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Leadership for Improving Learning
Insights from research

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The Australian Council *for* Educational Research acknowledges the Wurundjeri people of the Kulin Nation, Traditional Owners and Custodians of the land on which we gather for Research Conference 2017.
We acknowledge the Traditional Owners of the lands on which our offices are located, and of the Country in which we work. We pay our respects to Elders past, present and future. We acknowledge the Aboriginal and Torres Strait Islander people who contribute to educational research and development, including work to improve Indigenous learning.

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Foreword

Educational leaders play a crucial role in setting directions for improvement and innovation. Leaders – whether or not they are in formal leadership roles – create the tone of an institution, set priorities and directions for change, build coherence and shared commitment across the community and maintain a sharp focus on measurable improvements in student outcomes. Effective leaders take a deep interest in the quality of teaching and learning. They closely monitor indicators of student achievement and wellbeing and promote institution-wide conversations and professional learning focused on improving teaching and learning processes and student outcomes. They also form partnerships with other educational institutions and external organisations to better meet students' learning needs. Research Conference 2017 will profile recent research into leadership practices and initiatives that have revitalised educational institutions and produced significant improvements in student engagement and performance.

Professor Geoff Masters AO
CEO, Australian Council *for* Educational Research

Keynote papers

Capabilities required for leading improvement: Challenges for researchers and developers

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Viviane Robinson is a Distinguished Professor in the Faculty of Education at the University of Auckland, New Zealand, and Academic Director of its Centre for Educational Leadership. She is the author of five books and numerous chapters and journal articles on school improvement, leadership and the relationship between research and the improvement of practice. She currently leads an evidence-based international research and development program on the leadership capabilities required for networked and individual school improvement.

Viviane has consulted on leadership policy and development to professional and government bodies in England, Norway, Singapore, Chile, Canada, Australia and New Zealand. She has received awards from national and international professional and academic organisations, including the Australian Council for Educational Leaders, the New Zealand Secondary Principals' Association of New Zealand and the United States-based University Council for Educational Administration. In 2011, she was made a Fellow of the American Educational Research Association for sustained excellence in educational research. In 2016, she won the Mason Durie Medal, which is awarded by the Royal Society of New Zealand to a pre-eminent social scientist whose research has made an international impact.

Abstract

The leadership of improvement is a challenging task, requiring capability in 1) using relevant knowledge to 2) solve complex educational problems while 3) building relationships of trust with those involved.

In this keynote paper, Professor Viviane Robinson describes what she has learnt from her leadership research and development program about each of these three leadership capabilities.

In addressing the first of these leadership capabilities, she describes key findings about how leaders' relevant knowledge intersects with their ability to build trust and solve the problems that stand in the way of their improvement goals.

Her discussion of the second capability draws on empirical research about how educational leaders typically solve complex on-the-job problems. She discusses how leaders communicate about perceived problems; how they analyse and attempt to solve them; and the consequences of their typical strategies for single- and double-loop learning and for educational improvement.

In discussing the third capability, that of building relational trust, Viviane presents key findings about the interpersonal skills leaders employ in their on-the-job problem-solving conversations and the dilemma they frequently experience between progressing the problem and maintaining trust.

She then discusses the types of professional learning and development that are more effective or less effective in building leaders' capacity in these three critical capabilities.

In the final part of her paper, Viviane reflects on the considerable methodological and design challenges that are involved in conducting research on leadership capabilities that is simultaneously highly rigorous and highly relevant to leadership practice.

Three capabilities are central to the leadership of improvement. It requires capability in 1) using relevant knowledge from research and experience to 2) solve the complex educational problems that stand in the way of achieving improvement goals while 3) building relationships of trust with those involved. I settled on these three capabilities because there is either direct or indirect evidence of their links to student outcomes (Robinson, 2010, 2011). I like having just three broad capabilities because leadership work is complex and holistic, and if we create long lists of discrete leadership capabilities, we misrepresent its highly integrated nature (Louden & Wildy, 1999).

Take the example of a secondary school leader who knows from the research evidence that streaming is a major contributor to achievement disparities, because students in the lower ability streams get few opportunities to learn challenging material (Schmidt, Burroughs, Zoido, & Houang, 2015). This leader wants to use this knowledge to make better quality decisions about how to group students in his school so that there are more equitable opportunities to learn.

But the leader cannot act on this knowledge without considerable skill in the second capability—being able to solve complex problems. In order to implement the decision to reduce streaming and move to more mixed ability grouping, he must address such issues as teacher attitudes towards and skill in mixed ability teaching; the preference of some parents for streaming; and the time it will take to reorganise timetables, assessments and teaching plans. Resolving these multiple issues requires capability in complex problem-solving.

Leaders cannot solve such problems on their own. They need to build trust with teachers who may be sceptical; who have different beliefs about what works in their classrooms; and who may be tired of change. In education, problem-solving is a largely social process, and it requires leaders at all levels to have high ability in the third capability, that of building relational trust. For the leader in this example, this would involve listening to teachers' objections to more mixed ability teaching; creating a safe environment in which teachers can talk about their lack of confidence and skill in mixed ability teaching; and leading the change process in a way that builds confidence in the leader's competence.

In summary, student-centred leaders use their research and professional knowledge to solve complex problems of teaching and learning while building trust with those involved. Student-centred leadership requires the skilful integration of these three capabilities.

First capability: Using knowledge

This capability is about making educational decisions that are strongly informed by quality research or practice-based evidence. For example, decisions about how to group learners are informed by research on ability grouping; school homework practices are informed by the considerable research on the types of homework that help or hinder learners; and decisions on how to teach comprehension are informed by research on the effects of particular teaching strategies.

I think we greatly underestimate the knowledge required to be successful educators. This is partly because the goalposts for what counts as success have shifted so much. Today, successful schools and systems are those in which teachers are deeply knowledgeable about how to accelerate the growth of learners who lag behind age-related benchmarks.

In many cases, such pedagogical knowledge is available in the system—there is good research evidence about the specific teaching strategies that are associated with accelerated progress in, for example, mathematical reasoning and the writing of well-constructed paragraphs. Leaders have a considerable responsibility to make such knowledge available to their teachers and to model, expect and enable continued professional learning that is focused on meeting the priority needs of learners.

I call this first capability 'using knowledge', rather than 'having knowledge', because it involves more than acquiring tertiary qualifications. While such study provides a foundation of knowledge, this capability requires leaders to use that knowledge to inform their educational decision-making.

There is very little research that directly investigates how different levels of this capability affect leadership performance and student outcomes. The strong tradition of research on teacher content and pedagogical content knowledge has no parallel in leadership research, with the exception of a study on how different levels of expertise in maths and maths pedagogy shaped principals' leadership of a district-wide maths reform (Nelson & Sassi, 2005).

Second capability: Solving complex problems

Effective leaders are those who can solve the problems that prevent the achievement of team or organisational goals (Mumford, Zaccaro, Harding, Jacobs, & Fleishman, 2000). For the last few years, I have led a research and development program that has revealed some very interesting patterns in the way New Zealand and Australian school leaders go about problem-solving. In one of our studies (Sinnema, Le Fevre, Robinson, & Pope, 2013), we asked educational leaders to complete a questionnaire about a concern they had regarding the behaviour or performance of someone in their area of responsibility. They described the duration of their perceived problem, the effectiveness of their prior attempts to resolve it, and their own possible contribution to the situation. In 22 per cent of cases, the problems these leaders nominated had persisted for between one and two years, and in 12 per cent of cases, they had persisted for more than two years. On average, educational leaders rated their prior attempts as minimally effective and the conversations they had as somewhat difficult.

For most leaders, there was a considerable difference between how they described their concern in their questionnaire and how they communicated it to the person involved. In all cases where there was a difference, the concern was described as much more serious, certain and problematic in the questionnaire than in discussions with the person involved. Rather than the clear and open-minded statement of their concerns required for what I call 'constructive problem talk', leaders tended to communicate their concerns indirectly through loaded questions or vague statements.

Our second major finding about how leaders solve problems was that they tend to move very rapidly from identifying a problem to offering or soliciting strategies about how to resolve it. They skip the phase of causal inquiry, including rigorous inquiry into possible school-based causes of the problem (Robinson, Meyer, Sinnema, & Le Fevre, 2016). This quick-fix approach can work if the problem is a new and simple one, but most educational problems are not of this type. Experienced teachers and leaders have usually tried multiple quick fixes that turn out to be neither quick nor a fix. Repeated cycles of quick fixes waste everyone's time; lead to cynicism and burnout; and, worse still, leave the students no better off. The quick-fix pattern manifests in both the micro context of problem-solving conversations and the macro context of regional and national school improvement policy and practice (Bryk, Gomez, Grunow, & Le Mahieu, 2015).

The third major finding from our research program on problem-solving was about how leaders check the validity of their beliefs about the nature, causes of and solutions to the problems they do discuss. Of the various validation strategies that can be employed in a conversation, seeking agreement is the most common (Robinson et al., 2016). In our analysis of dozens of transcripts, it was rare to find leaders who were able to test their beliefs by treating difference as an opportunity for disconfirmation or by discussing the alignment between their proposed solution strategies and the likely cause of the problem. The consequence, in a considerable proportion of our cases, was agreement on a solution that was misaligned with the likely problem cause.

Our research methodology has enabled us to study how leaders think as well as how they talk in problem-solving conversations (Mumford, Watts, & Partlow, 2015). We have learnt from analysis of the alignment between leaders' thoughts and their speech that the absence of causal talk is not due to the absence of causal ideas. On the contrary, leaders have numerous beliefs about how the teaching or relational skills of the person to whom they are speaking may have contributed to the problem under discussion. It is leaders' reluctance to disclose and test these ideas that is largely responsible for the paucity of causal talk. Also responsible is the belief of many leaders that it is their job to provide support, and that doing so requires them to agree as quickly as possible on some strategies for fixing the problem.

Third capability: Building relational trust

Leadership is not just about building trust. Nor is it only about getting the work done. It is about doing both of those things simultaneously, and it is this integration that is captured in this third capability. Experienced school leaders know how to build relationships; what they find far more difficult is building and maintaining relationships of trust while addressing the difficult issues that are central to leading improvement. One of the most compelling bodies of evidence on trust is derived from the research program of Bryk and Schneider (2002). Their empirically based model of trust shows that teachers' trust of their leaders is a function of the degree to which their daily interactions with those leaders demonstrate personal regard, interpersonal respect, competence and personal integrity. From extensive longitudinal quantitative and qualitative research, Bryk and Schneider demonstrated a causal relationship between the degree of trust among members of a school community and the degree of improvement in student outcomes.

If we are to help leaders develop this third capability, we need research and development programs that design and evaluate interventions that help leaders to solve problems in ways that build trust. In my own program, I have drawn strongly on the work of Argyris and Schön (1974; 1996), for it is a rare example of a research program that offers a strong normative theory of leadership effectiveness combined with behavioural evidence of what that normative theory looks like in practice.

Our research program has focused in particular on those conversations that leaders have reported as raising the possibility of threat or embarrassment—negative emotions that leaders believe could damage rather than build trust. Such conversations typically focus on aspects of another's performance or behaviour; perceived disagreements; or giving and receiving negative feedback. Our research on this third capability has shown that many leaders experience a dilemma between being honest about such issues and maintaining trust. They resolve their dilemma either by being brutally frank or, more commonly, by being selective and indirect about what they say. Rather than being genuine, a high proportion of leaders' questions in such conversations are either leading or loaded (Le Fevre, Robinson, & Sinnema, 2015). Our interventions have become increasingly focused on the thoughts that leaders take into such conversations rather than just on their actual speech, for it is their framing of the problem that creates their dilemma between being brutally frank or vague and dissembling (Robinson, 2016). The way out of the dilemma is not to seek a midpoint between speaking frankly and speaking vaguely, but to drop the prejudgements that reduce trust and limit collaborative problem-solving whether or not they are disclosed.

To date, our research program has reported one statewide intervention study with Australian system leaders in which independent ratings by both the leaders themselves and their conversation partners showed that after three days of training, leaders had improved their skills, built greater trust and made progress on the problems facing them (Robinson, Sinnema, & Le Fevre, 2014). We are now working on a pilot study that tests whether our leadership interventions improve team leaders' conversations with their teachers in ways that change teaching practice and lift the achievement of target students in reading. We are striving, in other words, to test whether our interventions with leaders have demonstrable impacts on the students for whom those team leaders are responsible.

Research challenges

There are substantial challenges involved in conducting research on these three leadership capabilities in ways that contribute to rigorous research and the improvement of practice. First, a normative theory is required so that we can move beyond describing what leaders do and don't do to intervening in ways that help them achieve the central purpose of educational leadership—building trust while addressing important educational problems in ways that benefit students.

Second, that normative theory needs to be specified at a level of detail that enables those who engage with it to discriminate between leadership thoughts and words that are consistent and those that are inconsistent with the values that comprise the normative theory.

Third, we need more studies that focus on the relationship between leadership cognition and behaviour (Mumford et al., 2015). We have found that behavioural measures are not always reliable indicators of the capability we are studying. The trust and problem-

solving capabilities require leaders to be able to reconsider their views, and such reconsideration is 'not a matter of mere perfunctory listening to contrary opinions but a genuine readiness to revise or even abandon one's views in light of new objections or counter evidence' (Spiegel, 2012, p. 28). Behavioural measures of listening or inquiry are not always reliable indicators of genuine readiness or of the interpersonal respect that is a key determinant of trust. Cognitive measures alert us to such normative mismatches and provide a window into the forms of reasoning that drive these behaviours. Together, cognitive and behavioural measures can provide descriptions and explanations of leaders' social problem-solving as well as insights into how it may be improved.

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Stronger Smarter: A sustained and enduring approach to Indigenous education (whether education researchers know it or not!)

Professor Chris Sarra
University of Canberra

Professor Chris Sarra is an internationally recognised Indigenous education specialist and the founder and Chairman of the Stronger Smarter Institute. He is passionate about effecting sustainable change through positive leadership and mentoring with high expectations for a strong and smart Indigenous population.

Professor Sarra became the first Aboriginal principal at Cherbourg State School (1998–2005). He holds a Diploma of Teaching, a Bachelor of Education, a Master of Education and an Executive Master of Public Administration from the Australia and New Zealand School of Government. He has a PhD in psychology from Murdoch University, and in 2011 his PhD thesis was published as a book entitled Strong and smart: Towards a pedagogy for emancipation—education for first peoples (2011). Professor Sarra is a Fellow of the Australian Institute of Company Directors and an Honorary Fellow of the Centre for Ethical Leadership at the University of Melbourne. In 2006, with the support of the Queensland Government, he established the Indigenous Education Leadership Institute, the forerunner to the Stronger Smarter Institute.

Professor Sarra has been a Commissioner on the Australian Rugby League Commission since 2012. He is a Professor of Education at the University of Canberra, teaching and researching on school leadership, Indigenous education and equity in education. In 2004, Professor Sarra was named Queenslander of the Year; in 2005, he was a finalist for Australian of the Year for Queensland; and in 2010, he was named Queensland Australian of the Year.

Abstract

In 1988, Professor Chris Sarra commenced his career as an educator. After a very personal revelation about how he as an Aboriginal student had been sold short by schooling, he became determined to change expectations of Aboriginal children in schools throughout Australia. It was a lofty career ambition, but one he feels he has achieved. The Stronger Smarter approach, which he developed and now shares with an army of hardworking and courageous educators, has had success—despite the questionable efforts of education researchers with little or no insight into the profound complexities of such an undertaking. This paper will reflect on aspects of the Stronger Smarter journey and invite education researchers to consider how to enhance this pursuit rather than get in the way of it.

In 1988, I started my career as an educator determined to change expectations of Aboriginal children throughout Australia. This passion and drive was fuelled by a very personal revelation about the extent to which I had been sold short by low expectations about who I was as a young Aboriginal student going to school in Bundaberg in the 1970s and 1980s. I was brought to this insight by the greatest teacher and mentor I have ever known, Dr Gary MacLennan. In my recent memoir, *Good morning Mr Sarra* (Sarra, 2012), I described how my mother and father had nurtured within me a very strong work ethic and a very strong, proud and positive sense of being Aboriginal. I explained that they kindled a fire in my belly, and Dr MacLennan came to me and threw petrol on it.

It is fair to say that my passion and desire to change expectations was fuelled by a sense of anger and outrage at such injustice. If I had been sold short by education, then how many other Aboriginal children were being sold short simply because teachers didn't believe in their capacity to learn and be exceptional? This had to change. When I look back on that time, I knew very well that changing expectations of Aboriginal children right across Australia was quite a lofty career ambition. It would take lots of hard work; lots of courage to say what needed to be said; and a thick skin. On reflection, though, I was very angry—and this was personal!

These days, I am not as angry as I used to be. Having made a significant and well-recognised contribution to education, and having achieving my lofty career ambition, I stand here as an educator with nothing to prove.

Recently, I was interviewed on a local Indigenous radio network by a young Aboriginal woman. The radio network was in Cherbourg. The young, budding radio presenter had been a student of Cherbourg State School when I was the principal there some years ago.

'This morning's guest is Dr Chris Sarra, a nationally recognised educator and my old principal from when I was there at Cherbourg State School', she commenced with an impressive degree of professionalism.

> *Mr Sarra, before we start this morning, I just want to say to you that I remember that message you always taught us. About being strong and smart and all the value that comes with that! I have carried that with me all my life, and I just wanted you to know that!*

I've always been confident in any radio, print or television interview because I have always just spoken from the heart, but with that opening she floored me like no other journalist had ever done. How could I speak from the heart when my heart had just been stolen like that?

On another occasion, when I was back in Cherbourg to help deliver a Stronger Smarter leadership program, another student started to cry when he saw me. I was in tears, too, as he spoke to me. I remembered him as a young boy very well. I had described him as one of the brightest children in the school.

'Sir, it's good to see you, man.' He spoke softly, with slightly slurred speech. He wasn't a completely broken young man, but I could see that he almost had been at times in his life.

'Sir … I've taken a lot of drugs, you know. But I just kept remembering strong and smart, strong and smart. That kept me alive, man.'

Many educators will have many such stories about past students they have run into and that wonderful feeling you get when they tell you how you made a difference in their lives.

I stand here as an educator among education researchers to challenge you to wonder about how you would measure that.

How do you measure the fact that your teaching and your philosophical approach to education can inspire children to inspire others?

How do you measure the notion that your Stronger Smarter philosophy has actually kept a young man on the hard road of staying alive, at a time when he was thinking it might have been far easier to just surrender to despair and walk with so many other Aboriginal ghost children?

It is these questions and more that I want to put to you today. As for the answers—part of me wants to say that I don't really care, but the truth is I do care. I want education research to be authentic and insightful. I want it to genuinely inform practice. I don't want to have a level of contempt for education researchers because, as an education academic and as an education practitioner, I seriously do value the role of education research—as long as it is executed in a way that enhances the practice of educators rather than hinders it.

In 2013, a report led by education researchers (Luke et. al, 2013) proposed to offer an evaluative insight into the Stronger Smarter Learning Communities project. The Stronger Smarter Learning Communities project was an $18 million project, funded by then federal Minister for Education and Deputy Prime Minister Julia Gillard. It was designed to build the leadership capacity of school leaders in 'hub schools'—schools selected as models of improvement in the area of Indigenous education—to challenge, mentor and work with surrounding school leaders.

Accepting that it is inherently obvious that I would defend the Stronger Smarter approach against what I

perceive as the wretched and naive failure of Luke et al. (2013) to fully comprehend the profound impact the approach can have on educators, I am still compelled to seriously question the methodology and the motives of those leading the research.

My motive in raising this with you today is not to defend the Stronger Smarter approach. As I mentioned at the outset of this paper, I have nothing to prove as an educator, and the Stronger Smarter approach has proven itself over many years, despite those seriously questionable methodologies and motives I raise here. My motives in raising this with you is to invite you to reflect on the gross inadequacies of such research so that we might learn from them.

Denzin and Lincoln (2011) provide for researchers what is fundamentally a moral and ethical orientation, and one that I am persuaded by. They write:

> The social sciences are normative disciplines, always already embedded in issues of value, ideology, power, desire, sexism, racism, domination, repression, and control. We want a social science committed up front to issues of social justice, equity, nonviolence, peace, and universal human rights. We do not want a social science that says it can address these issues if it wants to do so. For us, this is no longer an option. (Denzin & Lincoln, 2011, p. 11)

I feel that it is these principles that researchers forgot in their evaluation of the Stronger Smarter approach.

The Stronger Smarter approach asserts confidently that if we give Indigenous children hope; if we work from the assumption that they have strengths; and if we do things with them and their communities, then there is a tendency, *ceteris paribus,* all other things being equal, for them to succeed in education. The evaluation of the Stronger Smarter approach claimed to have found no evidence that this approach worked. What it failed to do was to measure what could not be measured, and so assumed it did not exist.

Thankfully, this evaluation has had little to no traction or credibility with real educators who understand the Stronger Smarter approach. I refer here to those educators who have the courage to stand on the front line and engage authentically with the often harsh complexities of the Indigenous education landscape, rather than flitting in and out to observe and research these dynamics from the safety of the luxurious outside. Of more than 70 research 'findings' listed by Luke et al. (2013), however, three cherry-picked findings did gain traction, serving the purposes of ideologues looking to discredit the Stronger Smarter approach by suggesting it has no effect on literacy, numeracy and attendance outcomes.

The researchers, of course, are not responsible for the use made of their work in a vicious personal and political attack on me by the right-wing columnist Janet Albrechtsen (2012). But they are responsible for the devaluation of an approach based on the necessity of self-respect, self-esteem and a positive self-identity.

From some, the cherry-picked findings expose some inadequacies of the Stronger Smarter approach. For me, the notion of simplistically linking our approach to literacy, numeracy and attendance outcomes exposes the gross inadequacies of those education researchers' attempts to understand, even in the slightest way, the complexity and profoundness of the Stronger Smarter approach and what it does for real and courageous educators, for Indigenous students and for Indigenous communities. It also exposes serious questions about their ability to identify and measure what is most useful to our education profession.

Let me give just one example here to ram home this point.

The principal of Yarrabah State School in Far North Queensland attended a Stronger Smarter leadership program. In his short time with us, he developed a profound appreciation of the need to engage community more deeply and more authentically. On his return to Yarrabah, he spent the next few months working extremely hard to get the community authentically engaged. One of the outcomes of his efforts was that 58 teenagers in the community who had been chronically disengaged from schooling were re-engaged in schooling. They did not set the world on fire as students—but they did not set the school on fire as juvenile delinquents, either.

As we reflect on this, it is not hard to see the challenges the re-engagement of such students could create:

- aggregate school attendance is likely to go down
- aggregate literacy and numeracy are likely to go down
- aggregate behaviour management issues might increase.

Simultaneously, it is not hard to see the profoundly positive benefits that the re-engagement of these students could create in community:

- reductions in vandalism and juvenile delinquency
- reduction in child sexual abuse in community
- reduction in incidences of petrol sniffing
- reduction of Aboriginal youth suicide.

There are many other profoundly positive effects I could name here—and even an undergraduate economist could tell us about the financial and economic returns on having 58 young Aboriginal men and women engaged in school in a way that sees them functional and on a pipeline towards a life that is honourable, hopeful and virtuous.

This is just one example of many. While the content is extremely complex, this is pretty easy to comprehend.

I could have explained this complexity and how to approach it in an evaluative sense, if only the researchers had made the effort to have just one conversation with me about it! One has to question the motives that would prevent such important and necessary conversations taking place. I will leave you to ponder this and create within your own minds the insights required here.

On accepting the 2016 NAIDOC Person of the Year award, which recognised my efforts as an educator and the efforts of those around me, I made a promise to every Aboriginal child in Australia. I reminded them that more than 25 000 Aboriginal students, in more than 450 schools throughout Australia, have been touched by the effects of the Stronger Smarter approach. I said to them, 'We will come for you!'

Somewhere, somehow, Stronger Smarter educators will touch the life of every Aboriginal student in Australia.

It is a lofty ambition, I know, but by now I know a thing or two about having lofty ambitions and transcending stifling expectations. With you or without you as education researchers, I will deliver on this promise. I hope Stronger Smarter educators can deliver on this promise to our children with you.

