These results were replicated with groups of students in years 6 and 7.

In this case, we identify three key leadership dimensions that were involved in the development and implementation of this successful programme: establishing goals and expectations, strategic resourcing, and creating educationally powerful connections.

Research context

The research was instigated by the tumuaki on behalf of the whānau of the kura kaupapa Māori concerned. The kura was committed to the principle of developing bilingualism and biculturalism by first ensuring that students achieve linguistic, academic, and cultural competence in Māori. This principle is similar to that found in Te Aho Matua, the philosophical statement that guides the operations of many kura. Te Aho Matua states that, while the kura whānau should ensure that the language used in the kura is, for the most part, exclusively Māori, the goal is competency in both Māori and English:

2.2 Mo ngā tamariki, kia rua ngā reo. Ko te reo o ngā mātua tīpuna tuatahi, ko te reo o tauiwi tuarua. Kia ōrite te pakari o ia reo, kia tū tangata ai ngā tamariki i roto i te ao Māori, i roto hoki i te ao o Tauiwi.

2.4 I runga i tēnei whakaaro, kia tere pakari ai te reo o ngā tamariki, me whakahaere ngā mahi katoa o te kura i roto i te reo Māori. Tae atu ki te hunga kuhu mai ki roto i te kura, me kōrero Māori katoa, i ngā wā katoa.

Whānau of different kura make different decisions around the place and timing of English language teaching. In this case, the tumuaki wrote to the researcher seeking her support to develop a literacy programme for their year 8 students, all of whom were fluent readers, writers, and speakers of te reo Māori. The researcher believed that workload, distance, and funding prevented her from working with the kura at that time. Accompanied by a native speaker of Māori, she travelled to the kura to explain kanohi ki te kanohi why this was so.

In the ensuing discussion of reading, it became apparent to the hui that whānau and community members could be powerful resources for improving students' literacy in English. Although they were not all fluent Māori speakers, they were all fluent and literate in English. The researcher was asked about programmes she was involved in, and three were identified that could be implemented as school–home partnerships: a reading tutoring programme (Pause, Prompt, Praise or PPP for short) and two writing procedures (responsive writing and a form of structured brainstorm).

While the researcher had said that she wouldn't be available to work with the kura for six months, the whānau was adamant that this would be too late for their current year 8 students, given that term 3 had already begun. The programmes needed to begin immediately.

Establishing goals and expectations

In chapters 5 and 6, we discussed setting and communicating goals for teacher and student learning. We argued that goals do not motivate unless they are seen to be important and that they gain in importance by being linked to wider philosophical and moral purposes. The goals for this particular initiative sat within a wider vision held by Māori—for the language, cultural regeneration, and educational achievement. The kura whānau was philosophically, spiritually, and culturally committed to this vision.

Goals for bilingual competence are set by leaders at the national level and by iwi, whānau, kaumātua, and tumuaki.

It was as a result of whānau and iwi exercising leadership at the national level that kura kaupapa Māori, now a significant educational movement, were established, funded, and resourced. National and iwi leadership were also involved in developing the movement's philosophical base, with its focus on bilingualism and biculturalism.

The leadership of the kura at the centre of this study identified that, somehow, their policy was obstructing achievement of their goals, and that this needed to be rectified.

> *Tumuaki: One of the main objectives was to become bilingual, biliterate and bicultural. I mean that was the brief. That they [the students] would be as fluent in English as they were in Māori … there was no policy to prepare these kids for college and they were going to a bilingual unit. I felt it was a golden opportunity to use PPP for transition.*

Leadership dimension 1

The kura's accountability to whānau and hapū ensured that this initiative was accorded priority. And because whānau and hapū had a strong sense of collective responsibility, all those involved saw the initiative as urgent and important.

> *Tumuaki: There was a common purpose. Us as staff and also us as a community, and really it does hinge upon, I guess, leadership, leadership in the school and in the hapū. You can't have one without the other … It was easy for me working with the hapū, for a start one of the kaumātua is my father-in-law … I know the Ngāti Ira people really well. I can whakapapa there myself.*

Initially, there was not unanimous support for developing a literacy programme that included reading and writing in English, but the kura leadership helped the kura whānau to get to the point where they agreed there was a problem and were prepared to seek a solution.

> *Board of Trustees Chairperson: There were a couple of parents who felt there shouldn't be any English whatsoever in the school … the rest of them, they really did want their children to read successfully in English as well as in Māori.*
>
> *… In fact, there seemed to be a general consensus among the people that were part of it that they wanted to be there, that they were all in this together.*

1. In kura kaupapa Māori, identifying and setting important educational goals involves making sure that these fit with the cultural and philosophical agenda that underpins the movement.
2. School leadership alone cannot resolve issues associated with setting and meeting goals for student learning and achievement. Also needed is effective leadership from whānau and hapū/iwi.

Strategic resourcing

In chapters 5 and 6, we discussed how leadership is exercised in obtaining and allocating material, intellectual, and human resources for the purpose of pursuing pedagogical goals. The tumuaki in this kura exercised leadership in this way by:

1. identifying the researcher as a potential intellectual and research resource and negotiating a research relationship;
2. ensuring that the kura whānau were able to make decisions based on good information;
3. leading the kura whānau, as its members worked collaboratively with the researcher to obtain or develop resources necessary for implementing the literacy initiative.

Leadership dimension 2

At the initial hui involving the researcher and the kura, whānau and community members were identified as appropriate and powerful resources for a literacy initiative aligned with pedagogical purposes. Importantly, this ensured that whanaungatanga underpinned all parts of the initiative, including its resourcing.

PPP tutors were drawn mainly from students' own whānau or from the wider community in which the kura was situated. An appropriate person from outside the community was engaged to develop the students' writing skills through the use of responsive writing strategies.

Leadership was exercised in ensuring that funding was made available for priorities associated with student literacy development. The literacy initiative got under way thanks to the efforts of whānau and community volunteers, with the board of trustees providing a budget for research travel and accommodation. Following implementation, the board made sure that the programme would be resourced on an ongoing basis by making its costs part of the annual budget.

The tumuaki's leadership was apparent in the way in which decisions made by the kura whānau were planned, deliberate, and based on factual information. He pointed out that it was critical to have "enough information to make the decision as a board as well as a community".

The leadership of the year 7 and 8 kaiako was essential to the success of the initiative. Taking on the role of community and school liaison teacher, she was responsible for the implementation of the reading and writing strategies. She approached parents and whānau members to explain the project, the training and support provided, and the commitment required of tutors. She monitored the weekly tutoring, helped select appropriate reading material, and provided feedback on student progress. She regularly supplied the researcher with audiotapes of the tutors in action, and she subsequently shared the researcher's feedback with them. She also played a key role in supporting the staff to continue consulting and partnering with the whānau, community, and researcher.

The PPP reading and writing tutoring programme was developed in New Zealand as a means of helping home and school to work together to raise standards of literacy. In the case of this kura, the researcher trained the kaiako to use the programme, then the kaiako trained the tutors. These included kaumātua, parents and grandparents, and young men and women from the community. The tutoring took place at school, but many of the students had parents who had done the training and who were able to give them further tutoring at home.

Leadership dimension 2

> *Young male PPP tutor: I really enjoyed the whole thing, it was awesome, it was a real learning experience … I think for these kids and for us, the tutors, that there was like, that element of an emotional experience in terms of having gone through something important together … It took the stress off them [the students], they knew they could do it in English now and they could feel good about having the Māori as well. What they could do when they are reading with English they can do in Māori.*

The research team trained a member of their research and development centre, a young woman from outside the kura community/iwi, in responsive writing strategies. Once a week, she would respond in writing (in English) to the messages in the students' stories, sharing her experiences and feelings. She would then return the writing books to the liaison teacher. Warm, personal relationships developed between her and the students through this sharing of writing, but they did not meet her kanohi ki te kanohi until they had completed the programme.

> *Hinemaia: Since I have been writing to her, I have expressed my true feelings about all my writing and now when I write to anybody, I think about Soli and how she encouraged me through my writing. It almost feels like I know her.*

The programme was implemented largely with the help of volunteer tutors. Since then, the kura has been able to find the funds to employ suitable people as tutors, ensuring that the literacy programme—in Māori and in English—becomes part of 'regular business':

> *Chairperson of the School Board of Trustees: Now the school has agreed to employ people to run PPP and TTT (Tatari Tautoko Tauawhi – te reo Māori reading programme), not relying any more on volunteers. The programmes are going to be ongoing at regular times, regular days, and in that way with it being a small [school] roll, two teacher aides to do that, the kids should get a reasonable, fairly good sort of coverage.*

Leaders played a key role in resourcing the goals that were valued by the kura whānau. The researcher, the tumuaki, and the kaiako all exercised leadership by finding appropriate people to work with the students and by making sure that those people had opportunities to learn the necessary knowledge, skills, and practices. Whānau and community members were key resources in the pursuit of biliteracy goals that they saw as vital for the academic and cultural futures of their young people.

Leadership dimension 6

Creating educationally powerful connections

In chapters 6 and 7, we explained how creating educationally powerful connections between individuals, organisations, and cultures can facilitate student achievement. Such connections achieve this by ensuring a better pedagogical and philosophical match between what students bring to school and what happens to them there, and by ensuring continuity of success as students move from one school environment to another. In this case, the kura drew on powerful whakapapa and community connections to ensure that its students were equipped for continuing achievement when they moved to the bilingual secondary school and that the pursuit of biliteracy goals continued without pause.

This study shows how the leaders of a kura, by focusing on goals that have been identified as important, ensure continuity in their students' literacy learning and achievement when they change schools. Their kaupapa, shared by many kura, was competence firstly in te reo Māori me ōna tikanga and then in English, so that students would be equipped to live as Māori, bilingual, bicultural, and biliterate. To support this goal, it was necessary to raise students' levels of literacy in English while maintaining or improving their literacy in Māori.

It was also important to the kura, whānau, and community that the kura whānau participate in the learning of its own young people. Relationships were critical to the success of the literacy initiative. By involving tutors from the students' own whānau and community, existing whānau and whakapapa connections were drawn on and strengthened in educationally powerful ways.

> *Young male PPP tutor: Well, we were all from the area, part of the whānau and stuff from there, and I think just improving everyone's confidence and stuff, yeah … I think that was important because then all the kids already knew the people they were being tutored by …*
>
> *Mother and PPP tutor: … like at first I didn't really know her [the student] very well. I think she's my cousin or something, but towards the end we started, even down the street, she would give us a yell and come over and have a little natter about stuff and see how things were going …*
>
> *Student: We had a lot of laughs together. If I didn't know how to read, she would tell me to give it a go, I'd just laugh and she would laugh with me. She was real cool. Getting to know my tutor better was an excellent part of the reading.*

At the pōwhiri to the initial hui, the speakers linked the researcher to their community through whakapapa. This set in motion a process akin to moral imperative, in which whanaungatanga is used to recruit the necessary expertise into an enterprise.

The importance of whanaungatanga and connections with community, hapu, and iwi were recognised and drawn on effectively in this initiative, which was designed to support the development of biliteracy and ensure that students were well prepared for the transition from a full-immersion primary school to a bilingual secondary school.

Findings/outcomes of the literacy initiative

Measures of students' reading and writing in English and Māori were taken at four assessment points: before, during, and at the conclusion of the 10-week initiative, and during the maintenance period. An analysis of all the measures showed that the groups of year 6, 7, and 8 students all made significant improvements in reading and writing English. Analysis of the measures for Māori reading and writing revealed that the students who were already very proficient retained their competence, while the others made statistically significant gains across the four assessment points. In addition, many of the qualitative gains in English writing were also evident in the students' written Māori.

These findings show that instruction in English literacy does not compromise literacy in te reo Māori when it is well developed, and it may actually enhance te reo Māori competences. The kura has continued to use the programme, including the assessment strategies in Māori.

Key questions

1. Consider what knowledge and understandings your kura whānau has about literacy and bilingualism and their relationship to the regeneration and maintenance of te reo Māori and to student achievement. If weak, how might they be effectively grown and used?
2. How are you able to demonstrate that your students are succeeding in the language(s) of instruction?
3. What policies and practices relating to biliteracy and bilingualism does your kura have in place?
4. What discussions has your kura whānau had about the impact that teaching English literacy might have on students' competence in te reo Māori?

Source

Berryman, M. A. (2001). *Toitū te whānau, toitū te iwi: A community approach to English transition.* Unpublished master's thesis, University of Waikato, Hamilton.

Further Reading

Berryman, M., & Glynn, T. (2003). *Transition from Māori to English: A community approach.* Wellington: New Zealand Council for Educational Research.

Glynn, T. (1994). *Tatari tautoko tauawhi: A bicultural journey: Development and evaluation of tutoring procedures for children learning to read in Māori.* Dunedin: Education Department, University of Otago.