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Opening or closing doors for students? Equity and data-driven decision-making

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Amanda Datnow is a Professor in the Department of Education Studies and Associate Dean of the Division of Social Sciences at the University of California, San Diego. Her research focuses primarily on K–12 educational reform and policy, particularly with regard to issues of equity and the professional lives of educators. She is currently engaged in two major research projects on the use of data to inform teaching and learning. These studies are aimed at uncovering best practices in data use and building educators' capacity to use data effectively. Across her studies, Amanda uses qualitative research methods in order to provide a detailed examination of school practices and of educators' and students' experiences with educational change. She is author or editor of seven books and more than 60 articles and book chapters. Her most recent book is Data-Driven Leadership (Jossey Bass, 2014). She is on the editorial boards of several journals and consults for numerous professional organisations and government agencies.

Abstract

Data-driven decision-making is a key pillar of educational reform initiatives in countries across the globe. While approaches to data use vary, the theory of action underlying these efforts is often similar. The common idea is that when leaders and teachers are knowledgeable about how to use data, they will become more effective in reviewing their existing capacities, identifying weaknesses, and charting plans for improvement. In the classroom, data can inform how teachers plan lessons, identify concepts for re-teaching, and differentiate instruction. For all these reasons, data use has significant implications for teaching and leadership.

Ensuring equitable opportunities and outcomes for all students is also a top priority of educators and policymakers. Data use can be an important lever for achieving equity, but how this may occur has not been well understood. Drawing on findings from in-depth qualitative research, this paper will illuminate the conditions under which data-use efforts can help to open—or close—doors for students. Through a careful examination of day-to-day practices in schools and systems, this presentation will uncover how thoughtful data-use practices can expand students' opportunities to learn, whereas misinformed use of data can limit their opportunities.

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1 This is an abridged version of a longer paper by A. Datnow and V. Park (2017). For a copy of the full version, appropriate for citation and circulation, please contact: adatnow@ucsd.edu

Introduction

Data-driven decision-making is a key pillar of educational reform initiatives across the globe. Data use is conceptualised as part of a cycle of instructional improvement (Goertz, Oláh, & Riggan, 2010; Mandinach & Honey, 2008). In this cycle, educators engage in a process of defining a problem and setting goals, gathering and analysing data, and then action planning and evaluating outcomes (Coburn & Turner, 2011; Schildkamp & Poortman, 2015). While useful for illuminating the process of data use, these frameworks do not explicitly call attention to equity concerns that may arise in the process. In most of the published research on data use in education, there is little or no attention to equity issues (for exceptions see Bertrand & Marsh, 2015; Skrla et al., 2004).

Data use can be an important lever for achieving equity, but how this may occur has not been well understood. Pollock (2017) defines equity as supporting the full human talent development of every student and all groups of students. In her conception, equity-oriented school talk is guided by principles of respecting all students' wellbeing; describes students accurately; pinpoints students' needs precisely, not vaguely, and regularly, not rarely; and shares opportunities to learn widely. Large-scale accountability policies, while drawing attention to systemic inequities, are often narrowly focused on highlighting student achievement gaps at the expense of understanding and mitigating the effects of unequal educational conditions and processes.

With a decade of data-use policies and practices behind us, what is the relationship between data use and equity? How might we best mobilise research knowledge to uncover the ways in which the use of data in schools can either open or close doors for students? In this paper, we reflect on what we have learned about data use and the tensions that educators face in using data and the consequences for equity. We argue that an equity agenda needs to be at the forefront of the field's understanding and study of data use in schools.

Methods

Over the past decade, my colleagues and I have conducted several qualitative research studies on data use (see Datnow & Park, 2014). In our first study, we focused on how school systems support schools to use data effectively. In our second study, we studied high schools that were engaged in data use, as most of the prior research in the field had been conducted in elementary schools. In the course of this research, questions around equity arose, especially as educators disaggregated data by student subgroups and made decisions about which students to focus their energy on or how to narrow the curriculum. However, we did not investigate these issues in depth.

Recently, we conducted a more intensive study that takes a deep dive into teachers' work with data and expands the existing research base on equity (Datnow, Choi, Park, & St. John, in press; Park & Datnow, 2017). We were motivated to find out more about how teachers actually use data, what types of data they use, and how their instruction is affected. We approached this work from a social constructivist framework, acknowledging that teachers' conceptions of data use and of their students' abilities are produced in the course of their interactions with other teachers, administrators, and students. We studied teacher teams in Grades 4 and 5 in four elementary schools. We felt this in-depth work was necessary in order to answer these important questions about teachers' use of data and examine how such efforts are impacting students' opportunities to learn. The knowledge we gained from these research projects, as well as our own reading of the literature, informs our arguments in this paper.

Equity and data use

Data do not drive decisions by themselves (Dowd, 2005). As we will explain, educators play a critical role in shaping how and why data are used, what counts as data, and so on. Data-*informed* decision-making is thus a more appropriate term for this practice, rather than data-*driven* decision-making, which is used most often in the field. We use the terms interchangeably here, along with *data use.*

In this paper, we juxtapose a set of data-use practices that either serve as obstacles or as facilitators of equity goals. These include:

- accountability-driven data use versus data use for continuous improvement
- using data to confirm assumptions versus using data to challenge beliefs
- tracking versus flexible grouping to promote student growth.

Accountability versus continuous improvement

The past decade of research distinguishes high-stakes accountability-driven data use, which emphasises complying with external pressures, from data use for continuous school improvement and organisational learning. Firestone and Gonzalez (2007) explain that an accountability-driven culture focuses on test scores, tends to have a short-term time frame, and excludes teacher and principal voices. In contrast, data use for continuous improvement focuses on student and organisational learning and instructional improvement, is long-term in scope, and includes teacher and principal voices.

While data use for continuous improvement is clearly a more productive approach, equity issues may still go unexamined in this process, unless problems are framed explicitly in terms of equity. School leaders can help frame data use among teachers, focusing them away from or towards accountability and equity concerns (Horn, Kane, & Wilson, 2015; Park, Daly, & Guerra, 2013).

Educators' and policymakers' decisions about what counts as data play an important role as well. Standardised tests have long been criticised for their orientation towards forms of knowledge that privilege white, middle-class students (Garner, Kahn, & Horn, 2017; McNeil, 2002). Educators focused on continuous improvement actively seek out a wide range of data and do not limit themselves to data linked to accountability mechanisms. As one teacher in our research shared: 'I look at [the benchmark assessment] as a snapshot on that day, but what I need to use is a range of data...' Drawing on a wide range of data allows for a fuller portrait of student learning. This allows for a greater possibility that the strengths of students who have historically been disadvantaged by standardised measures will be evident.

Achieving goals of equity requires carefully examining data on each and every student, rather than just those on the cusp of 'proficiency' on accountability measures (Halverson, Grigg, Pritchett, & Thomas, 2007). One school we studied used a process by which teams of teachers sit down with the principal, a counsellor, and two or three intervention teachers three times a year to discuss data and plan instructional interventions for every student. A notable feature of these meetings was that, while meeting participants had numeric data on student achievement in front of them, the discussion was not restricted to numbers. Educators discussed a wide range of factors that may influence students' academic and social adjustment. Examining data on all students also promoted shared responsibility, a key component of data use for equity.

Confirming assumptions versus challenging beliefs

A goal of data-informed decision-making is to bring evidence to light that will help educators think about student achievement in new ways. However, examining data does not always lead to new interpretations. Data can also be used to validate existing understandings of students' learning profiles (Oláh, Lawrence, & Riggan, 2010). When educators use student characteristics as explanations for results, they can reinforce a culture of low expectations and stereotypes (Bertrand & Marsh, 2015) and point to students' home lives as the primary explanation for high or low achievement.

Data use can be a powerful tool to push teachers to challenge existing assumptions about student learning and to reflect critically on instructional practices (Lachat & Smith, 2005). The process of closely examining data in the context of teacher team meetings can facilitate teachers' focus on student growth, thereby shaping teachers' beliefs about what they think their students are capable of. But building professional learning communities is not sufficient to bring about change. School talk must debunk myths about intelligence as easily measurable, and must explicitly challenge common comments about young people or families that are harmful (Pollock, 2017). Leaders in a school we studied redirected dialogue towards students' strengths rather than weaknesses and oriented the conversation around improving practice. It is critical that leaders frame conversations carefully and provide the opportunity for educators to bring multiple sources to bear on conversations about student achievement.

Tracking versus flexible grouping to promote growth

When we consider the ways that data use can open or close doors for students, we must examine the role of data in tracking and ability grouping. Thoughtful use of data can lead to flexible grouping and individualised learning plans that promote student achievement. Misinformed use of data can lead to increases in long-term ability grouping, which has been shown to widen the achievement gap between white students and students of colour (Oakes, 2005).

In recent years, educators have turned to benchmark assessments as a tracking placement tool, which is not their intended purpose. Instead, these assessments are designed to provide educators with interim feedback on student progress relative to curriculum standards. This has been documented in numerous studies (Davidson & Frohbieter, 2011; Heppen et al., 2012; Shepard, Davidson, & Bowman, 2011). In addition to misusing the assessments for unintended purposes, the sole use of benchmark assessments to determine tracking places too much emphasis on one form of data to make such a high-stakes decision.

Whereas the use of data for tracking purposes limits student opportunities, the use of data for flexible grouping of students can expand opportunities. As part of their comprehensive data-analysis process, educators at one elementary school we studied created language arts and spelling groups that shifted three times a year. In another school, teachers used formative assessment data daily to differentiate instruction and to place students in flexible learning groups to address particular skill areas. Closely examining student work or assessments led some teachers to move beyond categorisations of generalised ability and consequent instructional strategies, to focusing on targeting

students' skill levels in particular areas such as fluency, comprehension, or mathematical reasoning. This allowed for a more expansive, nuanced view of what students knew and were able to do.

Conclusion

In this paper, we set out to examine the relationship between data use and equity and to consider how best to mobilise research knowledge to uncover how data use can open or close doors for students. Within each of the dimensions we described, educators and policymakers are faced with a set of critical choices that can profoundly affect students' educational experiences.

One set of choices results in a school in which an accountability framework dominates teacher conversations and focuses instructional interventions on students for whom schools will get the most 'bang for the buck' on standardised measures. In this school, data are used, often unwittingly, to reinforce hierarchies among students and track them in ways that reproduce social inequalities. Educators proclaim that their improvement efforts are driven by data, but positive changes do not result, except for perhaps short-term gains in test scores.

Another set of choices guided by goals of equity and continuous improvement results in a school in which educators draw upon a wide range of data to gear instruction around students' needs. Educators share responsibility for providing an instructional program that allows all students to thrive. Data are used to actively challenge stereotypes, to examine student growth as well as weaknesses, and to differentiate instruction in dynamic ways. However, these features do not appear just with data use alone; equity needs to be an explicit goal of school improvement and data use efforts.

Just as equity needs to be an explicit goal in data use practices, research on data use also needs an equity lens. One reason why most research on data use has not uncovered equity issues is because researchers did not go looking for them. Educational improvement and policy lenses tend to prioritise organisational changes associated with reforms. Putting equity at the centre of studies of data use—and indeed all educational reforms—may involve the use of different research questions, methodologies and/or theoretical frameworks. These shifts are necessary if we are to truly transform education for all students.

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Karmel Oration: Leading schools and school systems in times of change—A paradox and a quest

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Abstract

The 'paradox' in this title refers to a set of contradictions that sit at the heart of education policy in many school systems. Policymakers in these systems want things that, if not inherently at odds, are nevertheless in tension—such as a tightly defined set of national standards *and* a broad and balanced curriculum; academic stretch for the most able *and* a closing of the gap between high and low performers; choice and diversity *and* equity; and so on.

The 'quest' is for leaders and leadership to resolve these tensions in practice. School autonomy policies have placed huge power in the hands of, and pressure on the shoulders of, leaders in high-autonomy–high-accountability quasi-market systems. Research has often focused on the values, characteristics and behaviours of effective leaders and leadership teams, but there can also be a darker, toxic side to leadership, and it is clear that leadership agency is constrained by the influence of hierarchy and markets.

Meanwhile, policymakers have become increasingly concerned with how to foster innovation as they wrestle with the question of how education might adapt to the needs of an increasingly complex, globalised world. Critics argue that change has been constrained by narrowly defined criteria for success and an instrumental focus on improvement, leading to a crisis of legitimacy. What seems clear is that change will require new approaches that somehow unlock leadership agency while supporting the development of new forms of leadership that can—and consistently do—resolve the paradox.

This lecture will focus on England's efforts to create a 'self-improving school system', which can be seen as one response to these issues. It will draw on the findings from a three-year study of the changes in England to draw out the wider implications for research and policy on leadership and school system reform.

Overview

Policymakers around the world are more aware than ever of how their school systems are performing, thanks to international benchmarking studies such as PISA, TIMSS and PIRLS, and it seems clear that the pace and scale of reforms is increasing (Mullis, Martin, & Loveless, 2016). Some studies have sought to distil the secrets of high-performing systems (Mourshed, Chijioke, & Barber, 2010; Jensen, Hunter, Sonnemann, & Burns, 2012), although such 'policy borrowing' is not without its critics (Coffield, 2012).

The evidence that school autonomy coupled with high-quality leadership and appropriate accountability correlates with improvements in school quality and student outcomes is now widely accepted (Pont, Nusche, & Moorman, 2008; Hanushek, Link, & Woessmann, 2012; OECD, 2015). Consequently, most research on leadership has tended to focus on the nature of effective leadership and its impact on student outcomes at school level (Leithwood, Day, Sammons, Harris, & Hopkins, 2006; Robinson, Hohepa, & Lloyd, 2009; Day et al., 2011).

In the context of this policy orthodoxy, this paper argues that research on school leadership should focus more on the relationship between school-level leadership and system governance. This is not to deny the value of studies that focus on issues of leadership and learning within single schools, but these should be complemented by wider 'landscape reviews'—interdisciplinary, mixed-method and, where possible, comparative studies that seek to understand the consequences of school system reform policies for leaders, leadership, networks, school quality and equity.

Landscape studies—such as the four conducted in England between 2002 and 2012 that are synthesised in Earley (2013) and the one described below—can inform policy and practice by indicating the ways in which leaders respond to and enact policy-driven change across different contexts. But, equally importantly, they can also reveal the perverse and unintended consequences of policy and the implications for leadership. Greany and Earley (2017) referred to these issues in terms of a paradox and a quest:

> The *paradox* is actually a set of contradictions that sit at the heart of education policy in many school systems. Policy makers in these systems want things that, if not inherently at odds, are nevertheless in tension—freedom *and* control; tightly defined national standards *and* a broad and balanced curriculum; choice and diversity *and* equity; academic stretch for the most able children and a closing of the gap between high and low performers … School leaders … are expected to resolve (these) policy paradoxes … The *quest* is thus to understand how leaders can

lead in autonomous and accountable systems in ways which recognise and resolve, or at least mitigate, the tensions that they face. (pp. 1–4)

One challenge in researching these issues, they argued, is that it can be hard to distinguish between 'toxic' and 'successful' leadership. On the surface, both types of leader want to secure the highest possible standards of progress and attainment for children—but whereas the toxic leader (Craig, 2017) may be driven to narrow the curriculum and focus on exam scores because they are fearful of the consequences of failure, the successful leader works within an ethical and intellectual framework that grounds their actions in a deeper moral purpose and seeks to create a healthy learning environment for every child and adult in their school.

In reality, few leaders can be characterised so simplistically. Leadership decision-making and action appears to be influenced by personal experience, values and beliefs in combination with a complex range of factors, including policy, accountability and funding requirements and incentives; school self-evaluation; an understanding of the school's particular context, including socio-economic factors, staff capacity and motivation, and the behaviour of other local schools; external research evidence; and parental expectations and student voice. Nevertheless, as the research outlined below highlights, policy and accountability pressures can quickly come to dominate this list and, in the process, challenge the values and motivation of leaders.

The self-improving school system in England

This paper draws on a three-year study (2014–17) led by the author into the development of the school system in England (Greany & Higham, in press). By way of background, this section briefly summarises key developments in England in recent years.

The Conservative-led governments in power in England since 2010 have implemented a range of radical and widespread education reforms, affecting almost every aspect of school life (Earley & Greany, 2017; Lupton & Thomson, 2015). A key tenet of these reforms has been to develop a 'self-improving school system', on the basis that 'the attempt to secure automatic compliance with central government initiatives reduces the capacity of the school system to improve itself' (Department for Education, 2010, p. 13).

Greany (2014, 2015) suggested that there are four principles underpinning the government's approach to the self-improving school system:

- Teachers and schools are responsible for their own improvement.

- Teachers and schools learn from each other and from research so that effective practice spreads.
- The best schools and leaders extend their reach across other schools so that all schools improve.
- Government support and intervention is minimised.

Structural change has been a major feature of the reforms, increasing school autonomy through the academies program. 'Academies' are schools that operate as companies and charities and that are funded directly by central government rather than by their local authority. Academies are not required to follow the national curriculum or employ qualified teachers. Since 2010, any high-performing school has been allowed to convert to academy status. Meanwhile, lower-performing schools can be forced to become 'sponsored academies', meaning that the school is run by another school or sponsor, usually within a multi-academy trust (MAT). Around two-thirds of all secondary schools in England are now academies, of which around 50 per cent are in a MAT. Around a fifth of all primary schools are academies, of which around 60 per cent are in a MAT.

A further innovation since 2010 has been the expansion of system leadership and school-to-school support. 'System leaders' are high-performing head teachers and schools that are designated by the government according to set criteria—becoming a national leader of education or teaching school alliance. These leaders and their schools then lead local partnerships of schools—providing initial teacher education and professional development, for example, or providing direct improvement support to struggling schools.

The corollary of these shifts has been a wholesale reshaping of England's middle tier—in which local authorities are largely hollowed out but still nominally responsible for around three in four schools, while a mixed economy of MATs and government-appointed regional schools commissioners has emerged to oversee the academies.

Research framework and design

At the highest level, the research by Greany & Higham (in press) on which this paper is based asks how school leaders are interpreting and responding to the self-improving school system agenda. In designing the study, we recognised that the policies summarised above have not been introduced on to a clean slate: they are layered onto, and interact with, historic reforms that continue to shape the school landscape. Drawing on governance and metagovernance theory (Jessop, 2011), the conceptual framework posits that the self-improving school system agenda exists within,

and impacts on, three overlapping approaches to coordinating the school system:

1. hierarchy—the formal authority exercised by the state, including through statutory policies and guidance, bureaucracies and the accountability framework
2. markets—involving incentives and (de)regulation aimed at encouraging choice, competition, contestability and commercialisation
3. networks—the (re)creation of interdependencies that support interorganisational collaboration, partnership and participation.

The project design has included:

- four detailed locality case studies (two in areas with high densities and two in areas with low densities of academies and formally designated system leaders) involving 164 interviews with staff from 47 primary and secondary schools as well as 18 system informant interviews
- a survey of almost 700 school leaders
- analysis of national Ofsted[1] school inspection results over a 10-year period
- statistical analysis of the impact of MATs.

Findings and implications

The findings from the research (Greany & Higham, in press) are rich and complex, and space here does not permit a thorough overview. However, we outline some selected findings below.

Hierarchy

England's accountability framework maintains hierarchical control over schools by the state. Indeed, accountability—via Ofsted inspections in particular—is seen by school leaders as a central driver of their behaviour. Indeed, the influence of accountability has become widely internalised by schools, imbuing school policies, language and thinking in many areas of practice. The accountability framework places tremendous pressures on leaders to secure particular types of improvement, leading many to narrow their focus to student attainment and progress in tests. Accountability also frequently provides perverse incentives to prioritise the interests of the school over the interests of particular groups of children. Many leaders reported high levels of stress and a loss of professional motivation as a result of these pressures. A minority of schools in our sample sought to consciously resist the pressures of accountability, although such resistance was only possible from a position of relative strength and was never outright.

1 Ofsted is the school inspection agency in England. It is a non-ministerial department that reports directly to parliament on school standards. Ofsted reports are published and grade each school at one of four levels—outstanding, good, requires improvement, and inadequate.

The school leaders we interviewed were engaged in a constant process of interpreting and responding to policy change, about which a majority were cynical at best. The virtual removal of local authorities has increased the need for schools to seek out information and support for policy implementation themselves, often via school networks.

Most schools have already become, or are becoming, accustomed to identifying and addressing their own needs, although some schools are better positioned to do this than others. The most common form of support for schools in this regard is their local cluster or partnership.

The designated system leaders described above are at the epicentre of change—faced with conflicting and often unreasonable demands from the central state, and with their motives sometimes questioned by their peers.

Markets

Quasi-market policies, such as parental choice of school and funding following the learner, have been in place in England since the late 1980s, creating competitive pressures on schools. Eighty-five per cent of secondary and 52 per cent of primary school respondents to the survey agreed that 'there is a clear local hierarchy of schools in my area, in terms of their status and popularity with parents'.

A school's positioning within its local status hierarchy was rarely seen to be a simple reflection of school quality. Rather, schools perceive local hierarchies to relate to a range of criteria, including school context and student composition. These factors combine over time to position a school relative to other local schools—and once gained, a positioning can be hard to change.

Most schools were working more or less overtly to protect their status or to engineer a move up the local hierarchy. Sometimes these moves were slow and unspectacular, reflecting hard work over time to build trust and support in the local community. Equally, we report examples of sharp-edged competition and 'cream-skimming' as schools sought to attract more middle-class students.

One impact of these stratification processes was that schools—and particularly school leaders—could end up with different perceptions of their locality and the children within it.

Low-status schools invariably faced challenges, including under-subscription, higher student mobility and disproportionate numbers of disadvantaged, migrant and hard-to-place children.

Networks

School-to-school networks have become more important for schools since 2010 and are continuing to evolve rapidly, partly as a result of direct encouragement and incentives from policy.

The leaders we interviewed articulated a range of benefits from partnership working, including professional learning, school improvement, giving confidence and capacity to leaders, securing efficiencies and fulfilling the moral purpose of education.

We describe a small number of networks that can be deemed both 'effective'—in that they are impacting on the quality of teaching and learning or the breadth and depth of the curriculum in member schools—and, more or less, 'inclusive'. However, we also describe common examples where networks are either underdeveloped or have fallen apart. We also give examples where network effectiveness is reliant on a degree of exclusivity—for example, where a subgroup of higher-performing schools in an area chose to work together.

We conclude by asking why some partnerships develop successfully but others do not. Where partnerships fail, the influence of accountability and markets is always significant, but other factors are at play as well. Some partnerships are overly dominated by one individual or school, with other schools chafing to escape and assert their own independence. In cases where partnerships have not formed at all, we conclude that it is because leaders do not have the appetite, skills or interpersonal relationships required to form and lead them.

Successful partnerships can benefit from a range of factors at the initiation stage, such as a rise in student numbers that reduces competitive pressure. Three aspects emerge as particularly important in shaping successful partnerships: shared attitudes and values; age and experience; and interpersonal and consensus-building skills. The most effective partnerships facilitated a rich and dense network of informal ties between schools and staff, based on high levels of trust. It was also important for partnerships to have effective structures and processes.

Conclusions and implications

The research report identifies a series of cross-cutting themes and implications from the research, some of which I will highlight in my oration. The key point I want to highlight here, though, is that as the state steps back from traditional bureaucratic control of schools, it appears to retain control by 'steering at a distance' (Hudson, 2007)—mixing combinations of hierarchy, markets and networks to achieve its goals. The implication for schools and school leaders can be a semblance of autonomy and self-governance, but in practice this is frequently experienced as a loss of support coupled with increased pressure as data is used to hold schools accountable (Ozga, 2009).

This can create tensions for front-line leaders, echoing the paradox and quest issues outlined above and in

line with findings from research on governance in wider sectors (Newman & Clarke, 2009).

I argue that, in these contexts, a narrow research focus on the 'leadership of learning' within schools is insufficient. Evidence is increasingly clear that successful school systems are aligned in terms of governance and incentives (Pritchett, 2015), but the rise of 'steering at a distance' (Hudson, 2007) and lateral school networks is arguably making such incentives more complex. One outcome can be toxic leadership at school level as leaders feel forced to place institutional self-interest above the interests of certain children. Researchers must help policymakers and practitioners to understand and address these systemic pressures productively, so that more schools can succeed and equity can be enhanced.

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Nourishing teachers' leadership for learning: Insights from practitioner research

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Abstract

This paper contends that leadership and learning are mutually supporting and reinforcing. It is only recently that attempts have been made to describe in practice the complex connections existing between the two activities by drawing on empirical evidence. To this end, this paper will depict ways in which leadership and learning are indispensable to each other in day-to-day teachers' work and the implications this symbiosis has for practice.

Firstly, the paper will consider the key foundations and principles of leadership for learning, especially as they relate to the international Carpe Vitam Leadership for Learning research project.

Secondly, the paper will discuss the features of teachers' professional learning that are likely to facilitate desirable conditions, practices and opportunities for promoting interconnections between leadership and learning in schools.

Finally, the paper will present exemplars of teachers' work at an empirical level, in which teachers' agency is enhanced when they are learners and leaders in different contexts. These exemplars are drawn from teachers' action inquiry projects designed to contribute to organisational improvement.

Collectively, the exposition will present a persuasive portrayal of teachers' agency being strengthened when teachers are both learners and leaders—in their classrooms, among their colleagues and across their communities.

Introduction

The chief argument in this paper is that leadership and learning are mutually supporting. Indeed, West-Burnham and O'Sullivan (1998) have described the relationship between leadership and learning as symbiotic because 'one is not possible without the other and the success of one is determined by the extent to which the other is available' (p. 184). Nevertheless, it is only recently that attempts have been made to describe in practice the complex connections between leadership and learning by drawing on empirical evidence.

The main aim of this paper, therefore, is to depict ways in which leadership and learning are indispensable to each other in day-to-day teachers' work and the implications this symbiosis has for practice. Accordingly, some key foundations and principles of leadership for learning are considered. The features of teachers' professional learning likely to facilitate the necessary conditions, practices and opportunities in a school for promoting interconnections between leadership and learning are then discussed. Finally, examples of teachers' work are portrayed at an empirical level to show how teachers' agency is developed when they are both learners and leaders, in various contexts.

Foundations and principles of leadership for learning

Two heuristic lenses may be used to sharpen insights into the connections between leadership and learning. First, is the 'wedding cake' model of a school's learning agendas (Knapp et al., 2003). These agendas comprise three 'tiers': organisational learning, teacher (professional) learning and student learning. Put simply, the agenda for organisational learning is primarily concerned with providing the appropriate conditions and opportunities for bringing to fruition the hidden capital of everyone associated with the school; the agenda for teacher learning is primarily concerned with building the intellectual and professional capacity of teachers in the school; and the agenda for student learning is primarily concerned with building the academic and social capacity of all the students in the school. Given this discussion's focus on teachers connecting leadership and learning, the main emphasis is placed on the teacher learning agenda. This comprises the conditions, practices and opportunities occurring within a school that encourage teachers to view themselves as powerful learners. It is important to emphasise, however, the interdependency of the three agendas. As Knapp and his colleagues (2003, p. 17) have asserted, the nature of student learning can inform teacher learning, which then can influence classroom improvement. In addition, student and teacher learning can contribute to organisational learning, and vice versa.

The second heuristic lens that may be used for revealing connections between leadership and learning comprises the five principles of leadership-for-learning practice generated from the deliberations of the international Carpe Vitam Leadership for Learning research project that was directed from the University of Cambridge.

These principles were the outcome of a rigorous and prolonged dialogue between researchers, principals, teachers and school board members across seven participant countries. Furthermore, as the principles were being developed, they were tested against practice and analysed with reference to the research literature (MacBeath, 2006).

According to Frost (2009, p. 71), the principles represent values within which leadership and learning may be embedded. Frost also asserted that a major aim of the principles is to serve as a set of 'tin openers' for continuing discourse. As such, the thinking that has taken place around the principles has evolved considerably over recent years.

The first principle of leadership for learning practice is *maintaining a focus on learning as an activity*. This is predicated on the belief that everyone is a learner, including students, teachers, principals, the school as a community and the wider education system. In its application to teachers, it is essential that they be provided with plentiful opportunities to construct meaning from interaction, discussion and professional dialogue (Harris & Muijs, 2005).

The second principle involves *creating conditions favourable to learning as an activity*. This highlights the influence of a school's culture on leadership and learning. In its relevance to the teachers' learning agenda, it is the nature of the professional relationships between the principal and the staff, as well as between teachers themselves, that will be indicative of the ways in which people within the school feel, think and act. The most indispensable components of a school's culture are deemed to be trust and openness, because they are the levers of cooperative action and social capital (Louis, 2007) and therefore lie at the heart of the processes of leadership and learning.

The third principle concerns *creating a dialogue about leadership for learning*. On this point, James (2007, p. 217) emphasised that dialogue promotes the 'collaborative, strategic and reflective thinking' found to be vital to teacher learning. As such, a continuous and rigorous dialogue around leadership for learning can enable teachers to take responsibility for their learning and thereby develop their agency.

The fourth principle relates to the *sharing of leadership*. According to Harris and Lambert (2003), the key notion engendered by shared leadership is learning together and constructing meaning and knowledge collectively

and collaboratively. In this process, the interdependence of leadership and learning activities is highlighted.

Although accountability and empowerment are often perceived to be incompatible, this is not necessarily the case, which is why the fifth principle comprises *fostering a shared sense of accountability*. Earl (2005) argued that an important distinction should be made between 'real accountability' and accounting. In this view, accountability is inseparable from 'a moral and professional responsibility to be knowledgeable and fair in teaching [and learning] and in interactions with students and their parents'. Earl also contended that real accountability 'engenders respect, trust, shared understanding and mutual support' (p. 7).

Teachers' professional learning at a theoretical level

This paper now attends to some features of teachers' professional learning that are likely to forge the necessary conditions, practices and opportunities in a school for facilitating interconnections between the leadership and learning. More specifically, it emphasises the importance of teachers engaging in reflective practice and the importance of them doing so through collaborative arrangements with colleagues.

Reflective practice

Reflective practice is a concept that has been heavily influenced by the seminal work of Argyris and Schön (1978). Of particular relevance to the commentary here is the notion of double-loop learning. In this approach to learning, people become observers of themselves—a form of critical scrutiny that changes the way in which decisions are made and deepens understanding of previously unchallenged assumptions. This can lead to the construction of new 'theories-in-action', defined by Argyris and Schön (1978) as the understandings and beliefs that guide a person's behaviour. The process of double-loop learning thus enables teachers to deliberately and systematically make explicit the taken-for-granted assumptions they bring to situations and subject them to scrutiny, a process which is at the core of reflective practice.

This approach to reflection on practice is closely aligned to the principles of action inquiry, which is concerned with inquiry into action in a field of practice and entails the deliberate use of any kind of a 'plan, act, describe, review' cycle. This cycle of inquiry has the potential to enable teachers to make informed judgements about their own practice and initiate improvements. Although action inquiry understood in this way can occur individually, its potency tends to be strengthened when others are involved.

Collaboration

Little (1990) has observed that joint work such as mentoring, action research, peer coaching, planning, and mutual observation and feedback provides powerful levers of interdependence, collective commitment, shared responsibility, review and critique. Collaboration, therefore, is a natural development of reflective dialogue (Louis & Leithwood, 1998). For collaboration to promote effective professional growth, it must be based on mutual inquiry and sharing in order to lay the foundations of a professional learning community. It is when teachers engage in dialogue with each other as a matter of course that meaningful reflection and teacher learning occur (Harris & Muijs, 2005).

In addition to the advantages that may be derived from collaborative activities within a school, similar benefits may also ensue from interschool collaboration. Atkinson, Springate, Johnson and Halsey (2007), for example, argued that such collaboration offers opportunities for teachers to exchange ideas and good practice as well as expanded avenues for professional learning—which, in turn, refines teaching expertise. Furthermore, staff have outlets to voice and share concerns with a larger number of colleagues. Within an enriched support network, it follows that gains may be made in staff confidence, motivation and morale.

The sense of empowerment that can be generated from collaboration suggests that teachers will benefit not just from engaging with a community of learners but also from a community of leaders (Mitchell & Sackney, 2000). In this way, teacher learning that is collegial, job-embedded and evidence-based (Ball & Cohen, 1999) has an interdependent connection with leadership.

Teacher learning at an empirical level

The University of Western Australia offers a master-level unit of study specifically devoted to leadership of learning. Learning, leadership and their interrelation are the main considerations of teachers' projects conducted under the aegis of this unit. The projects adopt an action inquiry perspective and provide an opportunity for participants to develop in-depth knowledge of an issue or phenomenon related to education leadership that is germane to the context of the individual's workplace. The unit's fundamental purpose is to contribute to organisational improvement. In keeping with Stenhouse's (1975) original understanding of practitioner research, the projects are envisaged to be an extension of participants' teaching work and are not, therefore, an imitation of academic research.

The process according to which projects are conducted is governed by the foundations and principles underpinning leadership for learning in several respects, particularly in connection with the teachers' learning

agenda already mentioned. The following discussion identifies some salient aspects of a number of these projects that serve to illustrate the five principles of leadership for learning practice. For this purpose, the voices of the participants have been elicited because they have their own validity and assertiveness in conveying the efficacy of the projects undertaken.

The first principle of leadership for learning, that there should be a focus on learning as an activity, is evident insofar as many of the projects have been primarily concerned with building the academic and social capacity of students in the participant's school. In doing so, the projects also reflect the recognition that the effectiveness of student learning that occurs in the classroom is inextricably linked to the effectiveness of teacher learning that occurs outside the classroom. For example, in one case a new mentoring program was implemented aiming to enhance teacher leadership and enrich the initial experience of new staff to the school; this, in turn, was intended to bolster student achievement. As such, teacher learning and student learning were both integral to the project in question.

Other projects have been more directly focused on student learning. In another case, a transition program for students entering high school as boarders was instigated after a gap was discerned between day students and boarders in Years 7 and 8 in their mathematical knowledge and understanding. Consequently, an online program was established to assess students' current level of mathematical ability and monitor their progress as they completed tasks. Although project focused on student learning, the teacher involved commented that conducting this work had demonstrated that it is not necessary for a teacher to hold a designated leadership position within a school in order to exert an influence on change. Similarly, another participant observed that 'stepping out as a leader among my colleagues beyond what I perceived to be my given role was a bit nerve-racking, but also, in the main, encouraging'.

From this perspective, many of the projects promoted the conditions for learning that help teachers to build their intellectual and professional capacity, an observation leading to the second principle of leadership for learning—namely, creating conditions favourable to learning as an activity. Particularly pertinent to this principle was an action research project undertaken to understand the efficacy of a school's tutoring centre. The ensuing report functioned as a catalyst for a broad discussion throughout the school about what was considered to be an ideal facility of this kind. The breadth of the discussion ensured that the designated committee was suitably briefed for designing a new centre, which was intended to be a prominent feature of the school.

This project illustrates two key aspects of the second principle. First, it highlights that a school's culture should enable opportunities for teachers to construct meaning from interaction, discussion and professional dialogue. Secondly, the project draws attention to the reality that in order to foster leadership-for-learning practices in schools, there needs to be a physical as well as an intellectual investment. This means it is important to recognise that space can and does have a significant impact on learning (Chism, 2006; Uline & Tschannen-Moran, 2008).

A further project related to creating conditions favourable for learning investigated the potential benefits of conducting peer observations in classrooms. This was accomplished by encouraging more reflective practice, facilitating professional dialogue between colleagues and fostering collaboration for enriching the school's professional learning culture. The participant in question commented that as the peer observations progressed, teachers began to view the process as reciprocal and to realise that in conducting peer observations, they were continuously learning. This, in turn, promoted a learning culture and contributed to whole-school improvement. Furthermore, peer observations became a trial for teacher leadership, as accomplished teachers were afforded opportunities to facilitate learning among their colleagues.

The desirability of teachers engaging in interaction, discussion and professional dialogue is also relevant to the third principle of leadership for learning: creating a dialogue about leadership for learning. The process of undertaking the projects in itself facilitates this principle by enabling participants to engage in such high-level collaborative activities as peer interaction, support and feedback. These activities, occurring as the projects evolve in the participants' respective schools and throughout the progress of the unit, are likely to promote a deepening of knowledge and expertise as information and insights are shared; common issues are debated; innovative ideas are tested; and tacit understandings are developed. Indicatively, one participant commented on the value derived from focusing on a particular aspect of school life; conducting research on it rather than relying on personal feelings or experience; and experimenting with different types of communication with the staff as a whole.

In a similar vein, dialogue engenders a free flow of meaning through the group that allows it to discover insights not attainable individually (Voogt, Lagerweij, & Louis, 1998). More specifically, Morrison (2002) describes dialogue as 'suspending judgement, identifying assumptions, listening, enquiring and reflection' (p. 140). These continuous processes can clarify the principles guiding leadership for learning within a school's context as well as revealing what leadership for learning looks like in practice. Accordingly,

the projects reported here tend to entail a highly reflective process that goes beyond just 'thinking about' something uncritically. Instead, a depth of deliberation is often demonstrated, enabling a new stage to be reached in participants' orientations towards practice. An example of this level of dialogue was apparent in the mentoring project already mentioned when the participant in question referred to the ways in which the mentors may themselves benefit from engaging in dialogue with their protégés. Specifically, the participant observed that listening to colleagues and providing them with feedback had enabled mentors in the project to reassess the efficacy of their own classroom strategies. There was also a discernible development in mentors' sense of self-esteem because of the satisfaction they tended to derive from helping less experienced colleagues. In these ways, the process of mentoring can assist mentors to reignite their passion for teaching and expand their own teaching repertoire by encouraging them to engage with younger, more recently qualified colleagues and encounter current pedagogical trends.

The fourth principle of leadership for learning—namely, sharing leadership—is embedded in the teachers' work reported here as a whole. Perhaps this is because the school environments in which this work occurred tended to take an 'invitational' approach to leadership (Stoll & Fink, 1996), meaning that a focus on leadership was encouraged and the worth of participants' work was communicated.

This notion of 'invitational leadership' (Stoll & Fink, 1996) was evident, for example, in the project that sought to close the gap in mathematical ability between day students and boarders in Years 7 and 8. The participant was strongly encouraged by the school in this undertaking, and the program that eventuated from the project was continued after its initial trial. In the wake of the participant's departure from the school, another staff member was given responsibility for maintaining the program in the longer term. Similarly, the mentoring project has established a program entering its fourth year. In another, potentially contentious project examining how a school may accommodate as effectively as possible the needs of students of diverse sexuality and gender, the participant was evidently encouraged and supported in her endeavours by the senior leadership at the school. As a result, she was placed in charge of a steering committee to further policy and practice in the area, and she also received funding to engage in relevant professional learning in New York. Understandably, she claims that such experiences have made her feel 'empowered, valued, and more confident'. Likewise, for another participant whose project sought to enhance opportunities for teachers to learn and lead in the school, her involvement made her feel better equipped to embrace

leadership herself and excited about collaborating with and supporting her colleagues.

Such institutional endorsements of projects reflect situations in which the teachers involved benefit from positive relationships with their schools' administrative teams within an organisational culture that is characterised by support, recognition, respect, trust and care. These modes of behaviour are likely to be buttressed by 'collegial communication', which is horizontal in nature and enables authority and expertise to be shared across the staff (Butt & Retallick, 2002). Accordingly, the appropriate enabling conditions and expectations are present to make the sharing of leadership integral to the process (Campbell, Lieberman, & Yashkina, 2015).

Processes that support the facilitation and monitoring of change in the school enable people to develop confidence, openness and take risks in their engagement with accountability practices (Stoll & Fink, 1996)—an observation that resonates with the fifth principle of leadership for learning, which is fostering a shared sense of accountability. Earl's (2005) understanding of accountability as entailing 'the conversation about what information means and how it fits with everything we know and about how to use it to make positive changes' (p. 7) is relevant to the action inquiry orientation of the teachers' projects. For example, the legitimacy of the project examining the mathematical ability of boarders entering the school was enhanced by a comparative analysis of mathematics test results achieved by boarders and day students over several years. Likewise, the renewal of the learning centre in another school was informed by a systematic collection of empirical data to gain insights into the current use of the facility. This data was complemented by an interrogation of the literature to identify ideal tutoring centre design and practices. Similarly, the mentoring project was strengthened by research into arrangements practised in comparable schools and in other sectors of industry, supplemented by interviews with staff. This approach highlighted the gaps between what is considered to be best practice in mentoring and the school's existing approaches.

In accordance with the principle of fostering a shared sense of accountability, teachers' inclination to collect, interpret and use data effectively develops their capacity to contribute to school policy and enhance the organisation's intelligence of accountability. Indeed, one of the participants commented specifically on how emboldening it was for her to communicate clearly and purposefully with peers with the conviction of evidence behind her.

Concluding comments

Bascia and Hargreaves (2000, p. 7) have referred to the imperative of adopting an 'intellectual conception' of teaching that emphasises the need for professional judgement to be informed by knowledge, expertise, reflection, research and continuous learning. This conception requires that professional learning becomes integral to the job itself. The potential benefits of embracing such an approach to professional learning are significant. By engaging in critical reflection, teachers challenge tacit assumptions about practice, and this can lead to a reframing of theories of action through deliberation and heightened metacognitive awareness. Certainly, the portrayal of teachers' work presented here would indicate that teachers' agency is fortified when they are provided with the opportunities and conditions to be learners and leaders, not just in their classrooms but also among their colleagues and across their communities. McLaughlin (2004, p. 17) has distilled the effects that can ensue when teachers investigate their own practice with a view to improvement: a renewed feeling of pride and excitement about teaching; a revitalised sense of being a teacher; a reminder to teachers of their intellectual capability and the importance of that capability to their professional lives; a recognition that the work they do in school matters; the reconnection by many teachers to their colleagues and to their initial commitment to teach; the development of an expanded sense of what teachers can and ought to do; and a restored sense of professionalism and power in the sense of having a voice. It is fair to say that all these effects were reinforced by the outcomes of the teachers' work reported here.

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Enhancing instructional leadership: Lessons from the NSW Literacy and Numeracy Action Plan

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Dr Tim Wyatt began his career as a primary school teacher in 1979. Since then he has held a range of positions within the New South Wales Department of Education, with roles such as Principal Education Officer—Special Programs and Chief Education Officer—School Improvement. He has held senior leadership roles in several government departments in New South Wales and has led and participated in government evaluation projects both nationally and internationally. He has worked with a range of international organisations, including the OECD, the United States Department of Education and the United States National Academy of Public Administration, particularly in the development of performance measurement and reporting methodologies at local, systemic, national and cross-national levels.

Tim has been a partner in Erebus International, an independent consultancy firm, since 1999. In that role, he has contributed to over 200 major evaluation projects for a wide range of government and non-government agencies. Tim's experience in central government agencies provides a unique appreciation of the policy context of evaluation findings.

As an active contributor to the education research literature, Tim's current interests include the role of school systems in large-scale school improvement initiatives, early years literacy and numeracy learning, and 21st-century learning.

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1 This paper draws on an earlier evaluation report for which Dr Bob Carbines, partner in Erebus International, was also a principal author.

Abstract

Over the past decade, schools, school systems and governments at all levels have invested heavily in enhancing the quality of school leadership. The Australian Government-funded National Partnerships (2012–14) identified principal leadership as one of its explicit goals. More recently, the emphasis of leadership development has been on enhancing instructional leadership.

This paper describes the approach to enhancing instructional leadership adopted by the New South Wales government school sector as part of the NSW Literacy and Numeracy Action Plan (2012–16). The three school sectors in New South Wales each adopted different models for their implementation of the Action Plan according to their differing contexts. The Action Plan's implementation in the government sector (where it was known as Early Action for Success) had as its centrepiece the appointment of dedicated instructional leaders to the 310 most disadvantaged schools in the state. The role of the instructional leaders was to build the capacity of teachers to deliver high-quality pedagogy through focused in-school professional learning. Drawing on the findings of a five-year evaluation of the Action Plan, this paper describes how the instructional leaders undertook their roles; the factors that influenced the success of the role; and instructional leaders' impact to date on schools, teachers and student learning.

Introduction

Over the past decade, schools, school systems and governments at all levels have invested heavily in enhancing the quality of school leadership. The Australian Government-funded National Partnerships (2012–14), for example, identified principal leadership as one of its explicit goals (Erebus International, 2012). More recently, the emphasis of leadership development has been on enhancing instructional leadership, drawing on a range of research by authors including Dempster et al. (2012), Timperley (2011), Robinson (2007) and Sharratt and Fullan (2012).

The evidence that the quality of instructional leadership in a school can make a significant difference to student learning outcomes is compelling. Principals have the second-biggest in-school impact on student outcomes, after classroom teaching. An extensive review of the evidence (Centre for Educational Statistics and Evaluation, 2015) concluded that leadership explains about one-quarter of the total difference in student outcomes explained by all school-level variables (once student intake and background factors are controlled), whereas classroom factors explain around one-third.

Interest in instructional leadership as an area of academic research has its roots in the early school effectiveness literature (e.g. Edmonds, 1979). This research, and much that followed, focused on the role of the principal in providing strong direction and a vision for the school as one of the apparent correlates of effective schools. This focus, which was criticised in later years for its narrowness of perspective, was subsequently redefined to encompass a broader view of leadership as a distributed activity and with greater emphasis on leadership of learning than on school management for its own sake (e.g. Spillane, Halverson, & Diamond, 2004; Hallinger, 2009).

The definition of 'instructional leadership' remains contested. Several authors have proposed frameworks of activities or strategies that characterise instructional leadership. Hattie (2015), for example, describes the work of instructional leaders as follows:

> Instructional leaders focus more on students. They look to the teachers' and the school's impact on student learning and instructional issues. They conduct classroom observations, ensure professional development that enhances student learning, communicate high expectations and ensure that the school environment is conductive to learning.

This paper describes an approach to enhancing instructional leadership adopted as part of the NSW Literacy and Numeracy Action Plan (2012–16) by the government school sector, where it was known as Early Action for Success. The centrepiece of the Early Action for Success was the appointment of dedicated instructional leaders to the 310 most socio-educationally disadvantaged schools in the state. The role of the instructional leaders was to build the capacity of teachers to deliver high-quality pedagogy through focused in-school professional learning. Drawing on the findings of a five-year evaluation of the Action Plan (Erebus International, 2017), this paper describes how instructional leaders have undertaken their roles and the factors that have influenced their success.

The Action Plan

Through the Action Plan, the New South Wales Government progressively allocated $261 million to meet the needs of some 41 392 Foundation to Year 2 (F–2)

students in 448 targeted schools in 2012–16. Targeted schools were provided resourcing to:

- support the explicit assessment of the learning needs of students, especially on entry to Foundation
- provide classroom-based professional development for teachers in personalised learning and diagnostic assessment
- adopt the use of a three-tiered response to intervention for those children who need special attention
- focus on whole-school instructional leadership, including the appointment of instructional leaders for literacy and numeracy within the government school system and equivalent positions in the Catholic school sector.

The role of instructional leaders in Early Action for Success

Instructional leaders were generally appointed at deputy principal level and were accorded senior leadership status in their new schools. However, they were usually relieved from normal operational responsibilities to focus exclusively on developing the quality of teaching and learning in F–2 literacy and numeracy.

Most of the instructional leaders (85% in 2016) were appointed from outside their current schools, with the intention that they would bring fresh eyes to analysis of school performance and challenge current practices from an objective point of view. While this arrangement had some advantages, it also had implications for the pace of change possible and the kinds of skills required by the new instructional leaders. For example, it took considerable time for the appointees to achieve acceptance and be perceived as credible in their new school settings (particularly in the early stages of the initiative).

The predominant form of employment of instructional leaders in government schools in 2016 was appointment to a single school. Over the course of the Action Plan (2012–16), a variety of different arrangements were put in place—some for pragmatic reasons, such as the need to accommodate small and geographically isolated schools. Most of the options explored in during the initial stages of the Action Plan had been abandoned by 2016 and were not preferred by principals. Over time, Early Action for Success has developed greater consistency of implementation across schools.

While all instructional leaders had broad responsibility for building F–2 teachers' competence and confidence in teaching literacy and numeracy, their specific roles and responsibilities varied somewhat from school to

school depending on individual school circumstances, and also varied over time as priorities changed and emerging needs were identified.

Instructional leaders played a very hands-on role in providing professional learning within their schools on a group and individual teacher basis; leading discussions about student achievement and implications for teaching and planning practices; and coaching and mentoring school staff. The development of data-gathering, recording, analysis and reporting systems was also a key task, particularly in the early stages of schools' participation in the Action Plan. A typical day for an instructional leader might see them engaging in a variety of tasks, including:

- observing a teacher's lesson and providing feedback
- modelling a particular teaching strategy in a classroom
- observing a teacher working with a small group of students on a diagnostic assessment task and making a judgement about the skills and understanding demonstrated (rated against the cluster levels specified in the New South Wales Department of Education's literacy and numeracy continuums for Foundation to Year 10)
- working with a group of teachers on a year level or stage basis to analyse progress made on a cohort basis, and to identify students at risk along with the appropriate tier level of intervention they may need
- working with a group of teachers to evaluate the success of their teaching programs or specific intervention strategies at a group and individual student level, and helping teachers plan for the next period of teaching
- providing professional learning for whole-school staff on topics of general relevance or specific need in relation to literacy and numeracy teaching and learning, such as how to structure a literacy block and how to engage students in ownership of their learning.