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Skerrett White, M. (2003). *Kia mate rā anō a tama-nui-te-rā: Reversing language shift in kōhanga reo.* Unpublished doctoral thesis, University of Waikato, Hamilton (especially Chapter 5).

5 A senior management team creates educational connections between school and home

Introduction

This case explores how one school developed educational connections with its families in a way that had a payoff in terms of impact on student outcomes. We use the word 'educational' very deliberately here because parent/whānau involvement is often viewed by schools (and parents) as little more than an adjunct to the real work of schools. The case will demonstrate that parents can contribute to the real work in ways that benefit students, teachers, and themselves. These benefits accrue to a school that makes direct, focused efforts to work with families to raise student achievement.

The case involves the implementation by a senior management team (SMT) of a parent tutoring programme known as Reading Together. Through this programme, schools work with parents to help them develop tutoring skills that have been demonstrated to improve reading comprehension and foster positive parent–child–teacher relationships. The SMT became interested in the programme because it was research-based, the evidence indicated substantially improved outcomes for students, and its demands on resources seemed reasonable in light of the potential gains.

Research context

The case is informed by recent research into the implementation of the Reading Together programme at St Joseph's School, Otahuhu. Reading Together was designed by Jeanne Biddulph in 1983 to help parents tutor children who were experiencing reading difficulties. When first introduced, it produced significant improvement in children's reading, together with improvements in parent–child and parent–teacher relationships. Similar outcomes have been observed over the last two decades in a range of contexts[519]. Tuck (the source for this case) extended this research base by focusing specifically on leadership and administrative processes associated with implementation.

Data for this research were collected from a variety of sources, including:

- interviews with key people involved in the programme (the senior management team, teaching staff, and programme developer);
- observations of two workshops;
- a review of relevant documents (in particular, children's running records).

St Joseph's is a state-integrated, Catholic primary school with a roll of 318. Nearly 90% of students identify as Sāmoan, Tongan, Cook Islands, or Niuean. Although a decile 1 school, its attendance rates are consistently higher than for other low-decile schools. There is little evidence of truanting (ERO review, 2004). The school has a very stable and experienced senior management team comprising the principal, deputy principal, and associate principal.

Leadership dimension 6

Creating educationally powerful connections through the development of relational trust

In Chapter 7, we discussed the type of leadership involved in creating educationally effective school–home connections. We found that, to create learning connections that will be sustainable and have a significant impact on student achievement, school leaders need to foster a shared sense of responsibility amongst their staff. School–home partnership programmes that were designed, funded, and implemented by external personnel with little internal involvement struggled to gain teacher ownership. Lack of shared ownership increases the likelihood that there will be discontinuity between the school–home programme and learning taking place in the classroom.

In this case, we will see how the principal fostered shared ownership of the Reading Together programme by building relational trust with her staff. In Chapter 8, we described how trust relationships are particularly important in situations where people are being asked to take risks and make changes.

At St Joseph's, the programme became part of the everyday life of the school. Those teachers who were not directly involved in the workshops were very supportive of the senior management team's efforts to implement the programme. They could describe the general structure and content of the training; they expressed interest in the running of the workshops; and they were able to identify and discuss positive changes in the participating children and their families[520].

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[519] Biddulph, J., & Allott, J. (2006). Reading Together: A programme which enables parents to help their children with reading at home – Overview. *Reading Forum NZ, 21*(3), pp. 20–27.

[520] The evidence indicated a range of positive outcomes associated with the programme. These included more positive interactions between parents and children, parental engagement with the school as participants in learning and teaching, greater parental confidence in exchanges with teachers about their children, and improvements in children's attitudes towards reading. Statistical analysis also revealed significant gains in independent reading skills (measured over a two-year period, compared with a control group).

In this case, we see how relational trust enabled the staff to develop a shared commitment to the programme and to win the confidence and the commitment of the participating parents. As the research on which this case is based focused primarily on the principal, we illustrate how the principal exemplified the four qualities of relational trust identified in Chapter 8 and what the consequences were.

1. Personal integrity

Integrity is a measure of the extent to which the values and principles espoused by a leader are consistently seen in their daily practice.

Leader value: An informed community

The principal was deeply committed to developing an 'informed community' within her school. She believed that staff understanding of new teaching and learning initiatives created a knowledge base that informed professional discourse. Out of this informed discourse grew opportunities for professional development, mutual support, and shared responsibility for initiatives.

Consistency with actions: The principal created opportunities to foster staff understanding

It was of crucial importance to the principal that she and the leaders of Reading Together had a 'deep understanding' of the programme.

She showed her commitment to developing an informed community by inviting the programme developer to discuss Reading Together with herself and the SMT. The principal considered this meeting an important opportunity for the team to gain a better understanding of the programme, its demands, and its underlying rationale. It ensured that members of the team could discuss the programme with each other and the staff.

The principal placed a high priority on ensuring that school staff who were not directly involved in the programme were familiar with its design and rationale.

All teachers at the school were involved, at least indirectly, in Reading Together—through their contacts with the participating students, their families, and school leaders. To ensure their understanding of the programme, the principal invited the developer to talk to them about its aims, procedures, and research base. In subsequent staff meetings, the leadership team let teachers know who would lead the workshops, how children and families would be selected, and which children would be involved. Teachers were also invited to attend the workshops.

Leadership dimension 6

Modelling the qualities of leadership

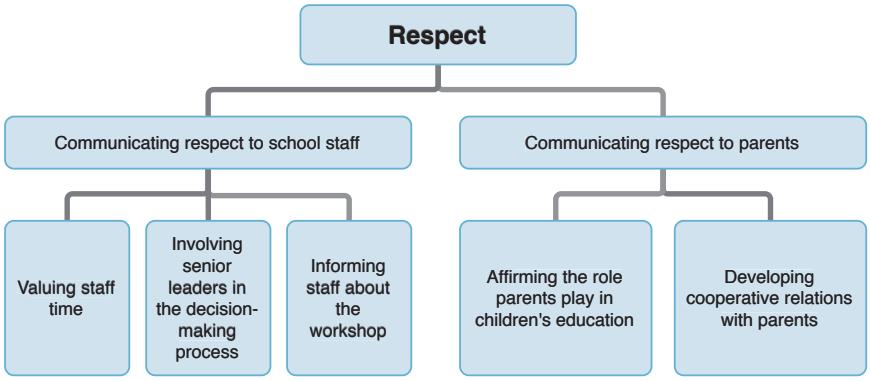
The principal's efforts to develop staff understanding created opportunities for informal, unplanned conversations between the team leaders and teachers. She recalled "lots of conversations on the run or on the hop … and not just [with the senior management team] … there are always key people on your staff who are really interested in such initiatives." These informal conversations were often initiated by the leadership team. Teachers who attended the workshops also served as key conduits of information and, with the leadership team, constituted an important information network.

In summary, the leader's integrity was seen in the match between her commitment to an informed community and the steps she took to ensure that it happened. These steps had three important outcomes:

- Even those who were not directly involved in the programme were made to feel included, were kept fully aware of its design and rationale, and were able to discuss positive changes in students and families. Commitment to the programme was fostered by the resulting professional discussions.
- The meetings with the programme developer were important professional development opportunities. For senior leaders, they were the beginning of professional learning that was to continue for the duration of the programme.
- The sense of mutual, collective support was enhanced as staff took opportunities to recognise and affirm the contribution of the workshop leaders.

2. Respect

Respect grows out of the realisation that many different people have important, mutually dependent roles to play in educating our young people. It involves valuing those roles and fostering the regard that is critical for relationship-building and shared commitment to goals.



Communicating respect to staff

Valuing staff time

The principal showed respect to her senior management team by evaluating the programme's appropriateness for her school and community before introducing it to them. She wanted to see whether it aligned with her beliefs about constructive school–home relationships and whether it would complement the school's existing language programme. She also wanted to investigate its practicality in terms of the financial and human resources required. In this way she avoided the risk of wasting staff time by asking them to consider a programme that was neither appropriate nor feasible. Her senior staff recognised, and indeed expected, this respect:

Leadership dimension 6

> *Liz wouldn't waste our time … that is the trust we have … we know she would have researched things.*
>
> *She would have thought about it … seen the value.*

Involving senior leaders in the decision-making process

Before committing the school to the programme, the principal discussed it with her senior management team. She considered these two teachers potential workshop leaders and was only willing to proceed if they saw the programme as a worthwhile use of limited resources. By fully discussing the Reading Together decision with them and seeking their professional judgment, she conveyed her respect for them:

> *You respect (their judgment). If they had come back to me and said this is far too difficult or is not actually going to work—I would have certainly taken that on board.*

Informing staff about the workshops

Although classroom teachers were not directly involved in Reading Together, they were kept fully informed about the structure and content of the programme. In this way, their role in educating their students and maintaining relationships with parents was recognised and respected:

> *There is a sort of a culture of community based ownership of children's progress. We don't see a teacher in a classroom as being responsible, just solely responsible for that child's progress. It is a much broader issue than that and there is a lot of consultation around all kinds of issues to progress and facilitate children's learning … I think there is a real sincere desire among the staff to make a difference and to kind of progress and … we look at ways that how we are best going to achieve that, probably.*

This effort to inform them and seek their views had three important outcomes for staff:

- It enabled the senior management team to take ownership of the programme.
- It enhanced the status of the programme in the school and, as a result, won teacher interest and commitment. As the principal noted:

> *It [Cathy and Marian's involvement] and our commitment gave the programme real status both with staff and parents.*

- Teachers engaged in professional discussions with each other and with workshop leaders about programme processes and outcomes.

Communicating respect to parents

Affirming the role parents play in children's education

To encourage parental involvement in the workshops and ensure the status of the programme, the principal personally contacted every potential family and invited them to participate:

> *I tried to make it as personal as possible … I talked to them about the programme … [made them aware] that I was asking them because I knew they were interested in their children.*

To further recognise and affirm the parents' role, at the conclusion of the programme they were presented with graduating certificates and pictures of themselves reading with their child. Photos were also displayed in the entrance foyer for the children to see.

Developing cooperative relationships with parents

The senior management team took a number of deliberate steps to develop cooperative relationships with parents:

- They held the workshops in the staffroom (rather than a classroom) because it was a more comfortable, informal environment.
- They welcomed parents by their first names and engaged with them in conversations over tea and biscuits.
- They began the workshops with a prayer, partly in Sāmoan.
- They made themselves available, both before and after the workshops, for informal discussion.
- They ran additional sessions for parents who were unable to attend on a particular night.
- The principal visited each workshop and talked informally with parents.

This emphasis on affirming the parents' role and developing cooperative relationships had at least two important outcomes:

- The cooperative parent–teacher relationships that were established carried over into different contexts:

  We do have parents now who will come in and very shy parents who wouldn't ever come into the classroom …
- Workshop leaders gained insight into Sāmoan protocols and how Sāmoan parents interact with their children:

  It gave us incredible insight into what was going on in the homes in terms of [discipline] … As one father said, we only know the PI way … That was discussed in every workshop.

The principal, teachers, and parents all played roles, whether directly or indirectly, in the Reading Together workshops. The SMT respected the contribution that each person was making to the education of the children. Out of all these interactions came a pedagogical partnership to improve student outcomes.

Leadership dimension 6

3. Competence

Competence is another criterion for relational trust. When people rely on others for the education of children, they care about their competence. They judge the competence of leaders and teachers by the value they add.

The principal demonstrated her competence by the way in which she rigorously investigated the appropriateness of the Reading Together workshops for her school (via emails, phone conversations, and meetings with the programme developer and by seeking the advice of her leadership team). She also demonstrated her competence by her active involvement in the workshops, in the administrative support she provided for her senior leaders (by, for example, making the initial contact with parents, sending out follow-up letters, and collating feedback), and in her informal interactions with parents during the workshops. Her goal was to ensure the success of the programme for all involved: families, children, and workshop leaders:

> *If you are asking teachers on your staff to do something, you want to set it up so that it goes well … If you are going to put in time and energy and you are asking others to put in time and energy then you want to set it up for success … so it is not disappointing for them.*

By asking her senior staff to commit to the programme and by demonstrating confidence in their ability to lead the workshops, the principal communicated to them her expectation that they would prove competent: "… trust [on Liz's part] and … [the] trust we give to her" creates a "… sense of empowerment!" "Liz knew we would be able to do it." They also understood that she was committed to developing their skills so that they could lead the programme as effectively as possible. They engaged in considerable planning and preparation before they felt confident of successful outcomes.

Reading the material … we still met every night before … and there was a good weekend's commitment … We were really confident of the outcomes … we thought it would be successful … the benefits … looked great for parents.