While flexibility of approach was important to accommodate emerging school needs, most instructional leaders developed structures and routines to ensure that they could impact on all classrooms on a regular and timely basis. For example, most adopted or developed templates and pro formas to record their discussions with teachers, actions required, follow-up required and goals to be achieved by the next meeting. This level of documentation was demanding and sometimes confronting for teachers, but it was essential in underscoring the seriousness of purpose of the exercise and the high expectations for improvement in student outcomes. Moreover, it reinforced that this level of scrutiny of practice and accountability for outcomes would not be an add-on to normal practice but rather business as usual from now on.

Meeting the needs of low-performing students

The Action Plan recognised that improving student learning was dependent on the quality of teaching students received, which in turn depended on the teacher's capacity to consistently deliver high-quality lessons targeted at students' individual learning needs. Building teachers' capacity was, therefore, a fundamental focus of the Action Plan. Research conducted by the authors of this paper into educators' perceptions about the outcomes of Early Action for Success revealed that the specific aspects of their role that instructional leaders believed to have contributed to enhanced literacy and numeracy outcomes in their school include establishing effective processes for identifying student needs and for consistent data collection; establishing high expectations; and providing in-class professional learning for teachers. These aspects all figured highly in instructional leaders' perceptions of how their roles had contributed to improved teaching and learning.

Importantly, instructional leaders have been pivotal in facilitating a substantial shift in the locus of delivery of professional learning. In contrast to earlier models of professional development, which consisted mostly of one-off in-service programs selected by individual teachers on the basis of their own interests and conducted away from the school, the predominant model in Action Plan schools by 2016 had shifted to one in which the vast majority of professional learning undertaken in targeted schools related directly to priorities identified within an overall school plan with the aim of directly equipping teachers to address the immediate learning needs of students. In other

words, the most frequent form of professional learning now occurring in the targeted schools is provided by instructional leaders 'at the teacher's elbow'—that is, at the point of need, in the teacher's classroom, and in a naturalistic and interactive rather than didactic manner.

These learning needs have been identified through the enhanced use of diagnostic assessment and student evidence samples as the basis of informed decision-making about teaching and student learning—a further important area developed explicitly as part of the instructional leaders' work. The process by which these needs are identified and, in turn, become the focus of teacher professional learning may be one of the most profound legacies of the Action Plan.

Teaching and learning practices

Table 1 summarises the impact of instructional leaders on a range of school practices in 2016. Instructional leaders believed they had achieved substantial change in the ways in which teachers use student assessment data, not only in terms of the frequency, accuracy and relevance of teachers' assessment practices but also in the ways that the assessment data was used. In addition, instructional leaders reported that assessment practices had become more consistent across classes and year levels, and teachers had become more collaborative in analysing the data as well as more sophisticated in their understanding of the factors contributing to student performance levels and the implications for subsequent teaching practice. Similarly, principals in the vast majority of targeted schools believed that the appointment of instructional leaders had been effective in building teacher capacity; challenging existing teachers' pedagogy; and facilitating

Table 1 Instructional leaders' beliefs about the impact of their activities on their schools (2016)

Predictor	Percentage of responses
Increased focus on classroom based instructional techniques	83
Built a stronger culture of evidence based decision-making	83
Increased emphasis on building teacher capacity	86
Greater emphasis on assessment of student learning for quality teaching	83
Greater consistency of teaching within Stage levels	70
Use of data for tailoring learning experiences for individual students	86
Use of data for tailoring learning experiences for whole class programming and planning	82
Engagement of parents in the learning process	14
Built a more collaborative approach to decision-making	65

staff to make the transition towards evidence-based decision-making in their planning and practice.

The work of the instructional leaders also facilitated:

- greater uptake of the concepts of differentiated teaching and personalised learning
- a more explicit approach to teaching literacy and numeracy
- more frequent opportunities for students to practise key concepts or skills and to receive direct feedback on their progress towards the incremental achievement of their goals, which impacted positively on student engagement during learning
- more specific articulation of the learning intention of a particular lesson or series of lessons, ensuring that students understood the criteria by which they could measure their mastery of the key concepts or skills involved
- stronger emphasis on scaffolding learning so that students better understood the purpose of their learning and the specific reasons why they were undertaking particular activities.

The observations of principals reflected their belief that the Action Plan had contributed to growth in students' engagement in learning, enjoyment of learning and positive attitudes towards literacy and numeracy.

In participating government schools, the percentage of students at or above the expected end-of-year literacy continuum standard had increased in reading by 24 per cent at Foundation level, 27 per cent at Year 1 level and 20 per cent at Year 2 level between 2013 and 2016. In numeracy, the percentage of students at or above the expected end-of-year standard had increased by 14 per cent at Foundation level, 15 per cent at Year 1 level and 16 per cent at Year 2 level.

Lessons to be learned from the Action Plan

The Action Plan experience demonstrated that the appointment of a highly experienced teacher as an instructional leader can have a positive impact on the quality of teaching and learning in early years classrooms, and indeed on the broader culture of teaching and learning in the school as a whole. A number of lessons can be learnt from this experience.

First, success depended on the capacity of the instructional leader to form a positive working relationship with the principal and other school leaders. School systems have a critical role in preparing principals and school staff to take advantage of the appointment of an instructional leader through the provision of clear guidelines, the establishment of strong

expectations and the close monitoring of progress in each participating school.

The attitude of the instructional leader is also paramount. Instructional leaders were more successful when they presented themselves not as an expert who had come to fix the school but as a resource to facilitate change. This same attitude also needed to carry through to ongoing interactions with teachers, in that success was more likely when instructional leaders adopted a style of interaction in which they did not tell teachers what to do but rather posed the questions, 'What do you think needs to be improved?' and 'How might we do this?' Approaches to building teacher capacity that are based on empowerment and recognition of teachers' professionalism were not only more accepted and respected by teachers but also more likely to help embed a sustainable culture of reflective practice.

The focus on data about student performance made possible through the adoption of a common measurement framework (the literacy and numeracy continuums), the emphasis on personalised learning and differentiated teaching and the adoption of a tiered approach to intervention were all essential ingredients in the success of the Action Plan. The instructional leaders provided the 'glue' that helped to integrate each of these elements by supplying the foundational knowledge and the ongoing structures and processes through which the Actions Plan was implemented. While the day-to-day activities of individual instructional leaders were determined by the unique needs and context of their school (or schools), the requirements imposed by the Action Plan priorities and the accountability required by the five-weekly reporting of student outcomes and scrutiny of progress by state office staff ensured a high degree of commonality of practice across the schools involved.

An evaluation of the Action Plan by Erebus International (2017) found abundant evidence that the instructional leaders had achieved substantial success not only in changing the culture of the schools targeted but also in changing teachers' understanding of what it means to be an effective teacher. The 'relentless focus on learning'—a term heard frequently in participating schools—promoted by the instructional leaders through formal and informal meetings with teachers, classroom observations and professional learning was credited with greatly increasing the quantity and quality of professional dialogue between teachers; increasing genuinely collegial and collaborative planning as well as sense of collective responsibility for student learning; and providing greater transparency of teaching and decision-making.

As a large-scale reform strategy, the appointment of instructional leaders has proved to be a very cost-

effective approach. The cost of employing instructional leaders, even at deputy principal level, is only marginally more expensive than, say, employing a reading recovery teacher—yet their reach in terms of the number of students impacted and the scope of change facilitated is much greater than that achieved by teachers tasked with implementing a particular program or intervention. The cost of the systemic administration, professional development and coordination of instructional leaders is similarly small compared to the overall cost of the initiative.

Conclusion

The NSW Literacy and Numeracy Action Plan, including the appointment of instructional leaders, was always seen as a long-term strategy for school improvement rather than a quick fix, but also as an integrated means for the simultaneous adoption of a range of practices identified in the literature as contributing to improved student outcomes that would have been difficult to achieve otherwise. From the results thus far in terms of improvement of F–2 students' outcomes as well as the feedback from participants, it can be safely concluded that the experiment was worthwhile. The Action Plan experience therefore provides a useful model for school improvement that could be considered for application elsewhere.

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Courageous and coherent leadership required for excellent and equitable outcomes

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Abstract

The paper illustrates the complexity of leadership work, using data on the varying perspectives of middle and senior leaders about their own goals; the seriousness of the problems that they face in reaching those goals; and the perceived effectiveness of the senior leadership team.

The findings from these studies indicate that the basic leadership skills of problem analysis, focused goal-setting and close monitoring of progress towards goals are lacking in many leadership teams in secondary schools. These findings highlight the importance of a team of middle and senior leaders being aligned in their goal pursuit, being active problem-solvers and being prepared to take some calculated risks to gain improvements.

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1   M. Broadwith, A. Wilson and A. Hynds worked on research for and reviewed iterations of this paper.

Introduction

The New Zealand Government had, until recently, a 'Better Public Services' target of 85 per cent of 18-year-old school leavers attaining the qualification of NCEA (National Certificate of Educational Achievement) Level 2. Improving outcomes for Māori and Pasifika was central to that target. Recent PISA data (May, Flockton, & Kirkham, 2016), however, shows that about a third of Māori and Pasifika are not achieving at acceptable standards and that this has changed little over time. New Zealand Ministry of Education data tells a slightly different story. Although New Zealand is not yet attaining equitable results for Māori and Pasifika students, this data indicates a slow but steady improvement over time (Education Counts, 2017). We will return to this apparent incongruity later.

The setting of a target is a practice soundly based in goal theory, which suggests that a few clear and challenging targets against which progress is monitored help to generate the extra effort needed to achieve priorities (Locke & Latham, 1990). In this regard, the government has done well to just set one memorable target. But the drive for the 85 per cent mark is, of course, arbitrary. This can be a tough target for schools in low socio-economic communities, where students may suffer from poor levels of prior achievement and have higher than average levels of absence or transience. Despite this, principals appear to have responded with energy and commitment in striving for that 85 per cent benchmark. Many have put a great deal of effort into designing curriculums that meet students' interests and needs.

NCEA context

Before going further, some explanation of NCEA is required. NCEA is a standards-based, modular assessment system that offers a lot of flexibility for schools to design their own curriculums. Schools can offer traditional academic subjects, vocational subjects and non-traditional subjects such as performing arts, and students can take a mix of these.

To gain a NCEA qualification at a given level, students are assessed against a range of standards in different subjects. Each standard represents a particular skill, understanding or competency and is worth a specified number of credits that, if achieved, counts towards the 80 credits required for a national certificate at that level (New Zealand Qualifications Authority, n.d.). Some standards are internally and others externally assessed. Schools and departments can select from a pool of different standards within a subject against which they assess student success.

The problem

This flexibility of NCEA is both a strength and a weakness. It is a strength in that schools can design curriculums tailored to the perceived needs of students, which in itself can greatly assist schools to meet the target of 85 per cent, but it is a weakness in that the curriculum design and choice of standards used can also limit the opportunities for students to learn academically challenging material (Wilson, Madjar, & McNaughton, 2016). Because some standards are relatively easier or harder for a particular student or group of students to achieve, school leaders can select standards that measure skills or knowledge that is already well within students' existing capabilities rather than standards that are more challenging but could be achieved with focused teaching and learning. Although the latter approach may be more desirable educationally, the former is a very rational response to the 85 per cent target.

Researchers who focused on literacy practices (Wilson et al., 2016) found that in some cases, an unintended consequence of the way NCEA was designed was that Māori and Pasifika students and students in low socio-economic status (SES) schools were being denied opportunities to learn that were typically provided for other students. For example, Māori and Pasifika students were 'significantly less likely to participate in programmes that would have prepared them to achieve in the academically challenging but critically important disciplinary reading standards' (Wilson et al., 2016, p. 19). Many of these students were in classes where fewer disciplinary reading or writing standards were offered and where observations showed fewer opportunities to read challenging and extended texts. For this reason, the drive to improve statistics at the overall qualification level, although motivating, may also mean that many Māori and Pasifika students have fewer opportunities to attempt challenging academic standards and experience the teaching associated with those challenging standards.

Class organisational practices greatly enable these practices of differing expectations. Māori and Pasifika students are frequently streamed into classes that reflect teacher expectations of their NCEA result. Yet these grouping practices have long been criticised for the effect they have on teacher expectations and the creation of self-fulfilling prophesies, particularly with respect to minority ethnic groups who tend to be grouped in lower-ability classes. Recently, Schmidt, Burroughs, Zoido and Houang's (2015) analysis of 2012 PISA mathematics results focused on the relationship between SES, achievement and opportunity to learn (OTL), both within and between schools. Part of this analysis included school-level data on streaming and on use of within-class ability grouping as indicators of OTL. They found that 'student and school level SES

and OTL had a statistically significant relationship with student mathematics literacy … and tracking and ability grouping were both negatively associated with student performance' (Schmidt et al., 2015, p. 374). Further, New Zealand and Australia had 'particularly large within school OTL gaps' (Schmidt et al., 2015, p. 376).

What is troubling about the course structures and standards being offered to students is that they are so strongly linked to SES and ethnicity, and they reflect an in-built bias about students' ability related to ethnicity (Wilson et al., 2016)—a pattern also established in other studies (e.g. Meissel, Meyer, Yao, & Rubie-Davies, 2017). It therefore seems that if leaders were to address some organisational and pedagogical features in schools (such as the way classes are structured and the amount of content and its level of challenge), they could significantly improve outcomes for students who are being disadvantaged. So why do they not?

The technical aspect of school improvement is now seemingly well understood. Evidence has demonstrated that a clear goal focus along with a process that involves investigating causes of problems and addressing them in tight cycles of 'small wins' motivates the school team and provides traction on improving outcomes (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010; Timperley, Kaser, & Halbert, 2014).

But, of course, nothing is quite that simple. Change is a deeply human endeavour. The dilemma for the leader is that they have to 'craft coherence' (Honig & Hatch, 2004) out of the tension between ambitious goals of excellence and equity and the need to reach an arbitrary target, and they must do this in a way that other stakeholders can engage with. The problem-solving must occur within a complex ecosystem involving a governing board, parents, students, teachers, numerous government departments, the wider community and, not least, the media who publish results and write stories about their interpretation of the data. The official and public perception of this data becomes a key driver for leaders. It is their 'shop window' attesting to school quality.

Just engaging the teaching staff in secondary schools in the nature of the problem of inequitable results may be a great challenge. These schools are typically large, with many longstanding staff members who can act as both culture-builders and culture-maintainers as they watch numerous principals come and go (Hargreaves & Goodson, 2006). School staff typically form subcultures around faculties or departments (Siskin, 1994) and this has a 'balkanizing effect' that can work against the creation of coherence. Departments often drive their own improvement agendas and goals rather than taking on the school's official goals and strategies. This lack of unity can actively undermine an improvement strategy (Siskin, 1994). It takes a shared understanding of the problem and a concerted cross-departmental effort

focused on the school's priorities to get improvement (Hofman, Hofman, & Guldemond, 2001; Siskin, 1994).

It is critical for principals and senior leaders to gain buy-in from middle leaders to the official goals, because it is the middle leaders—such as departmental heads and deans—who are the real instructional leaders for teachers in a secondary environment (Bendikson, Hattie, & Robinson, 2012; Siskin, 1994). It is only through them that coherence of effort can be achieved. These middle leaders have to agree, firstly, that the problem they are working on is both a priority problem and one that they can solve through perseverance. Secondly, they have to be prepared to support and apply the agreed strategies for improvement if a coherent cross-school effort is to be applied to the problem. For this reason, a principal's ability to define the priority problem, investigate the causes of the problem with stakeholders and plan to address it effectively is critical in creating within-school coherence and high expectations for student outcomes. Research by my colleagues and I (using questionnaires) into senior and middle leaders' knowledge of their own goals and perceptions about their problem-solving ability in 32 schools suggests a sobering picture of leadership capability.

Our findings

Goal knowledge

If the first step to school improvement is knowing what priority problem you need to solve, many leaders would fail at that point. When asked to recall their own student achievement and engagement goals, senior leadership teams were able to recall their school goals with about 55 per cent accuracy and middle leaders with about 40 per cent accuracy, suggesting about half the school leaders did not know their goals well enough to recall them. This pattern did not significantly change over time. Further, only about a third of the senior and middle leadership teams were sufficiently aligned in their goal knowledge to be likely to effectively progress their improvement agendas. This was not surprising given the number of goals and targets that schools typically had. While they had on average four goals, they had nine targets on average—too many to recall, let alone manage and monitor effectively.

Effective problem-solving

Effective leaders 'tackle the right problems in the right way' in order to reach goals (Mumford & Zaccaro, 2000, p. 26). The challenge is in deciding what problem is the priority problem (especially when there are many challenges, as there frequently are in schools serving low socio-economic communities) and what strategies will be effective in addressing it. We found that in the schools surveyed, the more serious the problem,

the less likely that it was viewed by middle leaders as being dealt with effectively. And often, what they considered serious were seemingly basic problems such as student attendance, lateness and students coming to school not prepared to learn (e.g. not having pens or books), along with undesirable variability in the quality of teaching practice. There is good evidence to suggest that creating an orderly environment is a prerequisite to gaining good academic results (e.g. Bendikson et al., 2012; Dinham, 2005; Jacobson, 2011; Louis & Miles, 1990). Noted Māori scholar Russell Bishop (2011) argues that Māori students can 'vote with their feet' and will turn up for classes when teachers work harder to create more effective learning environments. Yet many senior leaders did not know what their middle leaders perceived as problematic, nor how serious they considered these problems to be, and nor did they appear to be addressing them effectively.

Robustness of plans

The plans school leaders wrote to address goals ticked the compliance box. They all had the required goals and targets, and the targets were, on the surface, SMART (specific, measureable, achievable, relevant and time-bound). Leaders also tended to have some form of baseline data about qualification targets and usually named people to be in charge of strategies. These are all points we would endorse as effective in plans.

On the downside, however, baseline data was not always easy to find, read or make sense of because of the way it was set out, perhaps betraying a lack of deeper analysis and clear problem identification. And while we found that schools tended to put baseline data in plans for targets about qualifications, there was often no such data for other problems, such as poor attendance or frequent lateness—the fundamental problems that middle leaders identified as requiring attention. Most concerning to us, however, was the lack of detail about how progress towards the goals would be monitored during the year, as this is how an effective leader motivates a team.

Discussion: Barriers and opportunities to goal achievement

We started this paper by referring to the potential for misalignment between the major goal of equitable yet still excellent outcomes and the drive to reach the 85 per cent target. While the target is clear, and it certainly appears that schools from across a range of communities are committed to it, the best means of reaching that target in challenging environments has been left unarticulated at a national level. At worst, some schools may be 'dumbing down' the curriculum, believing that this in the best interests of Māori and Pasifika students and will improve NCEA results. If

that is being done across the system (which is my interpretation of the misalignment between PISA and NCEA results over time), leadership is maintaining the status quo rather than improving equity and excellence of outcomes for a significant group of learners.

Our findings also suggest that there is lack of goal clarity and pursuit of excellence at many levels. Basic problems seem to have been relegated to the 'too hard basket' in many schools, suggesting that leaders are not pursuing 'small wins' in systematic ways. This lack of coherent action on the part of principals and senior leaders is likely to impact trust in the leadership, and it may make teachers and middle leaders less likely to take risks to get improvement.

There are also signs of problems with system leadership. It is not enough to point to a target. At a national level, coherence between goals, targets and, most importantly, strategies must be discussed. Awareness needs to be raised about the risk that systematic biases and organisational practices will maintain inequity, and about the need to narrow one's focus in order to make continual improvements. The support of officials is required if changes are to be made for the better. If system leaders show their support for school leaders who take risks in the interests of serving all students well and are not just focused on getting the statistics to look good, more school leaders may be prepared to take risks and make changes that have been resisted to date.

Instead, our investigation revealed what appeared to be compliant but not necessarily effective behaviour on the part of many school leaders in setting and achieving targets that, although they may look good, may not be serving all students well and therefore may not be serving the best interests of New Zealand.

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Preservice and in-service teacher education: A leadership model for collaborative learning

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Abstract

Innovative collaboration between schools and universities can enhance teacher education. The model described in this paper was developed as part of a partnership between a school principal leading a cluster of diverse primary schools and a local university school of teacher education. The partnership established a memorandum of understanding to support targeted and standards-based professional learning for teachers and new leaders across the schools in the cluster. Novice preservice teachers were also assigned to these schools for an extended weekly professional placement. This paper outlines the model as it was designed—to respond to the strategic demands of particular school communities, and to ensure teaching and leadership development for preservice and in-service teachers. The paper will explain the model's conceptual and research base for professional learning. It will identify practical theories for skill and leadership development in preservice and in-service teacher education.

Introduction: Teacher education as an ongoing process

While concern with practice has always received significant attention in initial teacher education, most current approaches are structured within a conventional grammar of teacher education that separates teaching practice from the academic curriculum. In most Australian teacher education courses, preservice teachers practise their developing teaching skills, reflect on their practice and work to refine their skills with support and feedback from their school-based teacher educators (SBTEs) on school placements. However, the structure of these arrangements means that this practice teaching is almost always assessed as performance against professional teaching standards (Reid, 2011). This, in turn, means that most 'student' teachers have little opportunity to actually study teaching or practise key teaching skills before they enter the classroom. They therefore struggle to be teaching-ready in three main ways:

1. They often do not get explicit instruction and coaching to improve their technical performance in core practices of teaching.

2. They do not often get to participate in professional discussions that consider the rationale for and effects of the particular techniques they are learning to use.

3. They have not worked alongside other teachers as colleagues in attempting to find new or better approaches to teaching particular things to particular children in particular classrooms.

The idea of a collaborative model for in-service and preservice teacher education is designed to address these limitations and provide some of this experience. It also implies that initial teacher education is just the first step on a professional journey, not an end point in itself. Here in Australia, we are increasingly starting to think about the sort of teacher education that will provide teachers with the agility and responsiveness to social change that is necessary if they are to experience success as they enter the classroom. We know that early success is essential if teachers are to continue their professional journeys (Mayer et al., 2017). The emergence of teaching schools and the provision of funding for schools' participation in teacher education partnerships support this thinking. In this paper, I ask whether teacher education and school partnerships in which school leaders assist their staff to see themselves as practitioners who are continuously learning how to get better at teaching may be of interest to the profession. I explore a particular school–university partnership that aimed to address teacher learning in regard to the immediate problems of practice that emerge in the day-to-day life of schools. Reflecting on my own experience with this partnership, I also highlight some of the key issues that need to be addressed for such approaches to succeed.

Teacher education as the study of practice

The Initial and Continuing Teacher Learning Partnership (ICTLP) was based on a belief in the merit of conceptualising teacher education as a continuing process. Beginning with initial teacher education, this process proceeds from a transitional move into the profession to a continuing spiral of professional growth, as depicted in Figure 1.
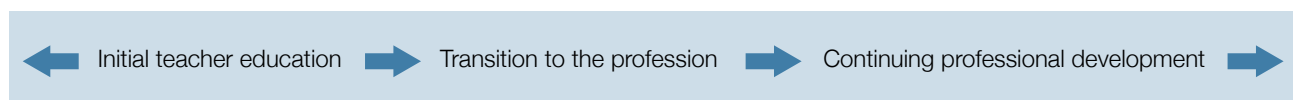
Figure 1 Model of teacher development and change over time
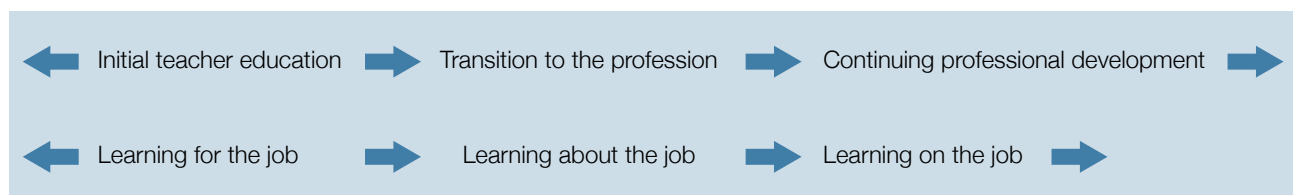
Figure 2 Model of collaborative teacher education partnership, including teacher development and professional learning over time

This is a well-accepted model of teacher development and change over time. It is important to recognise that novice teachers enter university with existing knowledge, skills, attitudes and experiences, and that even the most experienced teacher never knows it all—particularly as social and technological changes impact so deeply on students, schools and teaching.