The principal trusted the skills, knowledge, and professionalism of the leaders but, by involving herself in the workshops, she was able to gain a "feel for how it was going" and judge if the programme was adding value for students. She was also able to confirm the competence of her people: "They were very skilled … and very quick to pick up on [parents' concerns] … made parents feel at ease …"

The obvious competence of the SMT was an important factor in the creation of an informed community that collectively accepted responsibility for student success. As one teacher observed:

Liz is very competent, very confident, very clear with what she wants to achieve and I think she has very high standards and you feel, ***well I feel that I need to meet those standards*** *…*

The drive and the leadership comes from Liz at that level. From there I think there are a whole range of … there are some very competent, able professional staff here who then facilitate at a number of levels … Yeah I think so, and I think, I really do think we have a very strong layer of leadership for them to grow they need to be really well supported and that does happen. Liz is a true mentor and I have always said that for people in leadership there needs to be the leader, but there [also needs to be the people] at the next level.

Leadership dimension 6

4. Personal regard

Personal regard is the fourth determinant of relational trust. It involves caring about others—as people and as professionals. Knowing that others care can reduce vulnerability, increase social affiliation, and invite reciprocal regard.

One of the ways in which this principal communicated personal regard was by actively involving herself in the workshops. This influenced relational trust on two levels.

First, one of the reasons for her involvement was a concern for her senior leaders. She realised that they already had very busy schedules and would be challenged to find the time to fit in a major new responsibility. To ease the extra load, she undertook a share of the tasks involved. Still concerned about the demands on the leaders, she provided further collegial support by actively participating in the workshops. This continuing support signalled to the team that she cared about them.

She is here when we are running it … and that is all support she is not like gone home and left us to it. She could have gone home, she did not have to stay here …

Second, her involvement arose out of an 'ethic of care' that she shared with the SMT for the well-being of the children and families associated with their school. The programme developer particularly observed their sensitivity to and awareness of the needs of families. All their actions in relation to the programme were prompted by genuine concern.

These two strands of personal regard provided the foundation for staff commitment to the Reading Together programme. Further, the principal's efforts to get her staff onboard can be viewed as the creation of 'an informed community that cares about the well-being of students and their families'. Not only did the staff become familiar with the rationale for the programme and familiar with its structure, on numerous occasions they demonstrated their support for the team leaders and the participating children, particularly in informal conversations. They might do this by making general inquiries ("How did it go last night?") or observations concerning programme outcomes, for example.

The underlying factors … it does come from the top and it is that desire for all children to be able to succeed and really just wanting them to do well … and wanting their parents to help to be better parents and we all want it, but it has to be driven from somewhere (teacher comment).

In this case, we have seen how trust is particularly important when creating educationally focused connections between teachers and families. When people trust one another, they feel supported and are willing to take risks, make greater effort, and learn from one another.

Key questions

1. What school–home connections are important in your school? To what extent is the focus of these connections on student learning? How can this focus be sharpened?
2. How does your own leadership exemplify the four qualities of relational trust? How could you work with others to better exemplify them?
3. In your school, how much trust is there between parents and teachers on educational matters? Utilising existing connections, what small steps could be taken to increase that trust?

Source

Tuck, B., Horgan, L., Franich, C., & Wards, M. (2007). *School leadership in a school–home partnership: Reading Together at St Joseph's School Otahuhu.* Wellington: Ministry of Education. www.educationcounts.govt.nz/goto/BES

Further reading

Kochanek, J. R. (2005). *Building trust for better schools: Research-based practices.* Thousand Oaks, CA: Corwin Press.

McNaughton, S., Glynn, T., & Robinson, V. (1987). *Pause, prompt and praise: Effective remedial reading tutoring.* Birmingham: Positive Products.

Bryk, A. S., & Schneider, B. L. (2002). *Trust in schools: A core resource for improvement.* New York: Russell Sage.

6 Leadership through the selection and design of smart tools

Introduction

Not all educational leadership involves face-to-face interaction. Leadership is also exercised in less personal ways, through the selection and design of such tools as written policy documents (for example, curriculum statements), graphs, software (for example, asTTle), and templates. Given the power of tools to shape teaching practice, it is important to evaluate their worth. Is a tool 'smart', because it helps those it influences to improve their practice, or is it 'dumb', because it shapes their practice in undesirable ways?

Smart tools have two particular qualities: they incorporate a sound, evidence-based theory about how to achieve the tool's purpose and they are well designed. In this case, we evaluate two curriculum documents in terms of the second quality, good design. The examples are from Aitken's study of curriculum design in social studies.

Aitken contends that effective design involves:

1. making connections with teachers' prior understandings;
2. accommodating the limited capacity of users' working memory.

He uses the research on principles of curriculum design to examine the 1997 national policy statement *Social Studies in the New Zealand Curriculum* and then provides a model social studies curriculum statement as an example of effective curriculum design.

If a curriculum document (whether national or school) is badly designed—if the expression of ideas is unclear or contradictory—then the integrity of the learning area will be undermined and the effectiveness of teaching compromised. If documents are well designed, they are likely to be understood and used. This will increase the probability of a positive impact on student outcomes. Policy makers and school leaders need to be familiar with what constitutes good policy/curriculum design so that they can select or develop policies that teachers will be able to understand and implement in ways that will enhance student learning.

Context

The principles of good tool design

Drawing on cognitive theory, Aitken identified the two principles of effective design set out above. The following box explains how they apply to the design of curriculum documents.

Well-designed tools make connections with teachers' prior understandings	Well-designed tools accommodate the limited capacity of users' working memory
They: • clearly communicate the purpose of the curriculum so that attention is focused on the underlying intentions; • anticipate the existing understandings (schema) that teachers are likely to bring to the curriculum and the misconceptions these might create; • link abstract principles with concrete examples so that policy intentions are most likely to be attended to by teachers.	They: • use graphics to show how the various requirements of the curriculum are interconnected and to utilise the full capacity of working memory (visual and verbal); • organise text logically and use signalling devices to reduce the cognitive load when connecting related text that is located in different places • develop an internally coherent design that minimises complexity.

Design of the 1997 social studies curriculum statement

Aitken then analysed the New Zealand social studies curriculum (1997) to identify the extent to which the principles of good design were evident. Based on his analysis, he generated a set of design criteria to guide future curriculum development. To show how they would promote sense-making, the author used them to develop a model 'essence statement' for social studies[521].

[521] This statement was constructed by the author as an examplar of good curriculum design. It does not have official status.

Leadership through selecting, developing, and using smart tools

Aitken's six criteria for evaluating the design of a policy or curriculum statement are:

1. It is logically structured around a clear and unambiguous purpose.
2. It clearly explains the rationale for change.
3. It incorporates misconception alerts.
4. It acknowledges teachers' existing understandings and integrates them into the new document.
5. It maximises internal coherence and minimises complexity.
6. It clearly connects abstract ideas to spatially contiguous detail and examples.

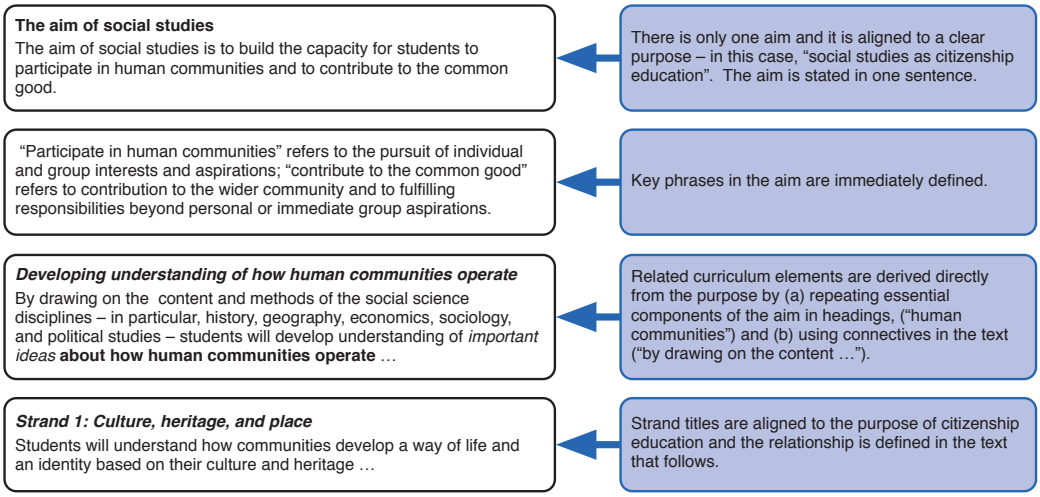
We outline these criteria in the following sections and conclude the case with examples from Aitken's model curriculum statement.

Criterion 1	
The statement is logically structured around a clear and unambiguous purpose	**Rationale** Settling on a clear purpose makes the development process more difficult, but it is essential for creating coherence and reducing the cognitive load required to implement disparate and potentially contradictory elements.

Leadership dimension 8

Coherence is enhanced when there is a single aim that is clearly aligned to the core purpose of the curriculum and when all elements of the curriculum are derived directly from this core purpose. The following example elaborates and illustrates this criterion using Aitken's model essence statement for social studies.

A model aim statement

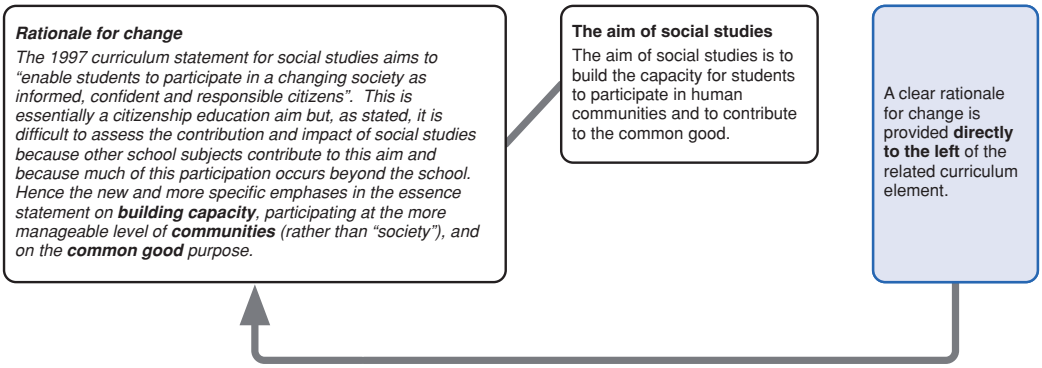


Criterion 2

The statement clearly explains the rationale for change	**Rationale** Drawing attention to the underlying purposes counteracts the tendency to attend only to the surface features of policy or curriculum.

In the example below, the 'Rationale for change' box alerts users to important differences between the aim of the 1997 curriculum statement and the aim found in the new essence statement. Placement of the rationale next to the relevant text minimises the cognitive load required to connect the two.

A model rationale



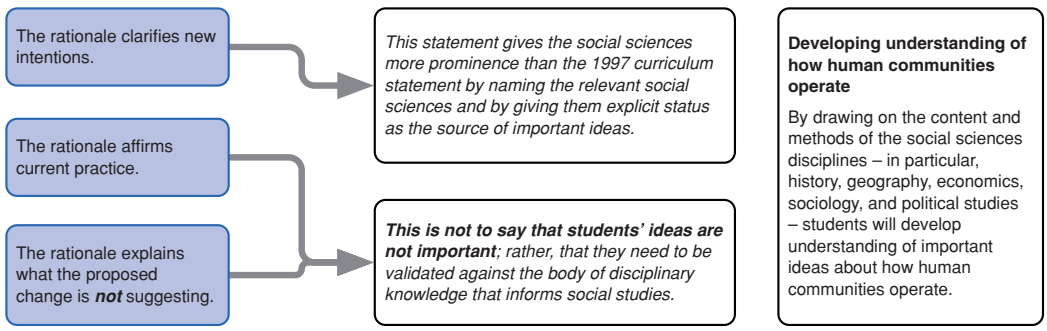
Criterion 3

Leadership dimension 8

The statement incorporates misconception alerts	**Rationale** Misconception alerts serve to counteract possible over-assimilation by clarifying how the new policy differs from the old or from what might be assumed. In other words, their function is to minimise confusion about what the policy is and is not.

Misconception alerts avert possible misinterpretation by (a) clarifying in what ways the statement requires significant new understandings and practice, (b) affirming current practice, where teachers might incorrectly understand that it was to be discarded, and (c) explaining specifically what the statement is not suggesting. The model essence statement explains that the aim of social studies will be achieved by 'developing understanding of how human communities operate' and by 'developing and applying the skills necessary for effective participation in human communities'. The diagram shows how misconception alerts clarify the meaning of 'developing understanding of how human communities operate'.

A model misconception alert



Leadership dimension 8

Criterion 4

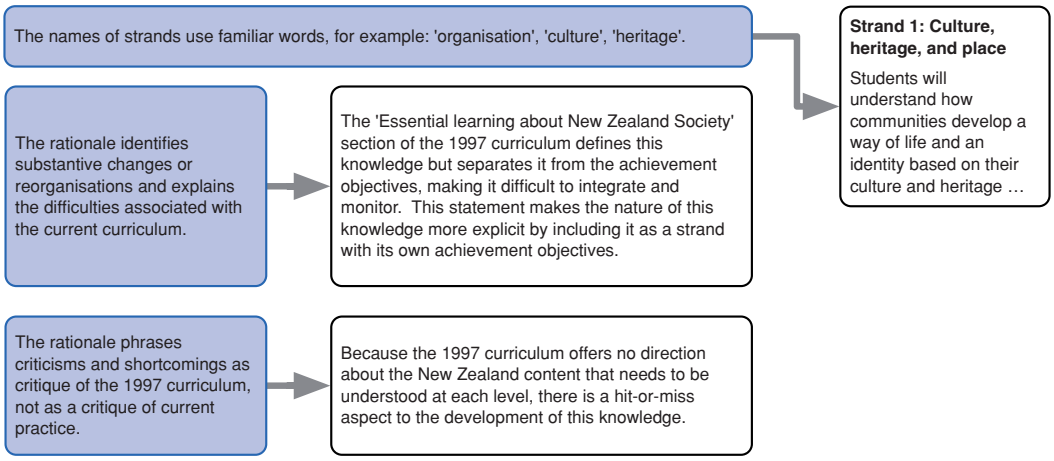
The statement acknowledges teachers' existing understandings and integrates them into the new document	**Rationale** This helps teachers make links to their current understandings and reduces perceptions that the required changes will be disruptive and unreasonable.

It is desirable to have continuity of language and meaning between old and new policies. When shifts in language and meaning are necessary, well-designed statements make links between old and new understandings. This can be achieved by:

- providing a rationale that alerts teachers to changes in emphasis;
- describing the difficulties associated with current policy (where more substantive change is required).

By framing such explanations as critiques of current policy rather than current practice, users are less likely to be alienated.

A model connection to existing understandings



Criterion 5

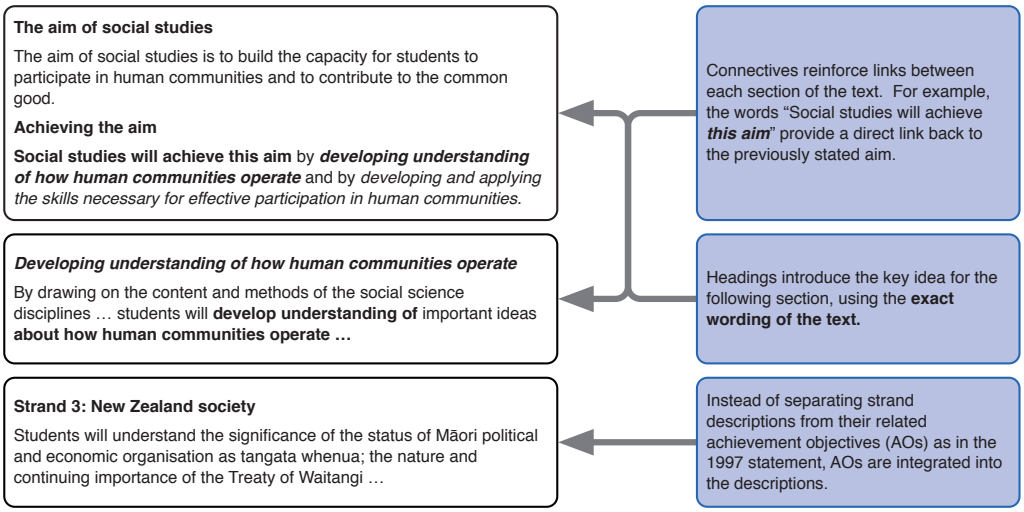
The statement maximises internal coherence and minimises complexity	**Rationale** Working memory poses severe limits on users' ability to understand and integrate multiple, interacting elements. Complexity is reduced through the use of fewer elements and through giving examples of how competing elements can be integrated.

Complexity is reduced when:

- the same words are consistently used to communicate the same idea throughout the text (instead of varied to avoid repetition);
- headings are used to highlight the important ideas, and the words from the headings are then used in the subsequent text;
- connecting words and phrases are used to reinforce links between the different sections of the text.
- related sections of the text are placed together.

Complexity is further reduced by simplifying the structure of the text (for example, by reducing the number of curriculum requirements or achievement objectives).

A model showing how coherence can be maximised



Leadership dimension 8

Criterion 6

The curriculum statement clearly connects abstract ideas to spatially contiguous detail and examples

Rationale

Helps accurate interpretation of principles and reduces cognitive load that is imposed if principles and examples are spatially separated.

Text that communicates abstract ideas does not aid sense-making because abstract statements can be "understood in superficial and idiosyncratic ways"[522]. Abstract ideas in curriculum statements are most likely to be understood when they:

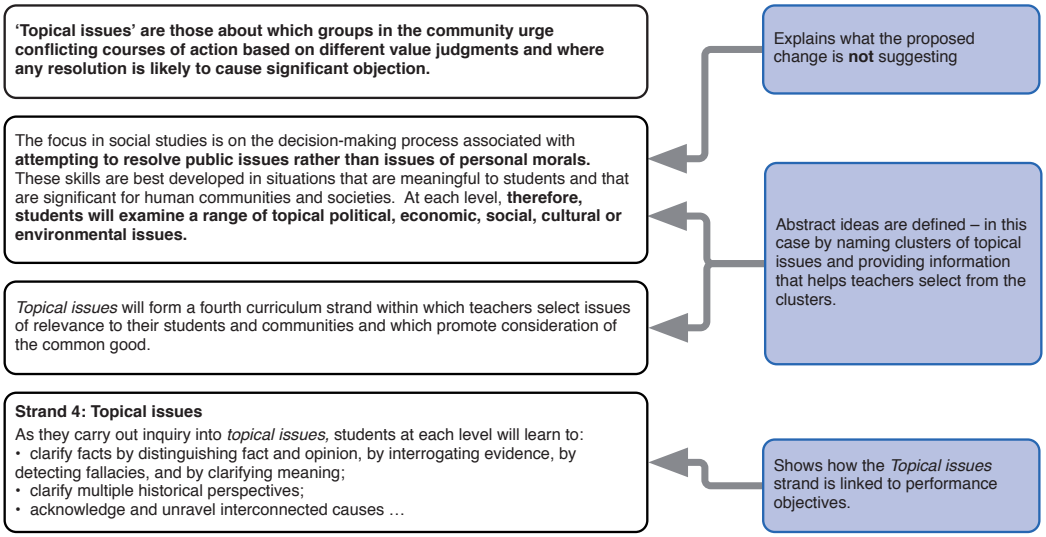
- are supported by definitions that make their meaning clear (for example, by explaining how they will be applied or by giving examples);
- are accompanied by misconception alerts that anticipate misunderstandings;
- come with performance objectives that make it clear what the desired outcomes are in terms of teaching and learning.

When curriculum statements are constructed in this way, the cognitive load on teachers is significantly reduced because they do not have to figure out for themselves what the abstract ideas mean and how they are to be applied. The following model shows how these techniques clarify the meaning of the concept 'topical issue'.

[522] Spillane, J. P., Reiser, B. J., & Reimer, T. (2002). Policy implementation and cognition: Reframing and refocusing implementation research. *Review of Educational Research, 72*, pp. 387–431. See p. 416.

Leadership dimension 8

Model showing how the meaning of abstract ideas can be clarified with the help of concrete examples



Conclusion

While we have used a curriculum statement to illustrate good policy design, the six criteria outlined above are applicable to any national or school policy. A policy's design has a big influence on how well it is understood and implemented. Ensuring that policies and other tools are well designed is an important leadership task.

Key questions

Examine a curriculum statement or policy statement that influences leaders' or teachers' practice:

1. Is the purpose clear?
2. What understandings/misunderstandings are teachers likely to bring to their interpretation of the statement ?
3. Are concrete examples provided to support the abstract ideas?
4. Could a graphic be used to indicate how the elements of the statement relate to each other?
5. Do the words used signal how the different parts of the text relate to each other?
6. Do the different elements of the policy (goals, procedures, success indicators …) form a coherent whole?

Source

Aitken, G. (2005). *Curriculum design in New Zealand social studies: Learning from the past.* Unpublished doctoral thesis, University of Auckland.

Further reading

Halverson, R., Kelley, C., & Kimball, S. (2004). Implementing teacher evaluation systems: How principals make sense of complex artifacts to shape local instructional practice. In W. K. Hoy & C. G. Miskel (Eds.), *Educational administration, policy and reform: Research and measurement* (pp. 153–188). Greenwich, CT: Information Age Publishing, Inc.

Spillane, J. P. (2006). *Distributed leadership.* San Francisco, CA: Jossey-Bass.

Spillane, J. P., Reiser, B. J., & Reimer, T. (2002). Policy implementation and cognition: Reframing and refocusing implementation research. *Review of Educational Research, 72*, pp. 387–431.

Appendices

Appendix 4.1 Individual studies of the effects of leadership on student outcomes

Reference	Schools	Leadership theory	Leadership measure	Who is leader?	Measure of student outcomes	Magnitude of effects
Alig-Mielcarek & Hoy (2005), US.	A representative sample of 146 elementary schools	Instructional leadership	Survey of teacher perceptions of instructional leadership	Principal only	Average school scores over 2 years in grade 4 reading and maths (Ohio proficiency exams)	For maths, ES = .32 For reading, ES = .16
Andrews & Soder (1987), US.	33 elementary schools	Instructional leadership	18-item instructional leadership survey	Principal only	Gains over 2 years in individual, normal-curve-equivalent scores on CAT in reading and maths	Gains in schools with strong instructional leadership were 2–3 times greater than in schools with weak instructional leadership. Ematical symbols
*Bamburg & Andrews (1991), US.	10 otherwise comparable high-achieving and 10 low-achieving elementary schools	Instructional leadership	19 strategic interactions of principal assessed by teachers[523]	Principal only	Gain scores on CAT in maths only	For maths, $\bar{x}$ = 1.01 (n = 19)
*Brewer (1993), US.	A representative national sample of 1100 high schools	Instructional leadership	Administrator and teacher surveys, plus principal ranking of academic excellence	Principal only	Gain scores over a 2-year period on test of verbal and quantitative ability	For ability, $\bar{x}$ = .42 (n = 7)
Cheng (1994), Hong Kong.	A sample of 164 elementary schools	The four leadership frames of Bolman and Deal (1991)	30-item teacher survey comprising four generic leadership frames and one additional educational leadership dimension	Principal only	Student survey about self-concept and attitudes towards school, teachers, and learning	For affective outcomes, $\bar{x}$ = .27 (n = 35)

[523] An additional 18 items measured other aspects of leadership. Only six of these were described in sufficient detail to be included in the dimensional analysis.

Reference	Schools	Leadership theory	Leadership measure	Who is leader?	Measure of student outcomes	Magnitude of effects
*Eberts & Stone (1986), US.	A nationally representative sample of approximately 300 elementary schools	Instructional leadership	Teacher and principal surveys	Principal only	Pre- and post-test scores on standardised maths test	For maths $\bar{x} = .14$ (n = 8)
*Friedkin & Slater (1994), US.	20 Californian elementary schools	Social network theory	Teacher survey of persons in school (i) with whom issues are discussed, (ii) from whom advice is sought, (iii) who are close personal friends	Both principal and teachers can be included in network.	4-year average of school maths, reading, and language scores on CAP, adjusted for SES	For combined achievement, $\bar{x} = .44$ (n = 6)
Goldring & Pasternak (1994), Israel.	34 elementary schools	Principal's (P's) control and coordination of the teaching programme	Principal's allocation of time to set tasks, degree of influence over teaching, importance attached to certain goals Teacher reports of degree of goal consensus	Principal only	Scores for grade 5 maths and reading and grade 6 reading	Standardised discriminant coefficients showed that the emphasis principals placed on involving parents (.42) and implementing innovations (–.51) discriminated between more- and less-effective schools. The emphasis principals placed on personal growth and potential (+ve) and moral and social values (–ve) discriminated between more- and less-effective schools. Staff agreement on educational goals was strongest discriminator (+ve).
Griffith (2004), US.	117 urban elementary schools	Transformational leadership	3 domains of transformational leadership: charisma, individualised consideration, intellectual stimulation	Principal only	(i) Individual-level analysis: student report of grade levels achieved, converted to GPA; (ii) School-level analysis: residual standardised test scores	For school grades, ES = .68

Reference	Schools	Leadership theory	Leadership measure	Who is leader?	Measure of student outcomes	Magnitude of effects
Hallinger, Bickman, & Davis (1996), US.	87 Tennessee elementary schools participating in a state programme	Instructional leadership	18 items on instructional leadership as part of CSEQ	Principal only	Gain scores on grades 3 and 6 reading tests (BSFT)	For reading, ES = .22
*Heck (1992), US.	23 high-achieving elementary schools and 17 high-achieving high schools	Instructional leadership	Teacher survey of 3 domains of instructional leadership	Principal or designee	CAP scores	Primary schools: For achievement $\bar{x}$ = 1.1 (n = 8) High schools: For achievement $\bar{x}$ = .42 (n = 8)
Heck (2000), US (Hawaii).	122 elementary schools, comprising all eligible schools in Hawaii	Instructional leadership	Teacher survey includes instructional leadership.	Principal plus	Total scaled scores for reading, language, and maths on SAT	For combined achievement, ES = .41 For combined gains, ES = .37
*Heck, Larsen, & Marcoulides (1990), US.	30 otherwise comparable high- and low-achieving elementary and high schools	Instructional leadership	Teachers reported on frequency of implementation of 22 instructional leadership behaviours.	Principal or designee	CAP scores on combined maths and reading (and language in high schools)	For combined achievement, $\bar{x}$ = .86 (n = 22)
*Heck & Marcoulides (1996), Singapore.	A convenience sample of 26 high schools	Transformational leadership[524]	Leadership as part of managerial processes, including resource availability, responsiveness to teachers' (unspecified) problems, and visionary and collaborative leadership	School administrators	A national test on a variety of curriculum areas	ES for combined achievement $\bar{x}$ = –.12 (n = 3)

[524] Of the three leadership variables included in this study, only one was described in sufficient detail to contribute to the dimensional analysis.