The ICTLP project team based our thinking for the partnership on the ideas of Standford Professor Pam Grossman, who has consistently aimed to understand and demystify the growth of knowledge in teaching (see, for example, Grossman, Hammerness & McDonald, 2009). Her research has focused not only on what, why, when and in what order a teacher should teach her students but also on how best to teach particular concepts and skills for different learners. She sees these as real problems that teachers are interested in solving. This suggests an expanded view of practical knowledge that goes beyond the limitations of a theory–practice dualism and actually connects current approaches to reflective practice in teacher education with the historical apprenticeship and training models of initial teacher education that were previously dominant. In contrast with other approaches that operate along these lines—such as Teach for Australia and the school-centred initial teacher training models operating in England—however, our thinking accepts that here in Australia we cannot afford either an elite approach to initial teacher education or a series of decentralised local systems.

For this reason, initial teacher education will most probably remain situated in the university setting, where new teachers are provided with the opportunity to gain knowledge that extends their personal intellectual capacities and ensures that what they can teach is both appropriate and rigorous. But this sort of knowledge is not enough. A collaborative teacher education partnership model means that as well as educating new teachers *for* the job of teaching, initial teacher education must also give them the opportunity to learn *about* the job as they engage with other professionals who are continuing to learn *on* the job—as depicted in Figure 2.

Leadership for improving learning

Our aim for the ICTLP was for preservice teachers, teachers and their school leaders to operate as a real community of practice (Lave & Wenger, 1991). As members of the cluster community, we would all benefit from working together to interrogate the effects and implications of policy and theory in relation to these particular schools. We aimed to focus on authentic problems of practice that frequently arise for schools as they struggle to achieve high education outcomes for the students and communities they serve. The key objective for the cluster leaders was to improve the learning outcomes of all students in the cluster schools.

In addition, the cluster leaders, aspiring leaders, teachers and preservice teachers would also gain clear benefits.

Principals and assistant principals

The principals of the cluster schools would be leaders of the work in their own settings, and they would share the leadership of the whole cluster focus by each performing that role once over the course of the year. As such, they would be able to amass and collect evidence of leading their schools to achieve regional and state priority outcomes; of effective peer and colleague development and support; and of meeting the short-term objectives of their school improvement plans.

Teachers

As members of ICTLP, the teachers in each of the schools would be able to meet their own professional development requirements for the maintenance of professional accreditation by participating in the community over the year. They would gain evidence of their own leadership capacities though their work with the preservice teachers in their stage teams; extend their own repertoires of practice by taking up the initiatives designed for the cluster; and work to enhance learning in their own classrooms.

Preservice teachers

We wanted to give the preservice teachers an opportunity to observe and participate in teaching as intellectual work, where they had to make explicit connections between observed practice, the policies that were driving the need to change practice, and the theoretical ideas that inform policies. We wanted them to see that teaching is work that needs to be studied and practised if it is to be learned. And we wanted them to see how more experienced teachers were demonstrating higher levels of proficiency and leadership in their workplaces in terms of the standards issued by the Australian Institute for Teaching and School Leadership (AITSL, 2011).

Our hope was that both the preservice teachers and the school teaching staff would come to see the value of continuing to study their teaching as an ongoing means of refining and extending professional expertise over time, and that they would gather evidence that allowed them to demonstrate this.

A case for consideration

In many ways, we were thinking big. Each school agreed to welcome and allocate at least one pair of preservice teachers to each stage level (Early Stage 1 to Stage 1; Stage 2; and Stage 3) for their initial weekly 'introduction to teaching' professional placement.

The initial stages of the partnership involved the allocation of a group of 6–12 first-year preservice teachers to each of the nine cluster schools. At minimum, each school was allocated a pair of preservice teachers at each stage, and the two larger schools had two pairs per stage. This meant that 66 preservice teachers were at the disposal of the cluster for a day a week over approximately 24 weeks across the year—a minimum of six and a maximum of 12 preservice teachers per school. This scale allowed for adequate university-based teacher educator (UBTE) participation and involved from three to six SBTEs in each school—33 across the cluster.

Leadership at all levels

Preservice teachers would always be placed in pairs and groups with a number of SBTEs so that both new and already competent or proficient teachers could reflect on their professional learning together. SBTEs and UBTEs planned the program of professional learning together. Over the 24 weekly preservice teacher visits to the schools, four different focuses were designed in alignment with annual planning for the schools. The learning community worked at four levels: classroom, school, cluster and university. At the university level, preservice teachers and their UBTEs formed a sub-community for on-campus activity.

As a group, the cluster schools planned to focus on one shared concern at a time. The pilot stage of the partnership took place in March and April, and the focus during this time was on 'closing the gap' for the large proportion of Aboriginal children in their communities. The relevance of this theme for initial teacher education is clear, and it provided an authentic pivot around which preservice teachers could integrate their encounters with theoretical concepts related to Indigenous cultures and histories in curriculum, sociology, learning and developmental studies as they progressed through their course.

As a key means of connecting with community, the cluster decided to introduce an Aboriginal language program across all schools, with cluster funding to resource a local Aboriginal language teacher to 'teach the teachers' as part of their mandatory professional development hours for the maintenance of their professional accreditation. To demonstrate their own professional accomplishment and leadership, one teacher in each school would take on the work of coordinating and organising the weekly introductory

language lesson, held over six weeks through interactive video-conferencing across the whole cluster after school on the day of the preservice teachers' placement. The language lesson would then be taught to all classes in the schools during the following week, with the preservice teachers having the opportunity to reteach the lesson as revision on their next visit. Part of the program was the development of a shared lesson plan and follow-up activities at stage level for use during the week between sessions. These were discussed at each of the four levels of the learning community at different times.

The remaining ICTLP focuses were quite different, reflecting both departmental and local priorities. The second cluster focus was on health and physical activity, leading up to the cluster's athletics carnival. The third shared focus was on local history, and the fourth was on public speaking and debating.

Reflection on the process suggested that the outcomes for the members of the ICTLP would be different according to their role in the school, the cluster and their career goals. The nature of these outcomes for each group, and our reflection on the issues raised in the operation of this partnership, will be discussed in the presentation at the Research Conference 2017 of the Australian Council for Educational Research.

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Principals as Literacy Leaders: A strategy for improving reading engagement and achievement in Australian schools

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Abstract

By the end of 2017, approximately 1500 school leaders from all states and territories in Australia will have undertaken the Principals as Literacy Leaders (PALL) program. This program was first funded in 2010 for 60 primary principals of disadvantaged schools by an Australian Government grant under the Closing the Gap strategy. Since that time, additional cohorts of school leaders have been funded by state departments of education, professional associations and individual schools. Many of the programs have been associated with research looking at various outcomes of the learning gained from the PALL program. To date, there have been six published studies (including one that considered PALL for principals working in Indigenous communities), numerous conference papers, chapters and journal articles, and a forthcoming book. In 2016, further data was collected from schools that were the subject of case study research in 2014.

This paper provides an overview of PALL and the research into its outcomes. It focuses on the most recent data collection, which was designed to look at the sustainability of the learning from PALL over time and its impact on leadership strategies; teaching practice; and student engagement, learning and achievement in reading.

Background

In the early years of the new millennium, data suggested that student achievement in literacy was a recurring problem in Australian schools (National Assessment Program—Literacy and Numeracy [NAPLAN], 2008, 2009, 2010; Thomson, De Bortoli, Nicholas, Hillman, & Buckley, 2011). In addition, evidence suggested that students who fall behind in the early years of schooling tend to fall further behind over the course of their school education (Louden et al., 2005; Rowe, 2005). Simultaneously, research findings suggested that factors such as the quality of instruction (Hattie, 2009), the quality of school leadership (Leithwood et al., 2006; Robinson, 2007; Louis, Leithwood, Wahlstrom, & Anderson, 2010) and the impact of well-designed professional development and support programs (Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009; Hord, 1997) could have a positive effect on student achievement. With this in mind, the Principals as Literacy Leaders (PALL) project was initiated in 2009 by the Australian Primary Principals Association (APPA) for schools in four states of Australia. It was funded by the Australian Government as part of its Literacy and Numeracy Pilots in Low Socio-economic Status Communities initiative. The program was designed to provide principals (and in later versions, other school leaders as well) with knowledge, practice and support for strategies that would enable them to help teachers teach reading more effectively, with the ultimate aim of improving student engagement and learning.

By the end of 2017, around 2000 government, Catholic and independent school leaders will have taken part in different programs that emerged from APPA's initiative, including the pilot PALL program itself, Secondary Principals as Literacy Leaders and Principals as Literacy

Leaders with Indigenous Communities (PALLIC). More recently, there has been a middle school program in which people from secondary schools and their feeder primary schools work together to look at reading in the transition years, and a program that focuses on getting parents more engaged and involved in their children's learning. Programs have been offered in every Australian state, and in some cases multiple cohorts of participants have been involved in a single state.

The PALL project

The project was designed on a foundation of the following five research-informed positions:

1. the PALL position on the moral purpose of leadership
2. the PALL position on learning to read
3. the PALL position on reading interventions
4. the PALL position on shared leadership
5. the PALL position on support for leaders' learning on the job.

A more detailed outline of these five positions is provided in Townsend et al. (2015, p. 17).

The professional learning modules of the PALL program were as follows.

Module 1: A leadership for learning blueprint

The synthesis of the leadership research culminated in a discussion about the elements of a Leadership for Literacy Learning Blueprint, illustrated in Figure 1 below.
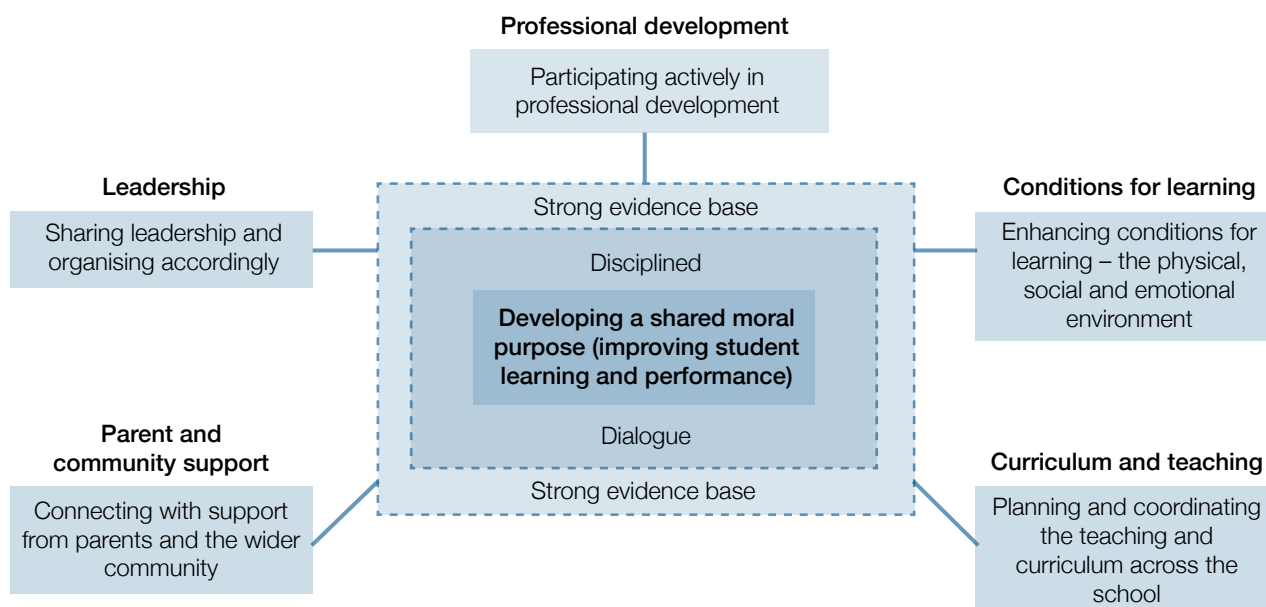
Figure 1 Leadership for Literacy Learning Blueprint

Source: Dempster et al., 2012, p. 7.

Module 2: What leaders need to know about learning to read

Module 2 demonstrated the complexity of the reading process and identified the 'BIG 6' elements of reading:

1. oral language
2. vocabulary
3. phonological awareness
4. letter/sound knowledge (phonics)
5. comprehension
6. fluency.

Module 3: Leading literacy data-gathering and analysis

Module 3 picked up the 'sound evidence' theme highlighted in the blueprint by focusing on the importance of evidence-based planning and decision-making.

Module 4: Designing, implementing and monitoring literacy interventions

Module 4 defined the term 'intervention', reiterating the ultimate purpose of improving children's literacy learning and achievement in project schools through intervention.

Module 5: Intervention evaluation and future planning

Module 5 took school leaders through three necessary steps in planning school-based evaluations of the interventions they had implemented: firstly, defining the purpose of the evaluation; secondly, identifying appropriate data gathering processes; and thirdly, determining how to use the data.

In between the modules, school leaders were expected to return to their schools and work through the issues brought up during each module. They were then expected to plan with their teachers an intervention that would focus on improving student engagement with, learning of and achievement in reading.

Research on PALL

Seven studies of PALL were carried out by my colleagues and I in 2010–17. Three of them—the pilot program study (Dempster et al., 2012), the South Australian study (Konza, Fried, & McKennariey, 2013) and the Tasmanian study (Dempster, Johnson, & Stevens, 2014)—concentrated on the program's effects on school leaders themselves. A further study, based on PALLIC, applied the general design of the pilot research to ascertaining the effects of PALL on principals of

schools with significant Indigenous communities (Johnson et al., 2014) and also included some case studies. Two studies in Tasmania and Victoria in 2014 (Townsend et al., 2015; Townsend, Wilkinson, & Stevens, 2015) were designed as case studies in order to get a deeper understanding of the leadership effects on student learning. Finally, in late 2016, five case study schools were visited—three that had previously been visited in 2014, and two that had been identified by the Victorian Principals Association as successful PALL schools. The subsequent report (Townsend, in press) provided further information on the sustainability of PALL over time and some of the key leadership qualities that supported such sustainability.

Findings from the studies

There is not enough room in such a short paper to provide a detailed review of the results from the seven different PALL studies, so here I can only report on the major findings from the first six studies; more detail is contained in Dempster et al. (2017). The findings are briefly reported using the five positions that PALL adopted for the professional learning itself. The 2016 case study research is then examined in more detail.

PALL research and the moral purpose of leadership

In most of the research, much attention was paid to the moral purpose of leadership as captured in conversations focused on the purpose of, goals for and expectations related to reading. Principals consistently reported an improvement in the knowledge and skills required to build vision and set directions collaboratively; to set high expectations; to gain consensus on goals; and to see those goals embedded in classroom routines. We found that paying attention to the shared moral purpose of those leading learning produced, almost as a matter of course, stronger staff collaboration than had been observed in the past. The data clearly show that the reaffirmation of the rights of all children to a literate life through a focus on reading brings principals and teachers together, creating opportunities for leadership distribution not previously possible.

PALL research and learning to read

There were five salient messages found in relation to leaders' positions on the teaching of reading. First, school principals need to have a high level of understanding about what it means to teach reading if they are to lead staff in their schools to strengthen student satisfaction and achievement. Second, teachers require targeted professional development in specific methodologies for teaching the fundamentals of reading, dependent on capabilities, over an extended period of time. Third, interventions in the teaching of reading should be based in robust evidence about students' capabilities in learning to read and teachers' knowledge about the explicit teaching of known areas of

student need. Fourth, knowledge about the cultural and social context for the teaching of reading should take account of student data and conditions for learning in particular schools and communities. Fifth, a strengths-based approach to engaging parents and community members in the teaching and support of reading is likely to result in a more productive take-up than the more familiar deficit alternative.

PALL research and the use of reading interventions

Across the first six PALL studies, it can be seen that successful interventions in reading have been based on sound qualitative and quantitative evidence. What became apparent in numerous intervention evaluations was that, while some schools had previously been using evidence to guide their teaching and learning programs, they had not necessarily used it consistently or strategically. Participation in PALL engendered sharper and more purposeful collection and use of data along with the ability to discuss the data sets using a common language. In addition, a whole-school approach was frequently mentioned by schools as making a significant contribution to the effectiveness of their interventions. This did not mean that all classes or year levels had to be doing the same thing, but rather that a shared commitment had to be evident.

PALL research and shared leadership

PALL involved the acceptance of the need for leadership depth and breadth—depth within the school, and breadth beyond its boundaries. During the PALL studies, we saw encouraging examples of depth and some promise in attempts at breadth, but continuing issues in both. The need to establish shared views of the school's moral purpose brings shared leadership into the foreground. The research interviews were replete with terms such as 'same page', 'same language', 'teamwork', 'team planning', 'community conversations', 'agreed strategies and solutions', 'trust in each other', 'collective responsibility' and so on. Most principals and teachers expanded their capacity to share leadership within their schools, in this way seeing leadership as activity, not position. The research also uncovered a small number of concerted efforts to move outside the gates of a single school. When and where this occurred, the value to principals and teachers was reported enthusiastically.

PALL research and support for leaders' learning on the job

Across the six original studies, school leaders made consistent reference to two main aspects of this PALL position. The first is that school leaders need the knowledge required to make changes that will result in improved reading outcomes for students within their schools, and the second is that school leaders need support systems to enable them to be successful in implementing changes. The PALL program itself can be seen as a support system with its action research approach. Principals were provided with evidence-based knowledge, and for many principals, the use of robust data gave them with the skills and confidence to better lead disciplined dialogue about learning and teaching practices. In addition, the role of PALL's leadership mentors cannot be understated. They were critical friends, not only ensuring that the various post-module tasks were carried out but also, because of their capacity to work with achievement data and other evidence of student progress, providing ongoing support for whole-school development. They helped to connect the modules, tasks and materials, all generic in nature, to the specific needs of each school.

2016 case study research

The findings from this study were:

- PALL had a positive impact on the school leaders that attended the program, and the BIG 6 made sense when it came to considering ways to improve reading.

- The use of PALL and the BIG 6 had a positive impact on student engagement in reading; enabled students to become more articulate about what and how they were learning to read; and provided evidence, from both NAPLAN and school-based assessments, that students were performing at higher levels than before PALL was introduced.

- Case study schools were able to articulate a shared moral purpose. They were more efficient in collecting and analysing data to use when making decisions about reading, and they were more effective in their professional conversations related to this data. The elements of professional development from the Leadership for Literacy Learning Blueprint—attending to the conditions for learning; making curriculum and teaching practice decisions about reading; encouraging active parent and community engagement with the school to support reading; and sharing leadership—were all evident in the case study schools.

- Case study schools recognised the important role that the Victorian Principals Association played in supporting and promoting PALL, not only through the professional learning modules but also through the state conferences and the website.

- Critical elements associated with improvements in reading included:

- Perseverance—case study schools had been testing, adapting and using PALL and the BIG 6 for more than three years.

- Professional conversations were far more frequent and focused than had previously been the case.

- There was a high level of trust generated by all people in the school. This enabled a shared leadership approach to occur easily. This was supported by the principal's passion for improving reading in the school.

In the final analysis, the ongoing success of PALL and the BIG 6 in the case study schools can be traced back to a number of leadership characteristics that provided teachers in the school with the support they needed to make the changes required. The role of the principal had not been lessened, but the leadership of others had expanded. Leadership characteristics that counted include:

- an absolute commitment to improving student reading and a passionate way of sharing this goal
- the ability to develop positive, trusting relationships across the school, fostering leader–teacher, teacher–teacher and teacher–student relationships based on communication and mutual support
- a willingness to remain in the school for the duration of the project while enabling much of the responsibility to be passed over to others, ensuring that the whole school is part of the process
- the ability to share leadership by letting go and allowing other people to take responsibility for some of the work done (in this regard, the case study schools could be seen as exemplars of shared leadership)
- a view of themselves as fortunate to have a staff that was willing to try things, test them out and to play around with them for a while in order to move towards best practice.

Conclusion

Overall, the research on PALL has demonstrated that school leaders with the required knowledge about how to improve student learning in reading, and in conjunction with a capable, knowledgeable and determined staff, can have a real impact on student learning. The lessons of PALL go beyond reading, however, in that if the same principles are applied to other curriculum, social or environmental aspects of school life, improvement will follow in any or all of them.

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Leading empowered evaluations to develop trust and improve learning: Insights from qualitative research

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Dr Kerrie Ikin, FACE, is a highly experienced educator, with over 35 years' experience at all levels within the New South Wales Department of Education. Kerrie is the director of Drummoyne Services in Education, providing consultancy services in leadership, organisational development and evaluation to school principals and leadership teams. Kerrie is an Adjunct Senior Lecturer in the University of New England Business School, conducting research in values-based leadership and evaluation with her colleague Dr Peter McClenaghan. Kerrie's strengths and research interests are in instructional leadership development, empowerment evaluation, evaluation capacity building and organisational development from a values- and trust-based lens.

As a result of her development of a new process that empowered leaders to evaluate their own schools and build staff and community capacity in evaluation processes, Kerrie was given the Award for Excellence in Evaluation by the Australasian Evaluation Society in 2008. In 2016, she was awarded a Fellowship of the Australian College of Educators.

Abstract

What does 'empowering teachers-as-evaluators' mean in whole-school strategic planning and evaluation? Our work seeks to develop and empower teachers as whole-of-school evaluators to embrace ownership of the school's plan and directions; build communities of practice; create transparency, openness and trust; and ultimately improve student learning outcomes.

Our previous research in whole-school qualitative empowerment evaluation showed that principals who were fully engaged in their schools' evaluations were more likely to be influenced by the evaluation process, use the evaluation results and build evaluation capacity than those who merely participated as guests. These engaged principals were performing double-loop learning. We further found that key values, such as trust, acted as catalysts for evaluation influence. This raised questions as to whether the influences on principals from this research would also apply to all staff if they were similarly engaged in their whole school's evaluation.

We describe one school's ongoing journey since 2015 in such a process along with our research findings to date. Our findings draw on observation, interviews and questionnaire data from all staff at all levels in the school. The research reveals that as staff members develop transparency and trust in the process and with each other, their understanding of and input into the school's plan and directions increases and their evaluation capacity is built.

Background

Since 2015, all New South Wales government schools have been required to have developed a three-year strategic plan in consultation with their staff, students and community. Each plan needs to comprise three strategic directions, showing the purpose of each direction; an overall outcome for the people involved; the processes to be used to achieve the direction; the products and practices that will ensue; and the quantifiable improvement gains and data (usually quantitative) that will be used to evaluate the direction. The introduction of this new planning model marked the beginning of a new era for New South Wales government schools in relation to school accountability and improvement. The new model dispenses with the system for reviewing schools by exception (New South Wales Department of Education and Training, 2004), whereby a team led by a senior departmental officer reviewed a school only if data indicated a concern. It introduces an integrated school self-evaluation, planning and evaluation process. The school plan is endorsed (as developed and completed in accordance with policy) by the principal's supervisor, while ultimate responsibility for the plan, its execution and its evaluation rests with the principal. In addition, a small team of principal peers assess the school's plan and achievements through an external school validation process.

This new model presumes a high level of competence in collaborative strategic planning and evaluation as well as a high level of evaluation capacity by school principals and staff. Anecdotal evidence provides little support for this presumption. School evaluation research over the last 20 years has tended to focus on comparisons of the merits of internal self-evaluation and external reviews (Mutch, 2012), and the literature on empowerment evaluation (EE) in schools has tended to focus on teachers as evaluators of their students' performance (Clinton & Hattie, 2015; Fetterman, 2015). Although these studies—as well as the broader literature on strategic planning (Robbins, Bergman, Stagg, & Coulter, 2015), EE (Fetterman, Kaftarian, & Wandersman, 2015) and evaluation capacity-building (Compton, Baizerman, & Stockdill, 2002)—have provided valuable information about the topic in general, the depth of information about the experiences of school staff actively participating in EE has been limited. We could not identify published studies specifically using teachers engaged in whole-school planning and evaluation as participants.

Therefore, in conjunction with the EE project already underway, we embarked on a long-term qualitative research case study designed to add valuable insights to the current body of school evaluation research by providing an in-depth look at the experiences of staff members from one government primary school in New South Wales who are currently participating in an EE of their school's strategic plan. The aim of this study is to create knowledge about teachers-as-evaluators at two levels: as individuals, and as a community of practice (Wenger, McDermott, & Snyder, 2002). This paper describes the staff's experiences and the emerging themes to date, partway through the EE project.