Reference	Schools	Leadership theory	Leadership measure	Who is leader?	Measure of student outcomes	Magnitude of effects
*Heck, Marcoulides, & Lang (1991), US & Marshall Islands.	32 elementary & high schools (US); 3 elementary and 1 high school (Marshall Islands)	Instructional leadership	Teachers reported on frequency of implementation of 22 instructional leadership behaviours.	Principal or designee	California: CAP scores; Marshall Islands: national test scores in reading and maths	California: For combined achievement, $\bar{x}$ = .51 (n = 22) Marshall Islands: For combined achievement, $\bar{x}$ = .33 (n = 22)
*Hoy, Tarter, & Bliss (1990), US.	58 high schools	Neither	(i) Principal supportiveness and directiveness (within OCDQ-RS); (ii) Principal influence, academic emphasis, consideration, initiating structure, resource support	Principal only	Reading and maths achievement, New Jersey HSPT	For combined achievement, $\bar{x}$ = .42 (n = 7)
Leithwood & Jantzi (1999), Canada.	94 elementary schools	Transformational and transactional leadership	53-item teacher survey	Principal only for transformational leadership	Student identification with and participation in school as measured by the Student Engagement and Family Educational Culture Survey	For identification, ES = .30 For participation, ES = .20
Leithwood & Jantzi (2000), Canada.	110 elementary and high schools	Transformational and transactional leadership	Teacher survey	Principal and teacher leadership, separately assessed	Student engagement with school measured by Student Engagement and Family Educational Culture Survey	Principal transformational leadership: For participation, ES = .08 For identification, ES = .16 Teacher leadership: For participation, ES = .20 For identification, ES = –.08
Leithwood & Jantzi (2006), UK.	256 elementary schools for literacy and 258 for numeracy	Transformational leadership	Teacher survey tailored to implementation of literacy and numeracy strategies	Distributed: 'those in positions of responsibility in your school'	Gain scores on Key Stage 2 tests	The impact of transformational leadership in terms of student outcomes for literacy and numeracy is "not significantly different from zero".

Reference	Schools	Leadership theory	Leadership measure	Who is leader?	Measure of student outcomes	Magnitude of effects
*Leitner (1994), US.	27 urban elementary schools	Instructional leadership	Measured by Hallinger's PIMRS	Principal only	Gain scores over one year for reading, maths, and language	For combined achievement, $\bar{x}$ = .02 (n = 60)
Marks & Printy (2003), US.	24 elementary, middle, and high schools	Integrated leadership comprising high-transformational and high-shared instructional leadership	Indices of each leadership type derived from items in teacher survey and coding of interviews and observations Instructional leadership measure includes degree of focus on and influence over teaching, curriculum, and assessment	Transformational leadership mostly principal only For instructional leadership, the measure combined both teacher and principal influence.	Student achievement on maths and social studies assignments, marked against three standards of intellectual quality	For combined achievement, ES = .56
*May & Wagemaker (1993), NZ.	175 primary schools	Instructional leadership	Principal's involvement in evaluation and development of teachers with respect to reading	Principal only	IEA (1990) measure of reading achievement and extent of voluntary reading activities	For reading, ES = .12
Ogawa & Hart (1985), US.	124 elementary and 151 high schools	Leadership as incumbent	Change in principalship	Principal only	Maths and reading scores on CAP achievement test over a 6-year period	Elementary schools: 6–8% of variance in achievement was attributed to principal, after controlling for year and school effects. High schools: The effect was similar for reading but smaller (3%) for maths.

Reference	Schools	Leadership theory	Leadership measure	Who is leader?	Measure of student outcomes	Magnitude of effects
Pounder, Ogawa, & Adams (1995), US.	35 elementary and 25 high schools	Leadership as an organisational quality	Amount of influence exercised by people in 4 different leadership roles	Principal only, school secretary, single staff member, collective group of staff[525]	(i) SAT-adjusted school average over the previous 3 years; (ii) Student absenteeism.	Principal leadership: For achievement, ES = –.20
Silins & Mulford (2002), Australia.	96 high schools	Transformational leadership	Survey of teacher perceptions of their principal's transformational leadership skills	Principal and teacher leadership measured separately	(i) Student participation in school; (ii) Student engagement with school; (iii) Academic self-concept.	For participation, ES = .10 For engagement, ES = .30 For self-concept, ES = .16
Van de Grift & Houtveen (1999), Netherlands.	383 elementary schools completed the survey; 174 elementary schools assessed students	Instructional leadership	Teacher survey of instructional leadership using 15-item Rasch scale	Principal only	Student achievement on 180-item test of language, arithmetic, and information processing	Instructional leadership had a small but significant effect on student achievement outcomes.
*Wellisch, MacQueen, Carriere, & Duck (1978), US.	9 successful and 13 unsuccessful elementary schools, based on number of grades/ subjects showing improvement in one year	Instructional leadership	Teachers' reports of principal's concern about instruction, coordination of instructional programme, and feedback on teacher performance	Principal plus	Grades 3, 4, and 5 in reading and maths over 2 years on CAT	For combined achievement, $\bar{x}$ = .55 (n=6)

[525] Even though the impact of four different leadership roles is assessed, not all results are reported in a manner that enables calculation of an effect-size statistic.

Appendix 4.2 Calculation of mean effects of leadership theory by type

For the purpose of estimating the impact of leadership theory, we were able to calculate effect sizes for all but five of the 27 studies. For studies that compared two groups of schools—for example, schools where students were achieving either above or below the levels that background characteristics would suggest—an effect size for leadership was calculated using a formula in which the difference between the means of the two groups was divided by the standard deviation of the combined data. Corrections were made for sample size, using Hedges'[526] formula. For studies that did not involve between-group comparisons, different formulae were used to obtain comparable statistics. These formulae converted product-moment correlations, Kendall's tau coefficients, and regression coefficients to z scores.

There is no one approach to interpreting effect sizes. We used this convention:

- 0 – .19, no or weak effect;
- .2 – .39, small effect;
- .4 – .59, moderate effect;
- > .6, large effect.[527]

[526] Hedges, L., & Olkin, I. (1985). *Statistical methods for meta-analysis*. New York: Academic Press.

[527] See Glass, G. V., McGaw, B., & Smith, M. L. (1981). *Meta-analysis in social research.* Newbury Park, CA: Sage Foundation Publications.

Appendix 5.1 Derivation and calculation of mean effects of five leadership dimensions

The leadership dimensions presented in Chapter 5 were inductively derived from the 12 studies in Appendix 4.1 marked with an asterisk. These studies provided the two types of information we needed for this purpose: descriptions of the variables that contributed to the overall measure of leadership and statistical data from which we could calculate the relationships between the variables and student outcomes. For example, Heck and colleagues' studies[528] all employ a similar survey in which teachers report the frequency with which their principal or other school leaders engage in particular behaviours. This made it possible to calculate a separate effect size for each survey item. In other studies, where data were reported against leadership component constructs rather than actual survey items, it was also possible to calculate an effect size for each component.

For each of the 12 studies, the survey items or leadership constructs were listed in a spreadsheet and an effect size was calculated for each item or construct to reflect the impact of that particular type of leadership on student outcomes. For some of the studies, it was necessary to list every item from the survey used and then to record or calculate an effect size for each. Where data were not provided for individual survey items, the impacts of the different leadership constructs were calculated and recorded, together with the author's description of each construct.

The exact wording of each survey item or component construct was recorded in a spreadsheet. After multiple readings and preliminary sorting, the 199 entries were finally grouped into five main categories. Definitions were written for each category, and mean effect sizes and standard errors were calculated.

[528] Heck, R. H. (1992). Principals' instructional leadership and school performance: Implications for policy development. *Educational Evaluation and Policy Analysis, 14*(1), pp. 21–34;
Heck, R. H., Larsen, T. J., & Marcoulides, G. A. (1990). Instructional leadership and school achievement: Validation of a causal model. *Educational Administration Quarterly, 26*(2), pp. 94–125;
Heck, R. H., Marcoulides, G. A., & Lang, P. (1991). Principal instructional leadership and school achievement: The application of discriminant techniques. *School Effectiveness and School Improvement, 2*(2), pp. 115–135.

Appendix 7.1 Source studies in the meta-analysis informing this chapter

1. High effect on student outcomes

Joint parent/whānau and teaching intervention

Thirteen analyses involving 232 students were derived from the five reports and the literature review that informed this category. Nine analyses focused on literacy, one on writing, two on student behaviour, and one on mathematics.

Berryman, M. (2001). *Toitu te whānau, toitū te iwi: A community approach to English transition.* Unpublished master's thesis, University of Waikato, Hamilton. www.nzcer.org.nz/pdfs/T00171.pdf See also Berryman, M., & Glynn, T. (2003). *Transition from Maori to English: A community approach.* Wellington: New Zealand Council for Educational Research.

Berryman, M. (2007). *Repositioning within discourses of self-determination*. Unpublished doctoral dissertation, University of Waikato, Hamilton. http://adt.waikato.ac.nz/public/adt-uow20080429.133202/

Berryman, M., Glynn, T., & McDonald, S. (2004). *Tatari Tautoko Tauawhi home and school literacy research project. Milestone four: Final report.* Wellington: Ministry of Education.

Berryman, M., Woller, P., & McDonald, R. (in progress). *TATA: A school's response to supporting five year olds learn in their own language.* Paper prepared for 2008 WIPCE Conference, Melbourne.

Berryman, M., Woller, P., & Togo, T. (2007, April). *RĀPP: Tape-assisted reading to support students' literacy in Māori in two bilingual schools.* Paper presented at the Narrowing the Gap Conference, University of New England, Armidale, NSW, Australia.

Glynn, T., Berryman, M., Atvars, K., & Harawira, W. (1997). *Hei Āwhina Mātua: A home and school behavioural programme.* Wellington: Ministry of Education.

Glynn, T., & McNaughton, S. (1985). The Mangere home and school remedial reading procedures: Continuing research on their effectiveness. *New Zealand Journal of Psychology, 14,* pp. 66–77.

Teacher-designed interactive homework with parents

McNeight, C. (1998). *"Wow! These sorts of things are similar to our culture!" Becoming culturally inclusive within the senior secondary school curriculum.* Unpublished postgraduate action-research report, Victoria University, Wellington. See also Case 2: Making links between cultures: Ancient Roman and contemporary Sāmoan. In G. Aitken & C. Sinnema (2008). *Effective pedagogy in social sciences/ tikanga ā iwi: Best evidence synthesis iteration.* Wellington: Ministry of Education. www.educationcounts.govt.nz/goto/BES

Sheldon, S. B., & Epstein, J. (2005). Involvement counts: Family and community partnerships and mathematics achievement. *Journal of Educational Research, 98*, pp. 196–206.

Strategy to access family and/or community funds of knowledge

Berryman, M., Glynn, T., & McDonald, S. (2004). *Tatari Tautoko Tauawhi home and school literacy research project. Milestone four: Final report.* Wellington: Ministry of Education.

Lipka, J. (2006). *Mathematics in a cultural context: Salmon fishing – Investigations into probability.* Paper prepared for the Third International Conference on Ethnomathematics, Auckland.

Lipka, J., & Adams, B. (2004). *Culturally based math education as a way to improve Alaska Native students' math performance. Working Paper 20.* Ohio: Appalachian Collaborative Center for Learning, Assessment and Instruction in Mathematics, Ohio University.

Kyriakides, L. (2005). Evaluating school policy on parents working with their children in class. *The Journal of Educational Research, 98*, pp. 281–298.

McNeight, C. (1998). *"Wow! These sorts of things are similar to our culture!" Becoming culturally inclusive within the senior secondary school curriculum.* Unpublished postgraduate action-research report, Victoria University, Wellington. See also Case 2: Making links between cultures: Ancient Roman and contemporary Sāmoan. In G. Aitken & C. Sinnema (2008). *Effective pedagogy in social sciences/ tikanga ā iwi: Best evidence synthesis iteration.* Wellington: Ministry of Education. www.educationcounts.govt.nz/goto/BES

Note also the BESs focused on teaching, available via www.educationcounts.govt.nz/goto/BES:

Aitken, G., & Sinnema, C. (2008). *Effective pedagogy in social sciences/ tikanga ā iwi: Best evidence synthesis iteration*. Wellington: Ministry of Education.

Alton-Lee, A. (2003). *Quality teaching for diverse students in schooling: Best evidence synthesis iteration*. Wellington: Ministry of Education.

Anthony, G., & Walshaw, M. (2007). *Effective pedagogy in mathematics/pāngarau: Best evidence synthesis iteration*. Wellington: Ministry of Education.

For supplementary Australian evidence, see:

Amosa, W., Ladwig, J., Griffiths, T., & Gore J. (2007, November). *Equity effects of quality teaching: Closing the gap*. Paper presented at the Australian Association for Research in Education Conference, Fremantle.

Gore, J., Ladwig, J., Griffiths, T., & Amosa, W. (2007, November). *Data-driven guidelines for high quality teacher education*. Paper presented at the Australian Association for Research in Education Conference, Fremantle.

Teacher feedback on homework

Marzano, R., Pickering, D., & Pollock, J. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria, VA: ASCD. (p. 61).

Walberg, H. (1999). In H. Waxman & H. Walberg (Eds.). *New directions for teaching practice and research*. Berkeley, CA: McCutchan.

Parent intervention

Biddulph, L. J. (1983). *A group programme to train parents of children with reading difficulties to tutor their children at home*. Unpublished master's thesis, University of Canterbury, Christchurch.

Biddulph, J., & Tuck, B. (1983). *Assisting parents to help their children with reading at home*. Paper presented to the annual meeting of the New Zealand Association for Research in Education, Wellington.

Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review, 13,* pp. 1–22.

Glynn, T., & McNaughton, S. (1985). The Mangere home and school remedial reading procedures: Continuing research on their effectiveness. *New Zealand Journal of Psychology, 14,* pp. 66–77.

Graue, M. E., Weinstein, T., & Walberg, H. J. (1983). School-based home instruction and learning: A quantitative synthesis. *Journal of Educational Research, 76*, pp. 351–360.

Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London and New York: Routledge.

Jeynes, W. H. (2007). The relationship between parental involvement and urban secondary school student academic achievement. *Urban Education, 42,* pp. 82–110.

Jordan, G., Snow, C. E., & Porche, M. V. (2000). Project EASE: The effect of a family literacy project on kindergarten students' early literacy skills. *Reading Research Quarterly, 35,* pp. 524–546.

Rosenzweig, C. (2000). *A meta-analysis of parenting and school success: The role of parents in promoting students' academic performance*. Unpublished doctoral dissertation, Hofstra University, New York.

Sénéchal, M. (2006). *The effect of family literacy interventions on children's acquisition of reading: A meta-analytic review*. New Hampshire: National Institute for Literacy: The Partnership for Reading.

Shaver, A. V., & Walls, R. T. (1998). Effect of Title I parent involvement on student reading and mathematics achievement. *Journal of Research and Development in Education, 31,* pp. 90–97.

Tuck, B., Horgan, L., Franich, C., & Wards, M. (2007). *School leadership in a school-home partnership: Reading Together at St Joseph's School Otahuhu*. Report prepared for the Iterative Best Evidence Synthesis Programme, Pasifika Schooling Improvement and St Joseph's school. Wellington: Ministry of Education. www.educationcounts.govt.nz/goto/BES

2. Moderate effect on student outcomes

Parent involvement

Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review, 13,* pp. 1–22.

Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London and New York: Routledge.

Hodgen, E. (2007). *Competent Learners @ 16: Competency levels and development over time – Technical Report*. Wellington: Ministry of Education.

Jeynes, W. H. (2007). The relationship between parental involvement and urban secondary school student academic achievement. *Urban Education, 42,* pp. 82–110.

Kyriakides, L. (2005). Evaluating school policy on parents working with their children in class. *Journal of Educational Research, 98*, pp. 281–298.

Marchant, G. J., Paulson, S. E., & Rothlisberg, B. A. (2001). Relations of middle school students' perceptions of family and school contexts with academic achievement. *Psychology in the Schools, 38,* pp. 505–519.

Rosenzweig, C. (2000). *A meta-analysis of parenting and school success: The role of parents in promoting students' academic performance*. Unpublished doctoral dissertation, Hofstra University, New York.

Shaver, A. V., & Walls, R. T. (1998). Effect of Title I parent involvement on student reading and mathematics achievement. *Journal of Research and Development in Education, 31,* pp. 90–97.

Wylie, C., Ferral, H., Hodgen, E., & Thompson, J. (2006). *Competencies at age 14 and competency development for the Competent Children, Competent Learners study sample*. Wellington: New Zealand Council for Educational Research.

Wylie, C., Thompson, J., Hodgen, E., Ferral, H., Lythe, C., & Fijn, T. (2004). *Competent Children at 12*. Wellington: New Zealand Council for Educational Research.

Wylie, C., Thompson, J., & Lythe, C. (1999). *Competent Children at 8: Families, early education, and schools*. Wellington: New Zealand Council for Educational Research.

Wylie, C., Thompson, J., & Lythe, C. (2001). *Competent children at 10: Family, early education, and schools*. Wellington: New Zealand Council for Educational Research.

Supplementary studies

Catsambis, S. (1998). *Effects on high school academic success: Expanding knowledge of parental involvement in secondary education*. Baltimore: Center for Research on the Education of Students Placed At Risk, Johns Hopkins University.

Henderson, A. T., & Mapp, K. L. (2002). *A new wave of evidence: The impact of school, family, and community connections on student achievement*. Austin, TX: Southwest Educational Development Laboratory.

Simon, B. (2000). *Predictors of high school and family partnerships and influence of partnerships on student success*. Unpublished doctoral dissertation, Johns Hopkins University, Baltimore. (Note: Simon used beta coefficients to measure unique effect; accordingly, we were not able to include these findings in the meta-analysis, but they provide strong evidence for specific effects.)

3. Small effect on student outcomes

Parent–child communication about school

Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review, 13,* pp. 1–22.

Supplementary study

Simon, B. (2000). *Predictors of high school and family partnerships and influence of partnerships on student success*. Unpublished doctoral dissertation, Johns Hopkins University, Baltimore. (Note: Simon used beta coefficients to measure unique effect; accordingly, we were not able to include these findings in the meta-analysis, but they provide strong evidence for specific effects.)

Parent volunteering in school

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Good teacher–parent relationship

Hodgen, E. (2007). *Competent Learners @ 16: Competency levels and development over time – Technical Report*. Wellington: Ministry of Education.

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Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review, 13,* pp. 1–22.

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Computer in the home

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Wylie, C., Thompson, J., & Lythe, C. (2001). *Competent children at 10: Family, early education, and schools*. Wellington: New Zealand Council for Educational Research.

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Cooper, H., Robinson, J. C., & Patall, E. A. (2006). Does homework improve academic achievement? A synthesis of research 1987–2003. *Review of Educational Research, 76,* pp. 1–62.

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Paschal, R., Weinstein, T. & Walberg, H. J. (1984). The effects of homework: A quantitative synthesis. *Journal of Educational Research, 78*, pp. 97–104.

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Epstein, J. L. (2001). *School, family, and community partnerships: Preparing educators and improving schools*. Boulder, CO: Westview Press.

Mau, W. (1997). Parental influences on the high school students' academic achievement: A comparison of Asian immigrants, Asian Americans, and White Americans. *Psychology in the Schools, 34,* pp. 267–277.

May, S., & Wagemaker, H. (1993). Factors influencing reading achievement. In H. Wagemaker (Ed.), *Achievement in reading literacy: New Zealand's performance in a national and international context* (pp. 166–185). Wellington: Ministry of Education.

4. No effect on student outcomes findings

Parent role in governance

Hodgen, E. (2007). *Competent Learners @ 16: Competency levels and development over time – Technical Report*. Wellington: Ministry of Education.

Wylie, C., Ferral, H., Hodgen, E., & Thompson, J. (2006). *Competencies at age 14 and competency development for the Competent Children, Competent Learners study sample*. Wellington: New Zealand Council for Educational Research.

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Supplementary studies

Bryk, A. S., & Schneider, B. (2002). *Trust in schools: A core resource for improvement.* New York: Russell Sage Foundation.

Griffith, J. (1997). Linkages of school structural and socioenvironmental characteristics to parental satisfaction with public education and student academic achievement. *Journal of Applied Social Psychology, 27,* pp. 156–186. Note that Griffith published an earlier analysis in which he reported a positive association between parental involvement in school governance and student achievement, but this later re-analysis of the same data found no association.

5. No or weak negative effect on student outcomes

Teacher–parent interactions

Deslandes, R., Royer, E., Turcotte, D., & Bertrand, R. (1997). School achievement at the secondary level: Influence of parenting style and parent involvement in schooling. *McGill Journal of Education, 32*, pp. 191–207.

Homework surveillance

Rosenzweig, C. (2000). *A meta-analysis of parenting and school success: The role of parents in promoting students' academic performance.* Unpublished doctoral dissertation, Hofstra University, New York.

Supplementary Study

Clinton, J. & Hattie, J. (2009). *Student's perceptions of parental involvement: Relations with liking, efficacy and achievement.* Manuscript submitted for publication.

6. Small negative effect on student outcomes

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Epstein, J. L. (2001). *School, family, and community partnerships: Preparing educators and improving schools.* Boulder, CO: Westview Press.

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Wylie, C., Thompson, J., & Lythe, C. (2001). *Competent children at 10: Family, early education, and schools.* Wellington: New Zealand Council for Educational Research.

Teacher–parent relationship less than good

Hodgen, E. (2007). *Competent Learners @ 16: Competency levels and development over time – Technical Report*. Wellington: Ministry of Education.

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Appendix 7.2 Approach to calculation of effect sizes

When analysing the studies selected for Chapter 7 (Appendix 7.1), our particular interest was the nature and magnitude of the impact of school–home connections or homework practices on student achievement. In all these studies, standardised tests or overall class grades were used as the measure of achievement, not one-off, teacher-generated assessments. Desirable outcomes included grade achievement or improvement and a range of cognitive effects.

Educational impact was judged from effect sizes reported in the studies or calculated from other statistical data provided. If the data did not allow effect sizes to be calculated, studies with important outcomes-linked evidence were included in the table and described in the chapter. When computing effect sizes, either of two transformation formulae were used, depending on the statistical data available.

There are two major families of effect sizes. One is based on statistics that indicate proportion of variance explained by a relationship (for example, correlations, analysis of variance). The other is based on comparing the difference in mean scores between groups or times. When the authors of a study have not provided effect sizes, the analytic approaches required to determine an effect differ depending on the type of data provided.

1. Cohen's *d*[1]

$$d = \frac{\overline{X_1} - \overline{X_2}}{S_{pooled}}$$

2. Using *r* coefficient

A correlation is a measure of linear relations between two variables. While the mean score may be different for each variable, the patterns of high and low scores can be compared. The greater the similarity in the patterns, the greater the correlation. When a correlation is squared, the result is the proportion of variance explained by the linear relationship. Finding the effect of a linear relationship between variables involves squaring the correlation and determining its ratio out of 1.

Formula 1 is applied to Pearson's *r* in situations where *one* group completes *two* measures (for example, pre-test and post-test). This formula requires that both measures involve the same number of people.

Cohen's *d* from repeated measures from a single group: $d = r / \sqrt{(1-r^2)}$ (1)

Formula 2 is used in situations where *two* independent groups complete the *same* measure or test (for example, a common test at the end of an intervention). This formula requires that both groups have the same number of people.

Cohen's *d* from measures from two independent groups: $d = 2[r / \sqrt{(1-r^2)}]$ (2)

In this case, *d* is double what it is in formula 1 because measures come from two independent groups.

3. Using residuals

An alternative to using standardised beta weights or the proportion of variance accounted for is to calculate Cohen's *d* on residuals. What this means is that *d* is calculated *taking into account the variability explained by other variables*. For example, if we have information on parental help with reading homework together with information on variables that have been found to be associated with differences in achievement in reading or comprehension (such as maternal qualifications and family income), we can isolate the effect of parental help from the effects of the other variables. This is done by fitting a linear model (ANOVA), where achievement in

reading or comprehension is regressed on maternal qualifications and family income. The model is used to predict each student's achievement in reading or comprehension, based on maternal qualifications or income. Next the residuals—the differences between actual and predicted scores—are calculated; these represent the variability in student achievement that is not explained by maternal qualifications or family income. Cohen's *d* for parental help with reading homework is then calculated on these residuals and represents the effect of parental help with reading homework once maternal qualifications and family income have been accounted for.