Setting the context for the study

The school is located in north-west Sydney, caters for over 800 students from Foundation to Year 6, and has a staff of approximately 40, many of whom work on a permanent or temporary part-time basis. In 2015, the principal contracted the authors to work as facilitators with all teaching staff and school leaders over the following three years to engage and empower them in whole-school planning and evaluation.

The project that was subsequently developed was based on three core areas of research:

1. Ikin's doctoral research (summarised in Ikin & McClenaghan, 2015), which investigated how school principals were influenced by their participation in school reviews
2. Fetterman's (2015) theories and principles of EE
3. Tschannen-Moran's (2014) empirical research on trust in schools.

The project involved staff re-examining school planning and evaluation from an empowerment and values perspective.

First, all staff worked together to define their own personal values and examine the alignment between these values and those espoused in the school's strategic plan. Second, using a values lens as their analytical framework, staff worked together to re-examine and revamp the supporting actions needed to achieve the school's strategic directions. Third, through a process of prioritisation, three agreed actions were established. Working at times in one large group and at times in smaller groups, the staff then developed the parameters of these actions; the indicators that these actions were occurring; descriptions of the evidence that would be needed to demonstrate that these actions were occurring; and the ways in which this evidence needed to be collected and evaluated. The final phase (which at the time of writing this paper is still in progress) involves all staff, working in small groups, taking responsibility for evaluating one section of the school's strategic plan. The intention is that this work will be presented, discussed and finally accepted as the school's self-evaluation of its strategic plan. At every stage, comments, votes, recommendations and revisions are attributed to actual members of staff to demonstrate and build transparency, openness and trust.

The study that developed from the project is being guided by three research questions:

1. How do staff engaged in an EE of their school's strategic plan describe their experiences?
2. How does participating in an EE of their school's strategic plan change staff members personally?
3. How do staff perceive that participating in an EE of their school's strategic plan changes their community of practice?

Findings to date

While still in the early stages of data analysis, we have identified five emerging themes that capture the essence of staff's experiences and learning, from both individual and community-of-practice perspectives. We have also identified that each of the five themes is underpinned by the meta-theme of trust.

Heightened self-awareness

Staff reported that their experiences had led to a heightened level of self-awareness. All staff who participated in the initial values identification activity commented on its impact and power. As staff left the activity, they made comments such as:

- 'The school would be so different if these were the school's values.'
- 'Wow, wouldn't the school be a different place!'
- 'I'm going home to do this exercise with my husband.'

This was reinforced in recent interviews in which a number of participants, unprompted, noted how critical awareness of their values had influenced their interactions at school and how they now participate in setting school directions. One participant commented on how staff and leaders now frequently talk about values when discussing decision-making that impacts on school strategies. Another participant expressed a sort of epiphany in discovering the importance of acknowledging his vulnerability in the process:

[I've realised that if we are] to build trust and take risks, we have to voice our opinions. If you want change to happen, you have to say how you are feeling. Everyone is now starting to realise that if we are all going to trust each other, we have to show some vulnerability and put stuff out there. I am willing to be vulnerable, [and I am] starting to see a lot more of that in the staffroom.

Culture change

Staff described their initial experience with the process as being 'confronting' and 'challenging' but also 'powerful' because, as one staff member put it, 'It's

the first time we have been involved at a whole-school strategic level and required to defend our opinions in a public forum'. Consistent with Lencioni's (2002) theory of team development and trust and Senge et al.'s (2000) theories of organisational change and learning, public accountability in this form initially amplified staff members' feelings of fear, uncertainty, ambiguity and vulnerability, but it also began to develop trust.

At the same time, some staff—most notably, although not exclusively, those in temporary positions—reported initial feelings of low self-concept. Some felt that that their temporary status impeded their willingness to be as open in their input as other, permanent staff members due to their fear of reprisal. Those in permanent positions reported that their honesty in the past had had negative consequences. While these staff members agreed that some of their initial inputs had been in line with the status quo, they nevertheless gained enough confidence and trust in the process and with each other over time to voice their own opinions.

Willingness to change

Lewin (as cited in Manchester et al., 2014) and Kotter (as cited in Calegari, Sibley, & Turner, 2015) argue that for successful change to occur, participants need to have a greater sense of understanding of both the purpose for the change and their own role within the process. Aligned with an emerging sense of self-awareness, observational data indicated that staff were becoming more forthright in expressing and defending their opinions and constructively engaging in the change process. The majority of the staff interviewed commented that they are now more willing to take risks in front of others; that they have noticed a positive change in the sorts of conversations in the staffroom; and that staff are much more willing to share education ideas with each other. As one staff member commented:

I do think there is a change … People are talking and helping each other in the staffroom. I honestly feel people are more trusted. You see the interactions between people that you would not see a year ago. You see risk-taking teacher to teacher.

It should be acknowledged, however, that a small number of staff were quite adamant that these changes had not taken place. At this stage of the data collection and analysis, the reasons for this are not clear. Possible explanations include the continual staff turnover; the resistance to change based on the historical culture of the school, which had been described as 'toxic'; and the perceived lack of engagement in strategic whole-school issues. Although these staff did not perceive any changes, at no point did they suggest that they were resistant to such changes occurring.

Emerging sense-making

Staff reported a greater understanding of the school plan and how this has clarified their understanding of their roles within it. As two participants discussed:

> A: Risk-taking to me meant it was almost dangerous— but I now see that what is one person's risk-taking is not another's. Coming up with a definition that everyone agreed to is a big thing. [A] definition that is made by everyone in our own context is really beneficial, because once we started to work on it we realised that it meant different things to different people. Having that commonality of what the strategic goal is—it is much more important to have a shared goal than taking on a given definition.

> B: Yes, the strategic direction felt jargonistic until you [the researchers] started working with us. Now I think, 'Are we really covering that?' Before it was something that was pinned on the wall. How good would it be to come up with our goals for the next three years this way?

> The realisation by many has been that the school cannot be termed a real community of practice unless it has a common and agreed set of core values. The values that have emerged and been continuously reinforced through this process have been risk-taking and trust. Although most staff noted that the process at times seemed repetitive—especially during the values definition phase—they all agreed that they now had a much clearer sense of where they were heading and why. It would appear that this realisation can best be explained by drawing on Argyris and Schön's (1978) notion of double-loop learning, which involves learning from experience as a way to change behaviours and values.

Impediments to the change process

A consistent theme has been the negative influence of the school's past history in dealing with planning and change. Staff and school leaders have continually reminded us that staff morale had been seriously undermined and that little or no trust existed prior to the current school leaders being established. Despite acknowledging that the current school leaders are acting with greater transparency and inclusiveness, staff emphasised that it takes a long time to change perceptions and behaviours that have been so negatively influenced in the past.

Two additional factors that were raised relate to the constant staff turnover and the large percentage of temporary appointments in the school. Of the three senior leaders, only one has been in the school throughout the entire process. These factors are acknowledged as being largely uncontrollable and are accepted as being inevitable in large public

organisations such as this. Nevertheless, such issues raise the question of whether the EE process alone is enough to eventually overcome such factors.

At a personal level, staff reported that fear of failure in front of school leaders and senior staff and a related, ongoing issue of lack of trust has meant that some are still uncomfortable in speaking openly or putting their name to particular points of view. A few staff commented that they had not always accurately expressed their point of view because it did not seem to be the view of the majority, although they did acknowledge that they would probably be more open now.

Finally, most staff commented on how engaging and motivating the initial sessions were, but many felt that longer time gaps between facilitated sessions in the middle of the project had led to some stagnation of motivation and a dilution of learning. Staff were once again motivated, however, as the final stage of evaluation had begun and they were once more engaging in the process on a regular basis.

Conclusion

While a full cycle of the EE process is still to be completed, some tentative conclusions have begun to emerge.

At this stage of the research, it appears that beginning with a critical analysis of personal values has been the single most important factor in developing a community of practice within the school; driving cultural change; and creating opportunities for evaluation capacity-building. Second, when staff are given a framework to engage in whole-school strategic planning and evaluation, they are capable of rising to the challenge. Third, an EE framework appears to be compatible with this strategic planning process and capable of overcoming traditional impediments to organisational change, such as cultural and structural barriers. Fourth, staff buy-in and motivation is better when there are focused and regular facilitated workshops to continually reinforce learning. Finally, as staff develop transparency, openness and trust in the process and with each other, understanding of and input into the school's plan and directions are increasing, and staff's knowledge of and skills in evaluation—although still at an early stage—are developing.

With the final stage just underway, staff are now engaging in evaluation skills development, including designing data-gathering tools, applying evaluation processes and analysing data. The gains to date, however, have already led the school leadership team to request that the same process be used from the beginning to create the school's next three-year strategic plan. Independently, staff have also asked that this approach be used again with the same expert facilitation.

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Developing a professional certification system for school principals: The Principals Australia Institute certification project

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Abstract

In 2014, the Principals Australia Institute (PAI) decided to develop a national system for providing professional certification to accomplished school principals, based on the Australian Institute for Teaching and School Leadership's Australian Professional Standard for Principals (APSP). The Australian Council for Educational Research has been assisting PAI in the development of valid and reliable methods whereby principals can demonstrate how they meet the standard. This work has included conceptualising the system; developing an assessment and evaluation framework for certification; and developing guidelines for three portfolio initiatives linked to APSP. The portfolio initiatives were field-tested in 2015, and a group of principals was trained to assess them. The portfolio tasks were rated high on validity and, after training, assessors demonstrated high levels of reliability in assessing portfolio entries, identifying benchmarks and setting standards.

Introduction

In 2012, after extensive consultation with principal organisations and other stakeholders, the Principals Australia Institute (PAI) decided to provide a voluntary system for the certification of accomplished school principals, based on the Australian Professional Standard for Principals (APSP) issued by the Australian Institute for Teaching and School Leadership (AITSL, 2014). PAI invited the Australian Council for Educational Research (ACER) to assist in the system's development (PAI 2015).

For PAI, the ability to provide a publicly credible professional certification system was seen as a defining characteristic of a profession. Certification was seen as the way most professions promoted widespread implementation of effective practices and drove continual improvement in their members' practice, in the interests of individual professionals and the wider public. With greater school autonomy, there was also an increased need for systems that established profession-wide standards and supported their widespread implementation.

In designing the certification system, the following design principles were important: that the system was owned by the profession; that certification was based on valid and reliable evidence of successful leadership initiatives—not an academic qualification or a curriculum vitae; that certification was portable and not tied to a position specific to a particular school or school system; and that certification was distinct from performance management processes.

The certification system should provide a significant reference point for principals in their professional learning and career development. It should recognise the central importance of leadership for effective schools. It should provide a powerful and respected form of recognition from professional peers. And it should also provide principals with a highly respected and marketable form of professional certification for their career advancement.

Australia had many accomplished principals, but it lacked a system for identifying them and giving due recognition to the central role they played in the quality of schooling. A certification system would aim to provide employing authorities with a sound basis on which to encourage widespread use of effective leadership practices and career pathways for principals who achieved high professional standards.

Essential to the success of a professional certification scheme, therefore, would be the validity, reliability and fairness of the procedures used to determine whether the APSP had been met.

The brief for ACER

As a first step, PAI asked ACER to:

- review approaches to assessing and evaluating principals internationally

- draw on this review in developing recommendations for building a rigorous and beneficial professional certification system for accomplished principals in Australia (Ingvarson, 2014).

The review found that there were few examples of assessment methods that were suitable for certification purposes. Certification called for methods that reflected the complexity of effective leadership and its impact on the quality of teaching and learning over time. Most existing methods, like 360-degree surveys, were based on perceptions rather than direct evidence of performance or accomplishments.

What was needed for certification purposes were authentic examples of initiatives that principals had led to improve their schools over realistic periods of time. The work of principals is complex; methods for capturing, assessing and evaluating relevant evidence of effective leadership needed to reflect that complexity.

For this reason, ACER recommended that portfolio entries form the main source of evidence for certification purposes. Each of the five professional practices in the APSP called for evidence of capacity to conduct successful leadership initiatives, which meant that principals needed to gather evidence of change over an extended period of time.

Structured portfolio tasks are designed to measure changes over time, such as changes in measures of staff collaboration; professional culture; or student behaviour or achievement. No other method has the capacity to encompass the full story of leading and managing strategic initiatives to improve some specified area of professional practice as effectively as the structured portfolio task.

After an extensive and thorough consultation process with national principal organisations from all sectors, PAI decided to proceed with the development of a certification system based on a set of portfolio tasks that documented school improvement initiatives that principals had led and managed.

Stages in developing the PAI certification system

Three questions had to be addressed in developing an assessment and evaluation framework for the PAI certification system and setting the standard for certification.[1]

1. *What are we assessing?* The first stage required a clear understanding of what was being assessed. The APSP defined what was to be assessed in the certification system. It includes three leadership requirements (values and vision; knowledge and understanding; and personal qualities, social skills and interpersonal skills) and five key professional practices describing what accomplished principals know and do (see below).

2. *How will we assess it?* The second stage was to identify how the APSP would be assessed. It involved developing valid and reliable methods by means of which school leaders could demonstrate how their practice meets the APSP in their school contexts. The challenge was to ensure that the chosen methods of assessment provided a representative sample of evidence that covered the three leadership requirements and the five key professional practices, and in more than one

form. To meet this challenge, ACER prepared three assessment tasks in collaboration with PAI, in the form of three portfolio entries (initiatives). Each portfolio task provided principals with a clear structure within which they could document how their initiative demonstrated the requirements and practices set out in the APSP.

3. *How will we set the standard?* The third stage was to set the performance standards for each portfolio entry. A standard is the level of performance, on the criterion being assessed, that is considered satisfactory in terms of the purpose of the assessment. A benchmark portfolio initiative illustrates what the standard looks like in practice. This stage required evidence that we could train assessors to assess portfolio entries to high levels of consistency and identify benchmark portfolio entries illustrating different levels of performance. A four-level score scale with rubrics was adopted, in which a score of 3 was defined as the level of performance that met the certification standard.

PAI assessment framework

The guiding conception of leadership that underpins the PAI certification process draws on the work of leading researchers such as Michael Fullan and Richard Elmore. As these researchers see it, leadership in a school setting entails mobilising and energising others with the aim of ensuring high-quality teaching and learning. This is consistent with the PAI approach of focusing the certification process on building a portfolio containing evidence of successful leadership initiatives.

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1   It is important to understand that, while the APSP describes what good school leaders know and do, it is not a 'standard' in the strict sense of that term. The standard needed to be operationalised, which meant that clear and reliable procedures had to be developed for assessing portfolio initiatives and 'setting the standard'—that is, determining what level of performance counted as meeting the standard.

Australian Professional Standard for Principals	Portfolio Initiative 1 Focus: Improving teaching and learning	Portfolio Initiative 2 Focus: Developing professional community	Portfolio Initiative 3 Focus: Building school–community partnerships
Leadership requirements			
Vision and values			
Knowledge and understanding			
Personal qualities, social and interpersonal skills			
Professional practices			
Leading teaching and learning			
Developing self and others			
Leading improvement, innovation and change			
Leading the management of the school			
Engaging and working with the community			

Figure 1 Assessment framework for Principals Institute Australia certification

Figure 1 shows the assessment framework developed by ACER for the PAI certification system. The left side shows the leadership requirements and professional practices in the APSP. The three portfolio initiatives are the methods by which principals show how they meet the standards.

The heavily shaded areas in Figure 1 show the particular professional practice on which each portfolio initiative focuses (Portfolio Initiative 1, for example, focuses on leading teaching and learning). The lighter shading shows that preparing each initiative necessarily draws on and provides evidence related to most of the other leadership requirements and professional practices in the APSP. Together, the portfolio initiatives therefore provide multiple sources of evidence related to each requirement and practice in the APSP.

Portfolio initiatives

This section provides summaries only of the guidelines for each portfolio task.

Portfolio Initiative 1: Improving teaching and learning

This portfolio task invited principals to undertake and document an initiative that they had led and managed, in collaboration with relevant sections of their teaching staff, to meet a need to improve achievement for a designated group of students in a particular area of the curriculum. The initiative involved:

- gathering evidence about the current achievement level of a designated group of students in relation to expected levels
- identifying goals for improving the students' achievement
- developing and implementing a strategic plan for lifting the effectiveness of teaching in that curriculum area
- documenting evidence that the initiative had led to significant improvements in the level of student achievement.

Portfolio Initiative 2: Developing professional community

This portfolio entry invited principals to undertake and document a project over an extended period of time that would strengthen their school as a professional learning community. The initiative involved:

- gathering evidence about the current status of their school as a professional learning community
- identifying areas of need or opportunities for improvement
- developing and implementing a strategic plan for strengthening their school as a professional community
- documenting evidence that their initiative has strengthened the level of professional community activity in their school and thereby improved the quality of student opportunities for learning.

Portfolio Initiative 3: Building school–community partnerships

This portfolio entry provided principals with an opportunity to demonstrate how their leadership has strengthened partnerships with their school's wider community. The initiative involved:

- identifying the significant need or education opportunity that the partnership was set up to address
- establishing a project plan to address that need, or grasp that opportunity, in close collaboration with partners
- ensuring that the plan was successfully implemented
- documenting evidence that the partnership has improved student outcomes
- providing evidence of continuing commitment of partners to the partnership and the initiative.

Portfolio initiative example

As an example, Figure 2 shows how undertaking Portfolio Initiative 2 draws on and provides evidence related to most of the leadership requirements and professional practices in the APSP.
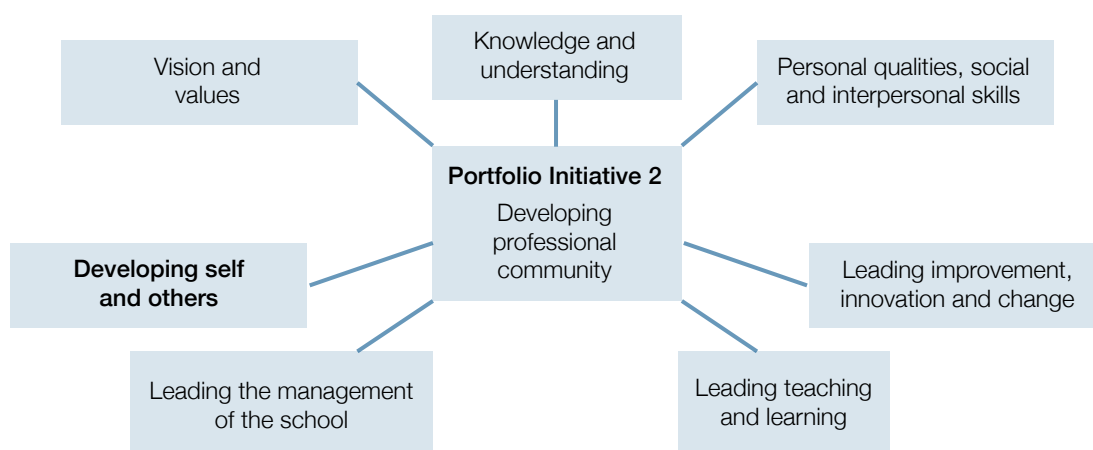
Figure 2 Portfolio Initiative 2 relationships to the leadership requirements and professional practices in the Australian Professional Standard for Principals

Portfolio initiative considerations

Why three entries? While the greater the number of entries, the lower the probability of making an incorrect certification decision, the law of diminishing returns applies. The basic question here was whether adding more entries would change a certification decision. Answering that question will require research at a later date. Another important factor was the need to ensure that the work involved in applying for certification was manageable for principals.

For PAI, it was also important that the certification system was both a professional development system and a system that had flow-on benefits to schools. Once principals signed on as candidates, the system would provide collegial support as they led and managed their action plans to improve their schools.

In this sense, the portfolio initiatives were to be prospective, not retrospective; they were to be based on initiatives that principals undertook once they decided to become candidates for professional certification. They were not to be based on simply gathering existing evidence or on a curriculum vitae of past achievements. Once a principal decided to apply for certification, they committed to undertaking the portfolio tasks in their school. This meant that schools would benefit from the certification system because their principals would be implementing the APSP.

Key considerations in developing the certification system

Content validity

This required that the assessment system provided evidence against all the leadership requirements and practices in APSP, and in more than one form. The challenge here was to ensure a representative sample of a principal's achievements in relation to the APSP—that is, a sufficient sample of evidence from which to generalise and make reliable judgements about a principal's accomplishments.

Construct validity

This required that the assessment process provided evidence of highly accomplished leadership. The challenge here was to ensure that the assessment tasks (the portfolio initiatives) were authentic—that is, representative of action plans that, according to the APSP, effective principals would normally be expected to implement as part of their practice. Principals should not see the tasks as artificial hurdles but rather as part of the normal documentation of their action plans.

Consequential validity

This required that the process of preparing for certification had valuable flow-on effects, so that it was in itself a valuable vehicle for professional development. It also required that the process did not disadvantage any group of principals, so that all had equally good opportunities to meet the APSP.

The challenge here was to ensure that principals found that the process of planning and documenting leadership initiatives necessarily engaged them in effective professional learning—that is, in describing, analysing and reflecting on their practice in the light of what the research said about what effective school leaders know and do.

It was also important that the process of preparation for certification was manageable. To facilitate this, the portfolio initiatives closely matched the kind of work in which principals would normally engage, and the evidence required closely matched what principals would usually gather as they monitored implementation of their action plans.

A future validity consideration will be to conduct research demonstrating whether principals who gain certification are more successful (based on independently gathered evidence) than principals who apply but are judged not yet ready.

Field test

In 2015, 50 principals volunteered to field-test limited versions of the portfolio tasks. Unfortunately, due to time constraints, participating principals had to base their portfolio entries on readily available evidence generated from previous school improvement projects, not new initiatives. However, 30 principals did provide sufficient evidence for their entries to be assessable.

Training assessors, setting standards and identifying benchmarks

The key challenge in setting standards for certification purposes was to find out if it was possible to train assessors (other principals) to high levels of consistency and set standards by identifying benchmark entries to provide examples of the standard in practice.

Eleven assessors from different states and school systems were trained to use a four-level scale for judging portfolio entries, in which a score of 3 meant assessors agreed the entry provided clear evidence of meeting the standard. A score of 2 meant there was evidence, but it was insufficient and a score of 1 meant there was little or no evidence. A score of 4 meant the evidence more than met the certification level and was uniformly convincing, coherent and consistent.

Training of assessors took place at ACER late in 2015. The first step in identifying benchmarks was to ensure that assessors had developed a deep understanding of the three leadership requirements and five key professional practices in the APSP. The second was to ensure that they developed a clear understanding of the three portfolio tasks—what each task measures and what evidence to look for, as described in the relevant evaluation guide and assessment record forms. Assessors were also trained in bias control.

Assessors then began judging entries. High levels of agreement emerged among assessors about the level of performance each entry represented, particularly entries at the certification level. Benchmarks representing performance at each of the four score levels were identified. Benchmarks will be essential to later training of other assessors. Assessor trainers will use these to make sure that assessors gradually improve their ability to discriminate between portfolio entries that represent different levels of performance. They will also use them to show trainee assessors that, although different in approach, portfolio initiatives may nevertheless represent the same level of leadership.

Final comments

At this stage, the PAI certification system is still a work in progress, and PAI is currently setting up a framework for future research. The field test demonstrated that

PAI is well on the way to establishing a rigorous and feasible approach to assessing a principal's leadership in relation to the APSP. A certification system lives or dies according to its rigour. It must be able to demonstrate that it can set standards and discriminate consistently between leadership initiatives that meet the standards and those that do not if it is to gain recognition and support from employing authorities as well as the profession. This is also crucial if the system's procedures are to be transparent and legally defensible.

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Teacher leader and teacher leadership: A call for conceptual clarity

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Abstract

Education systems cannot afford to lose promising teachers who could be the school leaders of tomorrow. My work shows a need to promote leadership as learning for teachers and students rather than as management and administration involving heavy workloads and disconnectedness from students and their learning.

Conceptions of leadership that allow teachers to see professional learning as the reason for their work make a contribution to school leadership as a whole. Schools benefit from leaders at all levels, no matter their distance from classrooms. School cultures can stimulate leadership practices when professional learning exchanges among teachers are reciprocated. Professional learning is dependent on school leaders making the time and space available to support and encourage teacher leadership as an attractive option for teachers. This paper highlights an example of a reflective tool (heuristic) for its potential value in reflecting on the content knowledge needed by leadership aspirants making the transition to leadership-for-learning work.