This approach is preferred when it is anticipated that much of the variability in outcomes (achievement in reading or comprehension) is due not to the intervention itself (parental help with reading) but to another variable that is strongly associated with the effectiveness of the intervention (maternal qualifications or family income). An effect size calculated in this way can still be compared with one that has been calculated on raw scores, but *d* calculated on raw scores is likely to be larger.

Appendix 8.1 The knowledge, skills, and dispositions implied by and embedded in the leadership dimensions

1. Establishing goals and expectations	
Establishing goals and expectations	Forward mapping dimension
Setting educational goals	Backward mapping dimension
	Knowledge, skills, and dispositions
How to set goals	Knowledge of goal-setting theory, including: why goal setting is important, the conditions under which it works, and how to overcome potential pitfalls.
What to set as a goal	Ability to make decisions about the relative importance of various learning outcomes; that is, asking what will students learn in the light of: • knowledge of what is valued in the national curriculum and in relevant overarching philosophies (for example, the special character of integrated schools, the philosophy of kura kaupapa Māori operating in accordance with Te Aho Matua); • knowledge of what is valued by the local community; • knowledge of what your students currently know in relation to a set of valued learning outcomes. Ability to envisage and expect achievement of more challenging goals: • knowledge of how to sequence learning outcomes (social and academic learning progressions); • knowledge of the conceptual structure of the relevant disciplines/ competencies, so that learning outcomes can be framed in ways that induct students into those disciplines or competencies (for example, mathematics, critical thinking).
How to gain goal commitment	• Explain/demonstrate how the alternative, more challenging, learning outcomes are credible and attainable. • Identify/listen to barriers to goal attainment and strategise how to overcome them. • Gain sufficient agreement about goals to ensure a coordinated teaching approach. • Clearly communicate the agreed goals and provide non-defensive explanations for their prioritisation. • Lead the teacher learning that is necessary to help teachers meet the goals – see dimension 4.
2. Resourcing strategically	
Resourcing strategically	Forward mapping dimension
Obtaining and allocating resources aligned to pedagogical goals	Backward mapping dimension
	Knowledge, skills, and dispositions
Why alignment is important	Uses the principle of strategic alignment of resources (human, financial, and material) to prioritise/rationalise procurement and allocation of resources.

Alignment of staffing resources	Can determine the type of expertise required to achieve particular goals. For example, if the goal is to sustain effective home/community partnerships, can identify appropriate personnel with requisite educational/cultural/community knowledge to facilitate and sustain effective partnerships/relationships with families/whānau/communities. Can transparently and fairly recruit such expertise from within or outside the school and openly explain the choices made. Develops relationships with community, universities, professional developers, and other schools that widen the networks of strategic expertise available to the school.
Alignment of teaching resources	Evaluates the effectiveness of alternative teaching/programme resources in terms of intended learning outcomes for students. Develops the school timetable in such a way that it reflects pedagogical priorities. Develops, or advocates for the development of, resources essential to the achievement of school goals. Ignores or defers funding opportunities that overload teachers and detract from priority goals. Recruits and inducts staff into school/department/syndicate-wide assessment and pedagogical procedures.
3. Planning, coordinating, and evaluating teaching and the curriculum	
Planning, coordinating, and evaluating teaching and the curriculum	Forward mapping dimension
	Knowledge, skills, and dispositions
Self-management	Prioritises own time to ensure oversight of teaching and learning.
Knowledge of how students learn	Has a research-based understanding of how students learn.
Knowledge of effective teaching	Has a sound understanding of effective teaching and of the necessity for situated inquiry into the relationship between what is taught and what students have learned. Rejects style-based concepts of teaching effectiveness. Uses impact on students as the touchstone for administrative decision making. For example, teacher appraisal, professional development choices, student grouping, homework policy, and reporting to parents.
Knowledge of how to evaluate teaching effectiveness	Understands and uses student data to collaboratively diagnose and resolve teaching problems and to set future goals.
Knowledge of how to improve teaching effectiveness	Uses, or oversees others using, pedagogical knowledge to assist staff to improve their teaching. Establishes procedures for ensuring staff regularly use evidence to review students' progress. Has the confidence to observe in classrooms and initiate informal discussion with staff about teaching and learning.
4. Promoting and participating in teacher learning and development	
Promoting and participating in teacher learning and development	Forward mapping dimension
Creating a community that learns how to improve student success	Backward mapping dimension

	Knowledge, skills, and dispositions
Use of data	Ensures systems are in place for ongoing monitoring, reporting, and improving of student outcomes. Ensures teachers develop the skills they need to interpret data.
Pedagogical content knowledge	Uses own knowledge of teaching and learning to help staff solve teaching problems.
Knowledge of effective professional development	Uses evidence on effective teacher development to design and evaluate professional development opportunities. Positions self as a public learner with staff in areas where they have gaps in own knowledge and skill.
Understands collective responsibility and accountability and how to foster it	Expects staff groups (for example, departments) to promote member learning about how to improve student achievement and well-being. Models and monitors the type of teacher talk that fosters teacher learning and caring about student achievement and well-being. Challenges and changes the culture of staff groups that are not focused or are negatively focused on the teaching–achievement relationship (for example, groups that have low expectations of or blame others, students, or parents).
5. Ensuring an orderly and supportive environment	
Ensuring an orderly and supportive environment	Forward mapping dimension
	Knowledge, skills, and dispositions
Is alert to issues that may impact on student well-being and learning and acts on them promptly	Identifies and addresses issues of competence early. Identifies and addresses conflict early. Creates multiple opportunities for students to provide feedback about the quality of their classroom and school experience. Acts on feedback to improve the intellectual and emotional engagement of students in important learning.
6. Creating educationally powerful connections	
Creating educationally powerful connections	Backward mapping dimension supplemented by meta-analysis in Chapter 7. Embed partnership activities with families/whānau and community in a strength-based perspective.
	Knowledge, skills, and dispositions
Understands the importance of school–home connections	Uses the evidence about the relative impact of various types of school–home connection when choosing which approaches to pursue.
Continuity of student identity and school practices	Uses up-to-date knowledge of how diverse learners experience the school and the classroom for purposes of improving teaching and learning and school culture. Approaches the school's diverse communities from a respectful, strength-based perspective (not a deficit-based perspective). Leads the school in making changes to its own culture so that it can work more effectively with diverse families/whānau and communities to improve student outcomes. Ensures that the teaching programme incorporates relevant community/family funds of knowledge.

Continuity of teaching and guidance between school and home	Provides the parents of primary school students with sufficient knowledge about the teaching programme for them to be able to support their children's school learning. Provides the parents of secondary school students with sufficient knowledge about qualification and employment pathways for them to be able to help their children make appropriate choices.
Continuity between educators	Engages openly with educators serving students prior to and after enrolment, sharing data and collaborating on transition arrangements, etc. Establishes relationships with parents/whānau that are respectful and trusting and that acknowledge and draw on their knowledge/values/commitments in the interests of students' education. Establishes relationships with local schools and early childhood centres that are focused on school learning and improvement. Establishes a relationship with local education officials that is productive and will benefit students. Listens to diverse perspectives on school–community links and integrates them into effective provision for students.
7. Engaging in constructive problem talk	
Engaging in constructive problem talk	Backward mapping dimension
	Knowledge, skills, and dispositions
Understands the need to build trusting relationships and how these might be effectively fostered	Makes the effort required to grow trust in culturally diverse contexts.
Gives and receives tough messages with respect and openness	Names problematic situations in a manner that invites ownership and commitment rather than blame and defensiveness. Creates a reinforcing and supportive environment for open discussion, problem naming, and co-construction of possible solutions.
Engagement with theories of action	Able to openly inquire into how their own and others' theories of practice may be contributing to a problem situation. Works collaboratively to develop and test an alternative theory of practice. Provides quality opportunities to learn the alternative theory of action. (See dimension 4.)
Feedback skills	Able to provide specific, knowledgeable, supportive feedback and critique in ways that help families/whānau and staff recognise and accept what needs to change.
8. Selecting, developing, and using smart tools	
Selecting, developing, and using smart tools	Backward mapping dimension
	Knowledge, skills, and dispositions
Can evaluate tools	Identifies the theory that is implicit or explicit in a tool. Seeks a critical evaluation of the theory that is implicit or explicit in a tool and rejects tools that incorporate theories with low validity. Understands tool design and use as a powerful source of leadership influence. Commits school resources and seeks commitment of state agencies to the development of smart tools.

Appendix 8.2 Summary of evidence about quality teaching

Below is a summary of evidence relating to teaching approaches that have been found to improve student achievement and a comparison with approaches that are unlikely to benefit students. It is drawn from the best evidence synthesis on quality teaching[529].

1. Quality teaching is focused on achieving high levels of success for heterogeneous groups of students on a range of valued student outcomes.

This involves teachers:

- having high expectations of students, plus the conviction that they can make a difference regardless of prior achievement;
- understanding student ability as learned rather than endowed and having, therefore, a sense of agency;
- focusing on achievement by continually inquiring into the teaching–learning relationship and taking consequential action to improve;
- skilfully probing student thinking.

This does not involve teachers:

- adopting new approaches without regard to their impact on student outcomes;
- using untested assumptions about what works for certain students (for example, 'Māori students are "kinaesthetic" learners') to justify teaching approaches.

2. Pedagogical practices enable classes and other learning groupings to work as caring, inclusive, and cohesive learning communities.

This involves teachers:

- nurturing student dispositions that support their learning (for example, persistence, identity as learners);
- teaching students how to support one another's learning (for example, by giving elaborated explanations);
- being seen by their students as caring about their learning (this is more specific than caring about them or simply liking them);
- demonstrating a caring pedagogy that values and honours diversity (for example, awhina, whanaungatanga);
- supporting student participation while engaging critically with students' views/ideas/ understandings;
- using debate rather than assertion to resolve intellectual conflict;
- organising the environment (for example, determining groups and designing tasks) to develop inclusive learning communities.

This does not involve teachers:

- assigning tasks to groups without giving them training in skills that promote peer learning;
- tolerating even low levels of verbal or physical bullying/abuse (as it inhibits the learning of both bully and victim);
- promoting a 'culture of niceness' in which all students' answers are accepted uncritically, inhibiting intellectual engagement and the development of academic norms;
- using language that inadvertently excludes some students (for example, by talking about 'we' when referring to Europeans in a lesson on pioneers);
- interpreting 'inclusion' as incorporating 'others' into 'mainstream'.

[529] Alton-Lee, A. (2003). *Quality teaching for diverse students in schooling: Best evidence synthesis.* Wellington: Ministry of Education.

3. Links that facilitate learning are created between school and other cultural contexts in which students are socialised.

This involves teachers:

- recognising that school practice is a cultural construction that may be a mismatch with some home and community cultural practices;
- soliciting and using student resources in order to create a bridge between how learning works at home and how it works in school;
- using bridging as a key pedagogical strategy for all students, rather than as an add-on for minority students;
- designing homework carefully and ensuring that students receive feedback.

This does not involve teachers:

- being given packaged information (about certain cultural groups) that will only serve to reinforce stereotypes and not show them how they can use the home culture as a resource for instructional purposes;
- accepting and reinforcing aspects of home culture that inhibit school learning (instead of building a bridge and transforming those aspects);
- inadvertently forcing students to choose between the home and school culture.

4. Quality teaching promotes student engagement with the instructional focus.

This involves teachers:

- having a coherent curriculum of powerful ideas: a curriculum that promotes understanding, recall, and application;
- being knowledgeable about research on how students learn and remember;
- being knowledgeable about the typical developmental sequence by which students learn a curriculum area;
- being skilled in diagnosing students' prior understandings of ideas that are the focus of instruction;
- representing new ideas linguistically and non-linguistically in ways that connect with students' prior understandings;
- linking new ideas to students' prior understandings and helping them resolve discrepancies with the new information;
- scaffolding learning to help students engage with material that they could not otherwise understand;
- promoting cognitive engagement by selecting content that is inclusive of diversity (rather than 'tacking on' such content).

This does not involve teachers:

- treating behavioural engagement as equivalent to cognitive engagement;
- relying solely on whole-class teaching when teaching groups with very different prior understandings;
- assuming that students have equal out-of-class access to the resources they need for their learning;
- encouraging the rote learning of unconnected bits of information.

5. Quality teaching provides students with sufficient, high-quality opportunities to engage with instruction.

This involves teachers:

- ensuring that students are given enough opportunities to learn, as this is strongly related to student outcomes;
- recognising that 'opportunities to learn' refers to those times in which students are cognitively engaged with the instructional focus;
- sequencing instruction and, within a few days, scheduling multiple and diverse opportunities for students to learn (a new idea/concept);
- providing quality practice opportunities when the instructional focus is a new skill;
- organising classroom routines to maximise instructional time;
- approaching classroom management as a means to an effective learning environment rather than a means to tight discipline and control.

This does not involve teachers:

- treating opportunities to learn as the same as time on the timetable;
- equating 'opportunities to learn' with 'on task';
- assuming that an active, busy classroom is providing adequate opportunities to learn;
- rushing to 'cover the curriculum', because full coverage will preclude in-depth understanding for at least some learners;
- using content that alienates or excludes particular groups;
- using an inappropriate concept of 'readiness' to delay instruction.

6. Quality teaching supports learning through a variety of instructional approaches.

This involves teachers:

- using different instructional approaches within the same instructional sequence (for example, individual preparation followed by peer-group exercise followed by teacher-led whole-class discussion);
- being aware of and applying evidence on how to make particular learning approaches effective (for example, cooperative learning);
- providing opportunities for students to hear teacher-led discussion of student ideas;
- designing cooperative group tasks well;
- exposing students to, and teaching them to resolve, academic disagreements.

This does not involve teachers:

- overusing, and ideologically committing to, a particular instructional approach (for example, cooperative learning);
- using cooperative and peer learning approaches without ensuring that peer interaction and student tasks will support academic engagement.

7. Quality teaching aligns curriculum goals, resources (including ICT), task design, and instructional strategies at both classroom and whole-school level.

This involves teachers:

- minimising between-class standards by means of a whole-school focus on educational achievement;
- committing to a school-wide focus on establishing an inclusive, academic student culture;
- understanding and promoting connections between core curriculum goals, students' lives, and societal values;
- aligning activities and resources with instructional objectives.

This does not involve teachers:

- having social norms that vary from class to class;
- using instructional and assessment strategies that are inconsistent from class to class;
- using instructional strategies (for example, a 'tourist curriculum' approach in social studies) that are not aligned to curriculum goals.

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

This involves teachers:

- explaining what students are meant to be learning and why;
- enabling students to monitor their own progress and assist fellow students to achieve their goals, too;
- enabling metacognitive instruction that is linked to curriculum content and goals (for example, problem solving in science);
- asking questions in ways that prompt deeper, more critical thinking (rather than 'the right answer').

This does not involve teachers:

- engaging students through the use of extrinsic reinforcement that will inhibit a transition to self-regulated, intrinsic motivation.

9. Feedback and formative assessment processes promote further student engagement and success.

This involves teachers:

- having sufficient knowledge about curriculum content, pedagogy, and learners to be able to provide constructive formative assessment;
- providing students with regular, task-related, constructive feedback;
- participating with students in the setting of clear learning goals;
- scaffolding students' learning so that they have a high probability of success;
- using feedback gained from student assessment as a basis for adapting their own teaching.

This does not involve teachers:

- rarely being able to detect and correct student misconceptions and difficulties because of the limitations of their own content knowledge;
- using assessments that focus only on checking for right answers (and, in this way, undermining in-depth thinking);
- using assessment practices that induce a sense of alienation and a fear of failure in low-achieving students.

Appendix 8.3 Quality teaching in specific curriculum areas

Since we compiled the summary in Appendix 8.2, the mathematics/pāngarau[530] and social sciences/tikanga ā iwi[531] best evidence syntheses have been published. These syntheses also report pedagogical approaches that have been shown to enhance outcomes for diverse learners. There is little (if any) conflict between the findings of these different syntheses.

The *Effective Pedagogy in Mathematics/Pāngarau BES* outlines key principles that underpin effective teaching in mathematics, disusses the characteristics of successful mathematical communities of practice, and describes the features of effective mathematical tasks, activities, and tools.

The *Effective Pedagogy in Social Sciences/Tikanga ā Iwi BES* outlines four mechanisms that explain learning in the social sciences: connection, alignment, community, and interest. These mechanisms are supported by advice about approaches that are likely to promote student achievement, and the reasons they do so.

These two learning-area-specific syntheses provide a valuable evidence base that school leaders can use to inform their pedagogical leadership.

The evidence reported in the quality teaching synthesis and in the mathematics and social sciences syntheses signals the importance of teachers attending simultaneously to the social, cognitive, cultural, and metacognitive dimensions of teaching/learning in ways that support effective learning for diverse students. The figure below represents these interconnected dimensions and some of the major themes that emerge in research that is relevant to each of them:

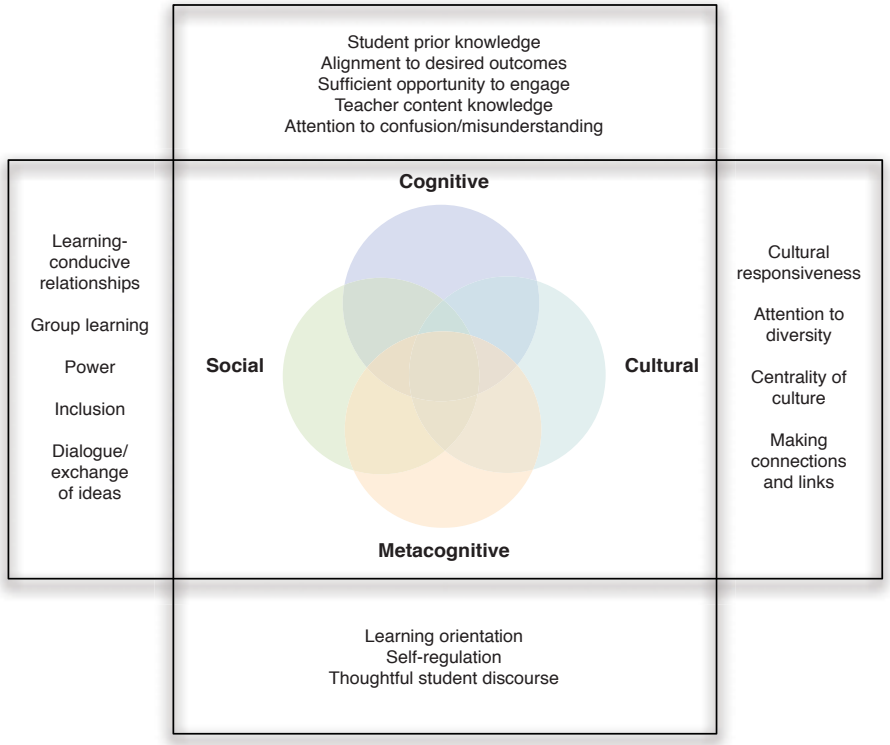

Figure 31. The four dimensions of teaching/learning, with related themes

[530] Anthony, G., & Walshaw, M. (2007). *Effective pedagogy in pāngarau/mathematics: Best evidence synthesis iteration.* Wellington: Ministry of Education.

[531] Aitken, G., & Sinnema, C. (2008). *Effective pedagogy in social sciences / tikanga ā iwi: Best evidence synthesis iteration.* Wellington: Ministry of Education.

Another important theme—teacher inquiry—is common to all three pedagogical BESs. It relates not to how teachers *work* with their students but to how they *think about their work* with students.

By using outcomes-linked evidence to inform their teaching, teachers increase the likelihood that the decisions they make will enhance student learning. It nevertheless remains true that the effectiveness of any particular strategy will vary from context to context. For this reason, an inquiry approach to pedagogical practice is vital.

See Figure 32 (figure 9 in the social sciences BES) for a model of what this involves[532].

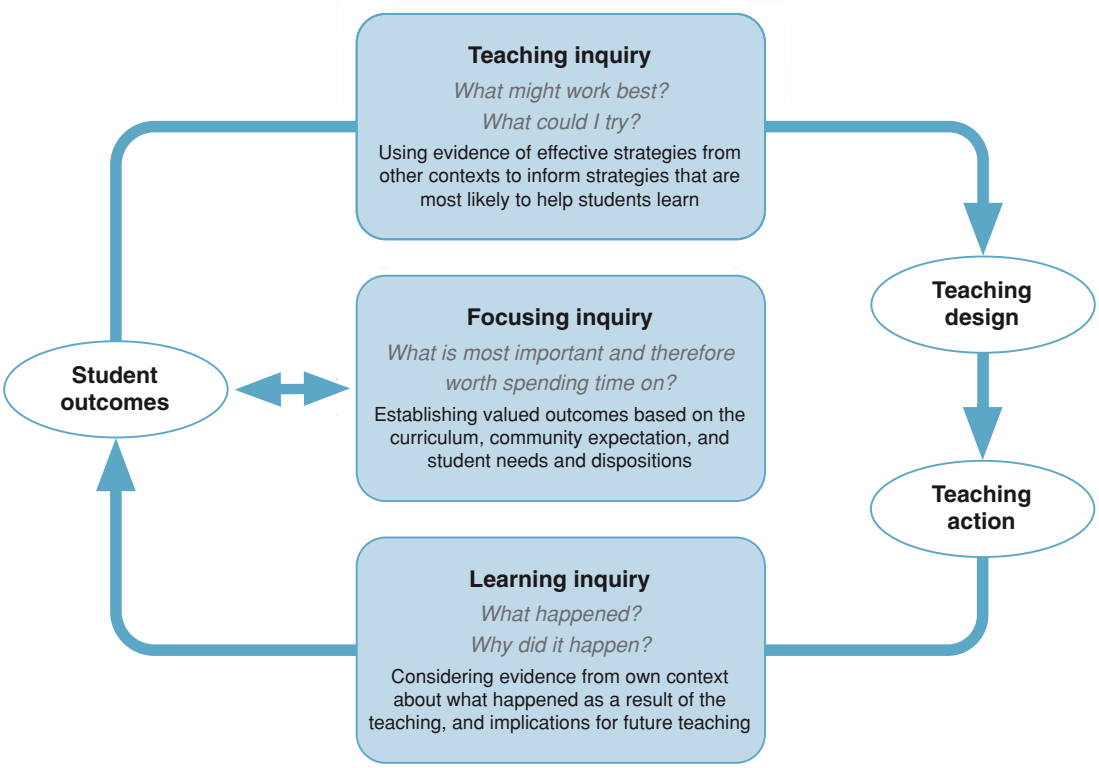

Figure 32. A model of inquiry-based teaching

[532] ibid.

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Note: All Best Evidence Synthesis Programme publications can be accessed at www.educationcounts.govt.nz/goto/BES

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Glossary of Māori terms

Ako	Teaching and learning, understood as a single, reciprocal process
Hapū	Sub-tribe
Hui	Meeting, gathering, usually with a specific kaupapa
Iwi	People, nation, tribe
Kaiako	Teacher, instructor
Kanohi ki te kanohi	Face to face
Kaumātua	Elder, old man or woman, adult
Kaupapa	Purpose, agenda
Koro	Male elder, old man, grandfather
Kuia	Female elder, old woman, grandmother
Kura	School
Kura kaupapa Māori	Māori-medium school with an identifiable philosophical base (e.g., Te Aho Matua)
Kura whānau	The support network of families and extended families associated with a school
Ngāti	Prefix denoting tribe
Pākehā	New Zealand-born non-Māori, especially those of European descent
Pāngarau	Mathematics
Pānui	Reading
Pōwhiri	Formal welcome or opening ceremony
Taonga	Prized possession, treasure, inheritance
Te Aho Matua	Literally, the central thread; the philosophical statement that guides the operations of many kura
Te Kotahitanga	A professional development intervention for non-Māori teachers of Māori in English-medium schools. For a description of this intervention, see Case 7 (Establishing a culturally responsive pedagogy of relations) in Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007), *Teacher Professional Learning and Development Best Evidence Synthesis*. See also the Te Kotahitanga website: http://edlinked.soe.waikato.ac.nz/departments/index.php?dept_id=20
Te reo Māori	The Māori language
Te reo Māori me ōna tikanga	Māori language and customs
Tikanga	The usual and accepted procedure or way of doing things; protocol
Tuhituhi	Writing
Tumuaki	Principal, head teacher, leader
Whakapapa	Ancestry, genealogy
Whānau	Family, to be understood in a much more encompassing sense than the nuclear family; network of mutual supports and obligations
Whanaungatanga	Sense of kinship, family, belonging

Mo ngā tamariki, kia rua ngā reo. Ko te reo o ngā mātua tīpuna tuatahi, ko te reo o tauiwi tuarua. Kia ōrite te pakari o ia reo, kia tu tangata ai ngā tamariki i roto i te ao Māori, i roto hoki i te ao o tauiwi.
I runga i tēnei whakaaro, kia tere pakari ai te reo o ngā tamariki, me whakahaere ngā mahi katoa o te kura i roto i te reo Māori. Tae atu ki te hunga kuhu mai ki roto i te kura, me kōrero Māori katoa, i ngā wā katoa.

Kura kaupapa Māori, therefore:

- respect all languages;
- expect full competency in Māori and English for the children of the kura;
- affirm that total immersion most rapidly develops language competence and assert that the language of the kura be, for the most part, exclusively Māori.

Te Aho Matua o ngā Kura Kaupapa Māori.
English interpretation by Dr Kāterina Te Heikōkō Mataira

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