This paper draws upon the longitudinal Teachers of Promise study of New Zealand teachers' conceptions of leadership work as well as experiences and insights into why it matters for the profession and individuals to ensure teacher leadership is valued and possible. We need more conceptual clarity on who counts as a leader; the scope of leadership work; and how it can be supported to capture those with potential to influence the work of colleagues as well as student learners.

Introduction

What shapes early-career teachers' conceptions of leadership is a matter that warrants closer attention. Assumptions are made that talented teachers will be tomorrow's school leaders.

However, the continuing high levels of attrition among early-career teachers cast doubt on this assumption, a matter recognised across several research studies (Bullough & Baughman, 1997; Boyd, Lankford, Loeb, & Wyckoff, 2005; Johnson & The Project on the Next Generation of Teachers, 2004). Recognition of high attrition rates has prompted widespread international concern about countries having sufficient numbers of new leaders ready to replace the current baby boomers reaching retirement age. To date, many countries have responded by increasing their offerings of national programs (typically targeting middle leaders, aspiring and first-time principals) in order to develop the dispositions, knowledge and skills deemed necessary for a leadership role. I argue that national provisions are only one strategy to address a much larger issue relating to conceptions of leaders and leadership, because what is currently practised as leadership is not necessarily what will appeal to the next generation of teachers as they make decisions about whether to lead or not. My interest in this dilemma has been prompted by my involvement in a longitudinal research study, Teachers of Promise (for a fuller account of the project and its subsequent publications, see New Zealand Council for Educational Research [NZCER], n.d.).

The research focus

The Teachers of Promise study was instigated by NZCER in 2004. It has traced the early careers of 57 primary and secondary teachers, from their choice of teaching as a career through experiences of initial teacher education; induction into the profession; and expansion of roles and responsibilities, including experiences of formal and informal leadership. This study provides valuable information about teachers' decisions regarding the work contexts and conditions that best satisfy their professional needs and aspirations (some of which relate to becoming positional leaders) and their reasons for choosing to stay, change school or opt out of teaching altogether. The teachers were selected from six teacher education providers, who were asked to supply a list of their most promising graduating students from the 2003 year. Our definition of a 'most promising graduating student' was someone the profession could not afford to lose and who would make a great contribution to students and their learning. We compared the providers' recommendations with the principals of the schools in which the graduating teachers were employed. All but three recommendations for these beginning teachers were endorsed. When we began our study, these teachers had just entered their third year—a time when they had reached full registration status. We hoped that our study would identify the factors important for sustaining an interest in teaching and explain why some early-career teachers become dissatisfied and leave. Knowledge of these factors is useful when considering what actions are needed to make leadership a more attractive option and grow the pool of prospective leaders.

Data collection

Data collection for this study included four rounds of survey and individual interviews carried out in 2005, 2006, 2008 and 2011, resulting in a detailed picture of how early-career teachers view their current work and next career steps. This study was deliberately restricted to the voices of early-career teachers. There were no observations of classroom teaching or interviews with mentors or colleagues. Of particular interest were the teachers' explanations of their sources of satisfaction, challenge, support, turning points, dreams and aspirations, and frustrations (Cameron, Baker, & Lovett, 2006). Insights from each of these topics sparked my curiosity about transitions and preparation for extended roles, referred to here as 'teacher leadership'—specifically, what works for these transitions and why.

In 2016–17, I gained permission from NZCER to approach five of the teachers from the Teachers of Promise study for a further interview, outside the original project, to explore their transitions into and experiences of leadership. I began by using the terms 'teacher leader' and 'teacher leadership'. This was an attempt to signal and capture my interpretation that early forays into leadership work take varied forms. Leadership is not limited to formal titles and roles—such as middle or senior leader and head of department or faculty. It also includes instances where teachers take up opportunities to make sense of and plan improvements to their practice by drawing on their own and others' expertise.

Interestingly, my intention to explore these early leadership experiences was hindered the fact that the terms 'teacher leader' and 'teacher leadership' were not in common usage, so their meaning was unclear to the teachers interviewed. For this reason, I sought firstly to establish why these terms from the leadership literature were not readily understood in practice, and secondly to offer a process that would increase clarity about these terms.

Knowledge sourced from early-career teachers themselves would, I hoped, provide a starting point for addressing the matter of having a sufficient number of teachers interested in and ready to take on future leadership roles.

I framed my interview questions around themes I had encountered in my reading of the teacher leadership literature that called for an awakening of teachers as leaders (Katzenmeyer & Moller, 2001; Petersen, 2016).

I noted that despite the passage of time since this literature began, a call was still being made for teacher leadership based on the view that leadership need not be restricted to a formal role. I asked the teachers what they thought of teacher leadership as a named leadership theory and whether it actually existed in practice. We then explored the matter of the constraints placed on teacher leadership by its terminology, and the teachers offered their explanations as to why teacher leadership had not progressed as a named leadership theory. From there, we moved to talking about leadership as a process of influence rather than a positional role or authority over others. I also wanted to know what had prompted each of the teachers to engage in leadership work and their continuing motivations to lead. Other questions explored what the teachers thought was distinctive about teacher leadership; how it developed; how it contributed to schoolwide reform; and the extent to which teacher leadership was a preparation for positional roles.

Insights gained

A more detailed account of the teachers' responses to these interview questions is provided in Lovett (in press). For the purpose of this paper, I will summarise the key learnings about the concepts of teacher leader and teacher leadership. Teacher interviewees are referred to by the pseudonyms 'Steven', 'Robyn' and 'Ruby'.

The scope of teacher leadership was accepted as being somewhat broad but usually informal. This broadness indicated the importance of teacher initiative in leadership work through the sharing of influence and expertise, deemed by Steven to be liberating yet also hard to specify. This view was similarly endorsed by Robyn, who commented that 'teachers are leaders every day in their classrooms, mentoring others, sharing curriculum expertise and taking on projects in their departments or in the community'. Her view makes me wonder if the term, 'teacher leader' is redundant, given that every teacher could be considered a leader by default. Similarly, according to Ruby, 'If you have motivated and highly professional teachers who continually strive to improve learning outcomes for other students, I believe that means they're demonstrating the attributes of teacher leadership'. Steven said his continuing motivation to become a more effective teacher was made possible through opportunities for teacher leadership. Interactions with colleagues deepened his own knowledge as he found ways to help others. These descriptions illustrate the importance of professional learning to satisfy teachers' moral obligations to make a difference to students and their learning. The teachers interviewed saw leadership as a collective and reciprocal activity rather than defining it in reference to an individual's power, status, title or level of remuneration. When leadership work arises from acting professionally as a teacher, it is no wonder that teacher leadership is a frequently misunderstood term. Interestingly, two of the five teachers interviewed, while

holding formal leadership roles, had a clear preference for what they considered teacher leadership roles, which they said kept their connection to classrooms strong rather than compromising that connection to satisfy compliance and accountability agendas set by their managers. Their explanations of this again reinforce the divide between teaching and what is understood as leadership.

For Steven, leadership disincentives concerned job intensification. He mentioned: having increased responsibilities as a leader in addition to his responsibilities as a teacher, which had not diminished; his dislike of the notion of superiority over colleagues; the level of acceptable risk; and a lack of support from others. He claimed greater satisfaction from situations that enabled colleagues to make sense of their practice alongside each other, involving mutually reciprocal support and expertise.

In short, my search for clarity in terminology has shown that definitions linking a person to a particular leadership type remain unhelpful, for this is not what is important. Rather, the term 'leadership' is the drawcard signifying the collective work to be done and how the work requires the sharing of influence, expertise and support to be completed. Viewing leadership as activities to further student learning is quite different to the conception of a knowledgeable individual in the role of a leader, where status and position are valued over the work to be done.

My working definitions of teacher leader and teacher leadership

In an attempt to provide some clarity and resolve tensions in the terminology, I define 'teacher leader' and 'teacher leadership' as follows:

Teacher leaders are characterised by their enduring commitment to improving students' learning. Their strong sense of moral purpose is what determines their leadership activities. They develop close and collaborative working partnerships with their colleagues through their mutual interest in solving issues of practice that revolve around helping students learn. Their need for learning is met through recognition that their colleagues are a valuable source of expertise and a sphere of influence to which they themselves can contribute. This often involves visiting classrooms in action to help other colleagues plan their next steps. Teacher leaders make their own learning visible to others by actively modelling how to interrogate practice, akin to action researchers following a systematic process of data collection and review to support their colleagues. When they engage in their own leadership learning, their ability to add insights from research enhances the depth of their interactions with colleagues.

This definition stipulates a strong connection between professional learning and leadership. It depicts individuals moving outwards, seeing their colleagues as a mutual source of influence. While the term 'teacher leader' is used to highlight the people engaged in teacher leadership, it is the opportunity to make a difference to the lives of students that creates the impetus for leadership.

A reflective tool to guide teacher leadership aspirants' conceptions of leadership and their next learning focus

With student learning and achievement as the collective focus, I now share details of how a reflective tool or heuristic can be used to raise awareness of what it means to lead and the scope of leadership work. I argue that such a tool may serve a useful purpose in helping individuals to recognise their leadership learning knowledge needs. This heuristic categorises the knowledge needed under five focal points: people, place, system, self and pedagogy. While the first four of these focal points are attributed to the work of Clarke and Wildy (2011), the addition of pedagogy as a fifth focal point was made by Lovett, Dempster and Flückiger (2015). This heuristic tool can be used in multiple ways by individuals to determine leadership learning already undertaken, the source of that learning and what is yet to be learnt. When analysed by cell, row, column and focal point and discussed with an experienced leader, the heuristic provides the opportunity to review conceptions of leadership at the same time as determining next steps in leadership preparation. Further details of the heuristic and its potential are featured in a journal article (see Lovett, Dempster, & Flückiger, 2015).[1]

The patterns that can emerge from this type of self-analysis allow the aspirant leader to see where the majority of their leadership learning has been focused. For example, it would be typically expected that a teacher leader would put 'Yes' most frequently in the pedagogy focal point and have few 'Yes' responses in the system focal point. The dominance of the pedagogy focal point highlights the classroom learning focus of teachers' leadership work, with its emphasis on planning and assessment processes rather than understandings of broader issues such as knowledge of legislation and regulations and of issues debated at an international level.

Conclusion

In attempting to improve the appeal of leadership work and clarify understandings of teacher leadership, I have shown that leadership need not be viewed solely in terms of upward trajectories to formal, remunerated roles. Rather it can be equally satisfying when viewed in terms of informal opportunities linking learning with leadership to enhance student learning. What is clear to me is that schools need both formal and informal leadership, but current conceptions are determined by formal positional roles rewarded in the form of title and salary. This needs to change so that informal leadership work, understood as teacher leadership, is valued as an appealing alternative to formal leadership work—and, more importantly, as an essential form of leadership.

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1 To view the full table 'Operational version of a heuristic tool to aid reflection on leadership learning', see Lovett, Dempster, & Flückiger, 2015, at http://www.tandfonline.com/doi/figure/10.1080/19415257.2014.891532

Leading age-appropriate pedagogies in the early years of school

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Abstract

There is increasing pressure on leaders and teachers to improve the academic achievement of children in the early years of school. Alongside this is recognition that social and emotional development are the important drivers of children's school and lifetime success. This paper reports on the design and leadership of the pilot phase of the Age Appropriate Pedagogies program commissioned by the Queensland Department of Education and Training to refocus pedagogical practices in the early years of school. This refocus was deemed to be necessary in order to achieve strong academic outcomes while ensuring that children's holistic development remained a key component of all learning and teaching. The program was developed by a Griffith University research team using an innovative research-informed and research-led design framed around the core premises that underpin Fullan's theory of action for educational change. The program consisted of both professional learning and research, with these two components being inextricably linked via school-based action research projects. Findings from the pilot, conducted in 45 state schools across three regions, illustrate the positive effects that can be generated when systems, schools and universities work together in a research and professional learning partnership

Background

Internationally, economic and social investment agendas have identified the importance of early childhood education in improving life prospects for all (Heckman, 2011). However, accompanying this recognition has come increasing pressure on leaders and teachers to improve the academic achievement of children in the early years of school (Irvine & Farrell, 2013). As a consequence, teachers in these early years are being drawn into a wider school performativity culture and using increasingly formal and didactic methods of teaching (Roberts-Holmes, 2016). Such methods are often in conflict with the natural learning strategies of young children that include investigation, action, creativity, dialogue and play (Broström, 2017), making the transition to school more difficult for some children (Dockett, Petriwskyj, & Perry, 2014).

Children's successful transition to school and the development of strong social, physical, emotional and cognitive competencies, outlined in the *Melbourne Declaration on Educational Goals for Young Australians*, are seen to support school completion, tertiary education, and citizenship (Ministerial Council on Education, Employment, Training and Youth Affairs, 2008). To develop such competencies, and the knowledge and skills needed for success in the 21st century, children need activities that engage and stimulate high levels of concentration, interest, enjoyment and challenge (Shernoff, Abdi, & Anderson, 2014).

Direct teaching or instruction that is narrowly focused on the achievement of specific curriculum goals, especially those that are emphasised in national testing processes, is therefore insufficient. Instead, teachers need to employ a repertoire of pedagogies that take into account the interests, capabilities and characteristics of individual learners, as well as the context and purpose for their teaching. With this in mind, the Queensland Department of Education and Training (DET) engaged researchers from Griffith University to design the Age Appropriate Pedagogies Program. The program engaged system leaders, school leaders, and researchers working together to support Foundation (Preparatory or prep) teachers in the use of age-appropriate pedagogies to teach the Australian Curriculum. The program was piloted in 45 state schools within three regions of Queensland in 2015, and trialled in 115 state schools and eight independent schools in 2016. The 2015 design and pilot of the program are the focus of this presentation.

Age Appropriate Pedagogies Program

The design of the Age Appropriate Pedagogies Program was underpinned by three principles. The first was the importance of research-informed practices. All participants had access to a foundation paper providing a synthesis of key international research relating to early years' pedagogies (Queensland Department of Education and Training, 2015). The second principle was the value of action research as a vehicle for both informing and leading change processes. Teachers and school leaders were co-researchers, creating and implementing their own action research. The third principle was an appreciation of the potential for positive impacts when there is true collaboration between systems, schools, and universities. Stakeholders at all levels of the system worked together.

The program was further framed around the following seven core premises that inform Fullan's (2007) theory of action for educational change:

1. a focus on motivation—without individual and collective motivation improvement is not possible
2. capacity building with a focus on results—strategies that increase the collective effectiveness of a group
3. learning in context—learning in the settings where you work
4. changing context—changing the larger school context and building capacity laterally, with schools and districts learning from each other
5. a bias for reflective action—doing, reflection, inquiry, evidence, more doing
6. tri-level engagement—within school and community, region and state
7. persistence and flexibility in staying the course—building capacity to keep going over time in the face of inevitable barriers.

Three components were utilised in the program's design: a literature review; a professional learning program; and a research process that both informed and led the change. These components were inextricably linked, because the professional learning was initially informed by the review of the literature and then extended as teachers and leaders engaged in school-based action research projects. A wrap-around study, conducted by the research team, including surveys and interviews, further informed the ongoing program. Each of the components is outlined briefly.

Literature review

A meta-analysis of more than 100 papers drawn from recent international research about effective pedagogies in the early years was conducted and findings incorporated in a foundation paper (Queensland Department of Education and Training, 2015). Within it, 10 large-scale research studies were of particular importance in identifying key messages that contributed to an overarching notion that a range and balance of pedagogies is necessary in the early years of school.

The 10 key messages were:

1. A balanced repertoire of age-appropriate pedagogies is needed to ensure that educators are responsive to learners and fulfil teaching goals.

2. A balance is needed between holistic development and academic goals in order to give children a strong foundation for success at school and in later life.

3. A balance is needed between child-initiated and adult-initiated learning experiences in order to recognise children's agency and promote their capabilities.

4. Positive personal relationships among teachers and peers are needed to foster motivation to learn, social collaboration, engagement and enjoyment.

5. Playfulness should pervade learning and teaching interactions.

6. High-quality verbal interactions are needed for sustained shared thinking in collaborative learning.

7. Adult leadership and scaffolding is needed for cognitive challenge and the development of higher-order thinking.

8. Opportunities for active learning are needed in real-life, imaginary, spontaneous and planned experiences.

9. A change in pedagogies in the early years has a flow-on effect for the following year levels that must be considered and factored in to the provision of training, resources and support.

10. Professional demands on teachers need to be supported and the lead-in time required to establish new approaches recognised.

As these messages suggest, selecting and utilising a range of age-appropriate pedagogies is complex but essential, in order to ensure that teaching is responsive to learners and attends to holistic and academic goals. As Luke (2013) stresses, there is no single effective strategy, approach or method of teaching, for singular approaches ignore the range of children, cultures, communities, age and developmental levels, subjects, skills and knowledges in the classroom.

Professional learning

The professional learning program consisted of two regional workshops. The first aimed to create the impetus for change, ensure teachers and school leaders embraced the rationale for range and balance in early years' pedagogies, and introduce action research. The second, at the end of the pilot, provided an opportunity for leaders and teachers to share their action research findings and change journeys.
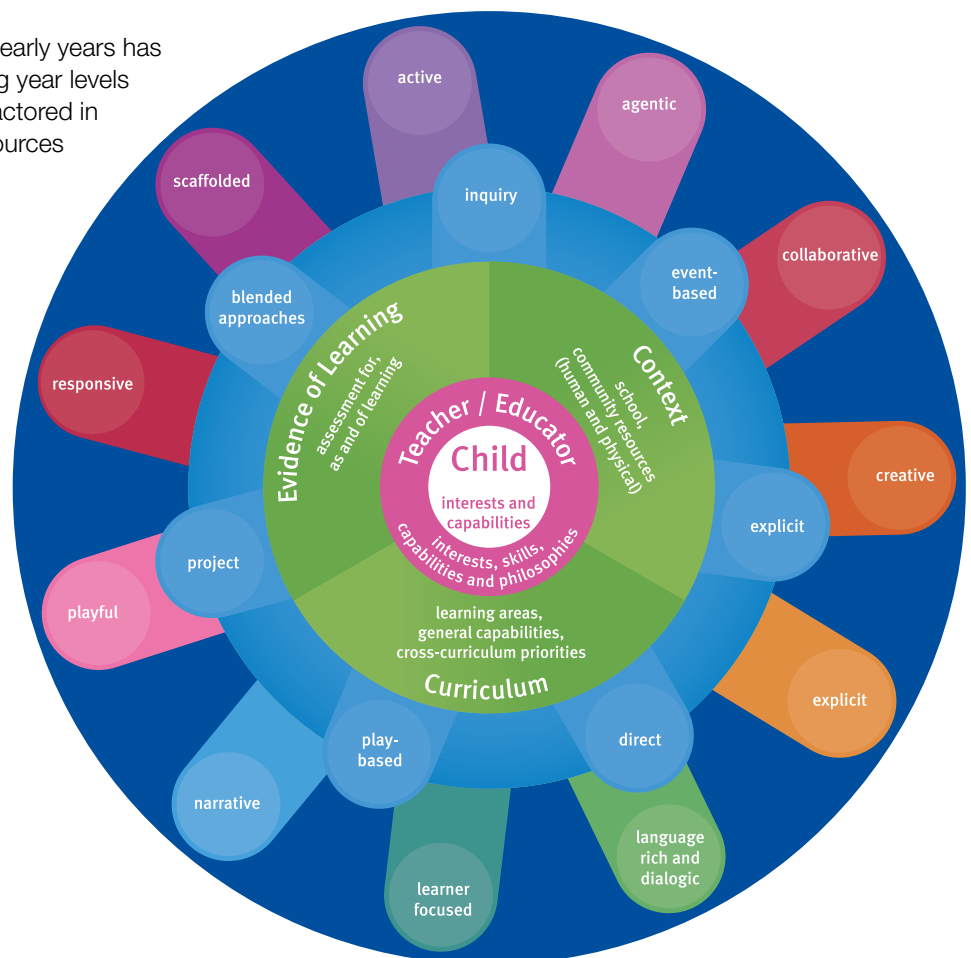
Figure 1 The Age Appropriate Pedagogies Program conceptual framework

Source: Queensland Department of Education, 2016, p. 7

In addition, teachers and leaders in schools were supported by four individualised on-site support visits from the researchers. Each visit was responsive to individual school priorities, and involved consulting with members of the school leadership team to discuss ongoing support, as well as meeting with classroom teachers to scaffold their practice. Teachers were further supported by regionally-based pedagogical coaches funded by DET and print resources that included professional readings, reflection frameworks, and evaluation tools created specifically for the pilot by researchers and the Learning Pathways team within DET. Additional support, offering specific guidance as requested, was provided by the researchers through email communication. The role of the researchers in such cases was that of a 'critical friend', offering encouragement, provocation and constructive feedback.

A deliberate feature of the professional learning component was the construction of learning teams that included the principal, early years' teachers, and where possible, other staff involved with the early years. This approach was adopted because Australian and international research on building school-wide capacity for improvement suggests conditions associated with school organisation, the task and the individual are important to manage change, improve classroom practices, and student outcomes (Thoonen, Sleegers, Oort, Peetsma, 2012).

The professional learning process was further supported by a conceptual model that places the learner's interests, capabilities, and experiences and understandings of school and schooling at the centre of teacher planning and decision-making (see Figure 1).

The model is centred first on the interests and capabilities of the child, but second, on the beliefs and philosophies, skills, capabilities and experiences that teachers bring to the teaching process. These elements inform and influence the teacher's pedagogical relationship with the children and their learning.

Other components of the model recognise the influence of context (including school and community location, ethos, culture and diversity, and the human and physical resources available within that context); curriculum (considerations of content, focus, skills, knowledge, general capabilities, cross-curricular connections, standards and criteria); and evidence of learning progress (identifying and recording children's learning and development).

The final two layers of the conceptual model represent the (non-exclusive) approaches and characteristics of age-appropriate pedagogies that were identified in the literature. These are presented as flexible and movable so that purposeful selections that support children's learning can be made.

The model identifies 11 characteristics of age-appropriate pedagogies: active, agentic, collaborative, creative, explicit, language-rich and dialogic, learner-focused, narrative, playful, responsive, and scaffolded. It identifies seven approaches: inquiry learning, play-based learning, project-based, explicit instruction, event-based, direct teaching or instruction, and blended. The model suggests that when a range of approaches and characteristics are selected and utilised over time, balance is achieved.

Research process

The pilot consisted of two distinct forms of research: school-based action research, designed and implemented by teachers and school leaders, which generated unique and grounded understandings of the processes, challenges, and impact of working toward a pedagogical refocus; and wrap-around research conducted by the university research team designed to gain broader understandings about the refocus processes and outcomes. An action research approach was used for the school-based research because, as an embedded practice, it provided opportunities for teachers to examine and reflect on their teaching practices, while also having the capacity to 'empower, transform and emancipate individuals' (Creswell, 2012, p. 597).

For the wrap-around research, a case study approach was employed, with the case being bounded by the scope of the pilot. The following question framed the investigation initially: 'How best can regions and schools support prep teachers to re-focus on and incorporate a range of age-appropriate pedagogies in their programs to achieve expected student outcomes?' This question was later broadened to include the impact of participation on teachers and children.

Data sources included interviews with school and regional team members, questionnaires and the interim and final reports generated by each school. As such, the bulk of the data collected was phenomenological in nature for the goal of this over-arching study was to generate an understanding of the participants' experiences as they described them. Although these data privilege the perceptions of individuals, triangulation of multiple data sources ensured a robust and comprehensive examination of multiple data sources and strengthened the validity of the research. Statistical analysis of questionnaires and content analysis of the school reports and transcripts of interviews with key stakeholders was undertaken to generate the findings.

Findings

The following findings are drawn from the *Age Appropriate Pedagogies Program Progress Report*

2016 (Queensland Government Department of Education and Training, 2016), a publicly available document produced by the Queensland Government Department of Education in response to the detailed report created by the research team.

In this section of this paper, the findings outlined in that summary report have been reconfigured to align with the premises that underpin Fullan's (2007) theory of action for educational change. This structure has been applied in an attempt to make explicit the potential of the program's design for effecting educational change.

Motivation and engagement

Leaders reported that the alignment of messaging from all levels of the system contributed to schools' engagement with the program, with the strong authorising environment motivating the leaders to make a commitment to more holistic views about teaching and learning. The clearly articulated and research-informed evidence base was also important in building and sustaining participation as it provided a high degree of validity for school and system leaders (p. 12). Engaged leaders were central to the program as their role in driving change, maintaining consistency and embedding change within existing school priorities was imperative to the change management process (p. 13).

Teacher motivation and engagement with the Age Appropriate Pedagogies Program were reported as high. Working with age appropriate pedagogies re-affirmed their enjoyment and commitment to teaching in the early years. Approximately 98 per cent of teachers agreed or strongly agreed that application of age-appropriate practices enhanced their motivation and professional engagement. High motivation and engagement were also stimulated by close alignment between the program frameworks and teachers' existing philosophies.

Teacher responses to post-study questionnaires indicated they are happiest and feel a stronger sense of professional identity and agency when there is close alignment between their own deeply held beliefs about learners and learning, and the approaches and practices they are implementing.

Responses to a question about the characteristics 'affirming my early years' philosophy' drew strong agreement from teachers. Again, 98 per cent agreed or strongly agreed with the statement. While teachers acknowledged the strong alignment with personal philosophies, they also acknowledged the need to adapt or change their current practice (p. 13).

Capacity building with a focus on results

Many leaders reported a commitment to maintaining high expectations of learners and retaining a focus on delivering a rigorous curriculum, in line with the stated expectations of the Australian Curriculum. To this end, emphasis was placed on understanding the pedagogies and approaches as tools to support teaching of the curriculum. Building capacity within school teams and regions was seen as a priority to 'future proof' the program in any further implementation (p. 12).

Learning in context

Some teachers reported that they were afforded opportunities to engage in continuous and sustained learning about their practices in the classroom settings in which they work, as well as opportunities to observe their colleagues and teachers in other schools. These responses went largely unreported in the *Age Appropriate Pedagogies Program Progress Report 2016*. However, leaders acknowledged the program as both 'flexible' and 'responsive' to the dynamic and changing nature of schools and their emerging needs (p. 12).

Changing context

Fullan proposed that theories of action must have the capacity to change the larger context and to build capacity laterally, so that schools and regions learn from each other. While this, too, was not reported in the *Age Appropriate Pedagogies Program Progress Report 2016*, the importance of building capacity within school teams and regions to 'future proof' the program in any further implementation was reported as a priority (p. 12).

A bias for reflective action

Teachers acknowledged the impact self reflection had on their practice. They found it useful in aligning philosophy, practice and curriculum knowledge. Some teachers also found this challenging, with (for example) one teacher revealing that deep reflection had forced her to confront the fact that there were weaknesses in her teaching ability and that she had a distance still to travel (p. 14).

Tri-level engagement

Leaders reported that a strong authorising environment was appreciated, and that the alignment of messaging from the highest levels down contributed significantly to schools' engagement with the program (p. 12). Strategies that promoted 'mutual interaction and influence' (Fullan, 2007, p. 11) within and across the state, regional and school systems, however, were not reported.

Persistence and flexibility in staying the course

As the Age Appropriate Pedagogies Program grew from a pilot phase to a trial in 2016, adjustments and refinements were made to strengthen opportunities for

mentoring of teaching teams, professional learning and regional capacity building (p. 16). The persistence and flexibility needed over time to maintain the focus on age-appropriate pedagogies in the early years of school has yet to be tested.

Discussion and conclusion

The Age Appropriate Pedagogies Program was designed to be both research-informed and research-led, with the professional learning and research components of the program inextricably linked through school-based action research projects. This design positioned the schools and university research team as co-researchers, affording opportunities for mutual collaboration and responsiveness. In an attempt to make explicit the potential of such a design to facilitate change, the core premises that underpin Fullan's (2007) theory of action for educational change were used to frame the findings. Although limited by the summary nature of the *Age Appropriate Pedagogies Program Progress Report 2016*, findings illustrated some of the positive effects that can be generated when systems, schools and universities work together in a research and professional learning partnership.

Acknowledgement

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Leadership that transforms schools and school systems

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Abstract

This paper will report on the findings of four international research projects on leadership in high-performing school systems around the world. The session will focus on building the capacity of school leaders to exercise professional autonomy and how different levels of government achieve strategic alignment among policies in their efforts to lift performance.

The paper summarises findings reported in *The autonomy premium* (2016) along with the findings of a national survey of principals in Australia. The major part of this paper is devoted to comparing Australia on 15 benchmarks derived from international studies in 2017 in Australia, Canada, China (Hong Kong), England, Estonia, Finland, Israel, Japan, Korea, New Zealand, Singapore and the United States.

The key message is that Australia will not become one of the top 10 high-performing systems unless there is a transformation of approaches to leadership and leadership development at all levels, and unless due account is taken of outstanding practice in schools and school systems around the nation.

Innovation and the resourcefulness of leaders abounds, but these must be scaled up. This paper will explore the challenges and priorities for governments and leaders in schools and school systems.

Foundations

The framework for these studies was established in research in 2007 in the International Project to Frame the Transformation of Schools, conducted in Australia, China, England, Finland, United States and Wales. Findings were published in *Why not the best schools?* (Caldwell, 2008). It was concluded that:

> Schools that have been transformed or have made good progress to transformation are adept at strengthening and aligning four forms of capital: intellectual capital, social capital, spiritual capital and financial capital, achieving this strength and alignment through outstanding governance. (Caldwell, 2008, p. 10)

'Intellectual capital' refers to the level of knowledge and skill of those who work in or for the school. 'Social capital' refers to the strength of formal and informal partnerships and networks involving the school and all individuals, agencies, organisations and institutions that have the potential to support and be supported by the school. 'Spiritual capital' refers to the strength of moral purpose and the degree of coherence among values, beliefs and attitudes about life and learning (for some schools, spiritual capital has a foundation in religion; in other schools, spiritual capital may refer to ethics and values shared by members of the school and its community). 'Financial capital' refers to the money available to support the school. 'Governance' is the process through which the school builds its intellectual, social, financial and spiritual capital and aligns them to achieve its goals.

A finer-grained analysis of what these entail and a more nuanced view of school autonomy has emerged in recent studies.

A nuanced view of autonomy

This framework described in Caldwell (2008) was the starting point for a second series of studies from 2014–17 as part of the International Study of School Autonomy and Learning (ISSAL), which brought together a team of researchers from Australia, Canada, China (Hong Kong), England, Finland, Israel and Singapore. Findings for Australia were included in two publications: a book entitled *The autonomy premium* (Caldwell, 2016a) and a report of a national survey of principals entitled *What the principals say* (Caldwell, 2016b). The distinction between structural autonomy and professional autonomy was an important finding.

'Autonomy' refers to the decentralisation from the system to the school of significant authority to make decisions, especially in respect to curriculum, pedagogy, personnel and resources, within a centrally determined framework of goals, policies, curriculum, standards and accountabilities.

'Structural autonomy' refers to policies, regulations and procedures that permit the school to exercise autonomy. Schools may take up such a remit in a variety of ways, or not at all, including ways that are ineffective if the intent is to improve outcomes for students. The granting of autonomy may make no difference to outcomes for students unless the school has the capacity to make decisions that are likely to make a difference and uses that capacity to achieve this end.

'Professional autonomy' refers to teachers and principals having the capacity to make decisions that are likely to make a difference to outcomes for students, and this capacity is exercised in a significant, systemic and sustained fashion. Professional autonomy calls for the exercise of judgement, with a high level of discretion in the exercise of that judgement.

International benchmarks

Two projects have been mounted in 2017: one dealing with strategic alignment among different levels of government, and the other with programs for preparation and ongoing development of teachers and principals.

Narratives have been prepared on strategic alignment in 12 countries, 10 of which performed at a significantly higher level that Australia on at least one of the tests in PISA 2015 and TIMSS 2015; the 12 countries are Australia, Canada (Alberta, British Columbia and Ontario), China (Hong Kong), England, Estonia, Finland, Israel, Japan, Korea, New Zealand, Singapore and the United States (Massachusetts). The narratives reveal that different levels of government make provision and provide support for school autonomy in different ways. Based on principals' self-reports of school autonomy in PISA 2015, it was evident that some of the 12 countries were above and some were below the OECD average for school autonomy.

Fifteen benchmarks were identified, with 12 that facilitate comparisons in accounting for current high performance and three on roles in adaptability or sustaining high performance in the longer term. These benchmarks are as follows:

Benchmarks in securing current levels of performance

1. Trust
2. Constitutional arrangements
3. Number of levels of government
4. Educational history
5. Establishment of current roles
6. Societal valuing of education
7. Priority attached to the human resource
8. Local government
9. Number of schools administered

10. Disruptive change in education
11. School autonomy
12. Professional capacity

Australia falls short in the value it places on its schools

Where does Australia stand on how it values its schools among the 15 benchmarks? I have selected six: trust; educational history; societal valuing of education; priority attached to the human resource; innovation in education; and alignment of education, economy and society. The benchmarks are not values in themselves, but there are values at play in the way we deal with them in policy and practice.

Trust among stakeholders is invariably listed as a characteristic of outstanding performance. Narratives on policy in school education in several countries referred to a high level of trust. Trust is particularly evident in some of the world's top-performing school systems, including Estonia, Finland, Japan and Singapore. There is evidence that principals in Finland do not engage in detailed oversight of teaching and learning to the extent they do or should do in many other countries, including Australia, because they trust their teachers to know what to do and when to do it; this is related to outstanding programs in initial teacher education and the high level of professional autonomy of teachers.

Public discourse and media headlines often suggest a lower than desirable level of trust in schools and school systems in Australia. Frankly, I have seen no counterpart to the continuous battles between different levels of government that characterise the scene in Australia, and this does little to enhance public trust. I include here the debates and conflicts about funding for schools that have raged for more than 50 years.

Most of the high-performing countries have a long educational history extending over many centuries. Australia, in contrast, has had systems of public education for less than 150 years. Australia does not value or have confidence in its public schools to anywhere near the same extent as evident among the top performers, where the importance of public education was established or resolved long ago. Settlement about the roles of public and private education has not been reached in Australia.

This does not mean that Australia will or should end up with close to 100 per cent of schools in the public sector should it become a high-performing nation. After all, in another international comparison, less than 10 per cent of students in high-performing Hong Kong attend a state-owned school. The large majority attend schools owned and operated by a private or not-for-profit entity, including churches.

Associated with the benchmarks of trust and educational history is societal valuing of education. While there is acceptance of education's importance in Australia, we fall short of the top performers in this regard.

Some high-performing countries realise that the human resource is the most important resource in securing their futures. Singapore is the stand-out example because the country has no resources other than its people. Education has been a driving factor in the journey from independence in 1965, becoming one of the region's economic powerhouses. The carefully designed and integrated approach to initial teacher education and leader development in Singapore is among the world's best, as highlighted in a recent report (Darling-Hammond et al., 2017).

The OECD reports that innovation in schools is generally more extensive than is often understood, and this is the case in Australia. An important issue is the extent to which innovation in schools contributes to innovation in a general sense. It is noteworthy that all high-performing nations in PISA and TIMSS are in the top 25 countries on the Global Innovation Index (Australia is 19th of 126 countries/economies).

An interesting variation on the language of innovation was provided by Canadian Prime Minister Justin Trudeau, who noted in a speech at the World Economic Forum in 2016 that Canada, like Australia, had been known up to that point for the economic strength derived from mining and other commodities. Rather than call for innovation to generate other sources of economic strength, he referred to resourcefulness:

> Canada was mostly known for its resources. I want you to know Canadians for our resourcefulness … We have a diverse and creative population, outstanding education and healthcare systems, and advanced infrastructure. (Trudeau, 2017, p. 343)

Resourcefulness may be a helpful concept for Australians, who often baulk at the idea of innovation.

In most of the top-performing nations, there is a strong alignment of education, economy and society. Where that alignment is not strong, there is a high priority in policymaking to make it so. It is most striking in countries where the human resource is pre-eminent. In Australia, we currently place a higher value on university education than on vocational education. However, many of the top-performing countries have a system of basic education for nine years, after which students make a choice between upper secondary education and

polytechnic education. They may move from one stream to another if they change their minds, as is possible between continuing in universities or polytechnic colleges. Finland exemplifies this approach.

Did Australian states make the wrong decision to abandon technical schools in favour of a single secondary stream? A modern polytechnic at the upper levels of schooling could be state-of-the-art in terms of curriculum, pedagogy, facilities and equipment, and might make a major contribution in addressing concerns about performance in STEM or alleviating the need for overseas recruitment.

The agenda for enhancing the value Australia places on its schools can be described in straightforward terms:

- bipartisan effort everywhere
- serious reform of initial teacher education
- empowering schools through higher levels of professional autonomy
- declaring and acting on recognition that our most importance resource is the human resource, and not waiting around for another boom—mining or otherwise
- invigorating an innovative culture in our schools by encouraging and rewarding resourcefulness
- securing a better alignment of education, society and economy, especially in rebalancing upper secondary and polytechnic education as well as university and vocational education.

What structural arrangements are best?

Two benchmarks concern structural arrangements, one of which relates to the number of levels of governments shaping what occurs in schools. Three federations were considered in the 2017 study. The federal government in Canada may play no part in education. Federal governments in Australia and the United States play an important role by making funds available, to which strict conditions are attached. Local government has a role in most countries under consideration, with this being a constitutional requirement in Finland. Local government is not mentioned in the Constitution of Australia and plays a minimal role.

Another benchmark concerned the number of schools administered by the controlling level of government. This is strikingly small in countries like Estonia and Finland (municipal government), and to some extent England (local authority) and Canada and the United States (school district). It is very large in some states in Australia—notably in New South Wales and Victoria, where the state government controls thousands of schools. Geographical distances are especially large in states like Queensland and Western Australia. Regional

levels of administration in state bureaucracies are not considered levels of government.

Conclusion

Principals can lead the effort in their schools and communities to increase the value this country places on its schools, but this is a cause that demands commitment and effort on an unprecedented scale, and a profound change in culture if Australia is to become the great nation we want it to be.

Leaders at the highest levels must now give thought to structural arrangements that suit the 21st century. This in no way diminishes what has been achieved over nearly 150 years, but serious questions must now be asked and answered to ensure that Australia can rise to the level of the top 10 high-performing nations.

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Case studies

Developing evaluative thinking and evidence-based practice: A synthetic case study

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Dr Tim Wyatt began his career as a primary school teacher in 1979. Since then he has held a range of positions within the New South Wales Department of Education, with roles such as Principal Education Officer — Special Programs and Chief Education Officer — School Improvement. He has held senior leadership roles in several government departments in New South Wales and has led and participated in government evaluation projects both nationally and internationally. He has worked with a range of international organisations, including the OECD, the United States Department of Education and the United States National Academy of Public Administration, particularly in the development of performance measurement and reporting methodologies at local, systemic, national and cross-national levels.

Tim has been a partner in Erebus International, an independent consultancy firm, since 1999. In that role, he has contributed to over 200 major evaluation projects for a wide range of government and non-government agencies. Tim's experience in central government agencies provides a unique appreciation of the policy context of evaluation findings.

As an active contributor to the education research literature, Tim's current interests include the role of school systems in large-scale school improvement initiatives, early years literacy and numeracy learning, and 21st-century learning.

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Abstract

The NSW Literacy and Numeracy Action Plan, which operated from 2012–16, provided $261 million to improve literacy and numeracy learning in 448 of the most disadvantaged and lowest performing schools across the three education sectors in New South Wales.

A key objective of the Action Plan was to enhance teacher and school leader capacity, including the ability to apply evidence-based practices and evaluative thinking to planning and programming for teaching and learning at a classroom level and to planning and decision-making at a whole-school level.

The concept of 'evidence-based practice' is part of common parlance in Australian schools; however, in many of the schools targeted by the Action Plan, authentic application of the principles of evidence-based practice was not well developed at the commencement of the initiative, and in some cases the concept was misunderstood.

This paper draws on data gathered during more than 70 schools visits and six longitudinal case studies conducted as part of the evaluation of the Action Plan. It develops a synthetic case study of how successful schools have gone about building the confidence and competence of teachers and school leaders to embrace the new ways of thinking and working required to become true evaluative thinkers. What occurred in many of the schools visited can be described as nothing less than a complete paradigm shift in how the schools operated, providing a much richer, more engaging and relevant learning experience for their students.

The case study will discuss the key role of instructional leaders in providing the professional learning necessary to underpin the new practices; the use of data systems to provide authentic evidence for planning and teaching; and the implications for adoption of differentiated teaching, personalised learning and targeted interventions from adoption of the new models.

Introduction

Evaluative thinking is now considered to be one of the key competencies of school leaders (Centre for Educational Statistics and Evaluation [CESE], 2015). It is recognised, for example, in the Australian Institute for Teaching and School Leadership (AITSL, 2014) standard for principals, which highlights the value of principals who 'evaluate outcomes and refine actions as change is implemented … [and] take account of the impact of change on others, providing opportunities for regular feedback' (p. 17).

The concept of evaluative thinking is not new, and indeed, the program-planning evaluation cycle and the closely related action research cycle have been popular since the 1980s. The importance of establishing processes for continuous improvement has likewise been long recognised (popularised by the total quality management movement of the 1990s). The reality, though, is that while these concepts have been long known, their application at classroom level (and particularly in Foundation to Year 2 [F–2] classrooms) has often been less well developed. Evaluation has often been viewed by teachers as an afterthought or as the province of school leaders, and it has often been disconnected from day-to-day lesson planning and delivery. Many teachers, for example, developed and implemented teaching programs they were confident

in delivering regardless of the actual impact on or relevance to student learning.

This paper describes how F–2 teachers' capacity for applying evaluative thinking was developed as one of the outcomes of the NSW Literacy and Numeracy Action Plan, which operated in 2012–16. The Action Plan involved 448 schools and 41 000 students across the three education sectors in New South Wales, with an allocated budget of $261 million to improve literacy and numeracy learning in the most disadvantaged and lowest performing schools in the state. These schools were often characterised by high staff turnover and by high numbers of beginning teachers and inexperienced leaders. A key objective of the Action Plan was to enhance teacher and school leader capacity, including the ability to apply evidence-based practices and evaluative thinking to both classroom-level planning and programming for teaching and learning and whole-school planning and decision-making.

Targeted schools were provided resourcing to:

- support the explicit assessment of the learning needs of students, especially on entry to Foundation
- provide classroom-based professional development for teachers in personalised learning and diagnostic assessment

- adopt the use of a three-tiered response to intervention for those children who need special attention
- focus on whole-school instructional leadership.

The Action Plan aimed to increase the literacy and numeracy outcomes for students in the targeted schools and to reduce the influence of socio-economic status as a key determinant of students' academic performance.

Literature

Evaluative thinking can be defined as a disciplined approach to inquiry and reflective practice that helps us make sound judgements using good evidence as a matter of habit.

Earl and Timperley (2015) note that:

Evaluation methods and evaluative thinking provide the tools for systematically gathering and interpreting evidence that can be used to provide information about progress and provide feedback loops for refinement, adjustment, abandonment, extension and new learning. … Evaluative thinking contributes to new learning by providing evidence to chronicle, map and monitor the progress, successes, failures and roadblocks in the innovation as it unfolds. It involves thinking about what evidence will be useful during the course of the innovation activities, establishing the range of objectives and targets that make sense to determine their progress, and building knowledge and developing practical uses for the new information, throughout the trajectory of the innovation. Having a continuous cycle of generating hypotheses, collecting evidence, and reflecting on progress, allows the stakeholders (e.g., innovation leaders, policymakers, funders, participants in innovation) an opportunity to try things, experiment, make mistakes and consider where they are, what went right and what went wrong, through a fresh and independent review of the course and the effects of the innovation.

The recent emphasis on evaluative thinking and evidence-based practices owes much to the work of John Hattie (2012), described in his book *Visible Learning*. While the term 'visible learning' has itself taken on several different but related meanings since, the mantra that teachers should 'know thy impact' has been taken up extensively by schools participating in the Action Plan, even appearing as a poster on staffroom walls. This exhortation reflects Hattie's (2012) finding that 'those teachers who are students of their own effects are the teachers who are the most influential in raising students' achievement' (p. 24).

Other researchers have reached similar conclusions. Timperley and Parr (2009), for example found that

'effective teachers use data and other evidence to constantly assess how well students are progressing in response to their lessons'. Robinson, Lloyd and Rowe (2008) likewise report that effective principals constantly plan, coordinate and evaluate teaching and the use of the curriculum with systematic use of assessment data.

According to the NSW Department of Education (2017), engaging in evaluative thinking requires teachers and school leaders to:

- suspend judgement, considering alternative explanations and allowing new evidence to change our mind
- question assumptions, particularly about the pathway of cause and effect
- select and develop solutions that are informed by a strong evidence base and are responsive to our context and priorities
- value the lessons we can learn from all our experiences—disappointments as well as triumphs
- wrestle with questions of impact and effectiveness, not just activity and implementation
- maximise the value of existing data sources already available to us, mindful of their limitations
- work to improve the strength of our evidence base as we go.

While the literature on the merits of evaluative thinking is extensive and abounds with descriptions of what it involves as well as case studies of change in individual school and teacher practice, there are fewer examples of how school systems have attempted to develop and embed evaluative thinking on a large scale.

Methodology

This paper draws on data gathered during more than 70 schools visits and six longitudinal case studies conducted as part of the evaluation of the Action Plan (Erebus International, 2017). It develops a synthetic case study of how successful schools have gone about building the confidence and competence of teachers and school leaders to embrace the new ways of thinking and working required to become true evaluative thinkers.

During the school visits and case studies, interviews and focus groups were conducted with principals, instructional leaders, school leaders, classroom and support teachers and paraprofessionals, and parents where available. The interviews were conducted by the two principal researchers using semi-structured interview schedules, which were provided to participants in advance.

In later years of the evaluation, principals and instructional leaders of schools participating in the case studies completed extensive pre-visit questionnaires in relation to specific areas of interest to the evaluation, including expenditures and use of intervention programs.

The school visits also included classroom observations and review of school documentations, including school plans, annual reports, data collections and so on. The overall evaluation also collected data using online questionnaires, analysis of student outcomes, document analysis and stakeholder interviews. Data from all sources was triangulated to draw conclusions about changes that had occurred during the Action Plan and conclusions about its effectiveness.

Findings of research

The case studies and school visits revealed that there had been substantial changes in teachers' and schools' use of data and evaluative methods over the course of the Action Plan, and participants had developed a stronger appreciation of the relationship of student achievement data and lesson planning and implementation. The following is a summary of the key actions, common in the schools visited, that led to these changes. These actions have been described in terms of four key themes:

1. Provision and use of tools to enable teachers to constantly identify student learning needs and monitor individual student progress:

   - The Action Plan introduced teachers to two key tools. The first tool was the literacy and numeracy continuums, which set out standards for student achievement at key milestones. The continuums derive from the relevant syllabuses and specify what skills and knowledge students should be able to demonstrate. The methodology behind the continuums requires teachers to make judgements based on their observation of individual students on a regular basis. The judgements were arrived at by various means, including direct questioning, teacher-made or standardised assessments and analysis of student work samples.

   - The second tool was the concept of data walls, which provided a visual display of the status of each student and the progress they had made since the last reporting period. Many schools embellished or enhanced the data wall entries with additional information—for example, about the intervention programs the student was receiving.

2. Regular analysis of student achievements with instructional leaders followed by reporting every five weeks of individual student achievement:

   - The driver for this change was the requirement for schools receiving funding from the Action Plan to report to their system (every five weeks for government schools and every 10 weeks for non-government schools) on the number of students at each continuum level in reading, writing and numeracy. Systemic monitoring and feedback to individual schools was a powerful

influence on school practice and provided a strong incentive for schools to act on their data. This was the first time that schools had been held accountable for F–2 student achievement, and the first time that a consistent form of data was available for this purpose. The feedback to schools also allowed them to benchmark themselves against the cohort as a whole, as well as the implicit standards defined by the continuums. This was, for many teachers, the first time that they had any sense of what sort of learning growth was 'normal' or possible, as participating schools typically had a high proportion of teachers and leaders with limited experience.

   - The role of the instructional leaders funded by the Action Plan was pivotal in establishing processes through which data was gathered, analysed and reflected on by teachers. Additional funding from the Action Plan (especially in government schools) allowed purchase of release time on a weekly or fortnightly basis for teachers to meet with the instructional leader and often the relevant school leader on a year level or stage basis to discuss student progress and to determine the next steps.

   - Instructional leaders typically adopted a formal process for documenting and following up on these discussions. The emphasis from the outset was to focus on the teaching and not the teacher to reduce the level of threat felt by some teachers in making both their teaching methods and students results open and transparent. Teachers often spoke about there being 'no place left to hide', but at the same time they felt better supported than ever as the collaborative nature of the discussions developed a culture of mutual support and a collective sense of responsibility for each individual student's learning.

3. Targeted professional learning opportunities for all teachers to build their capacity in the key elements of evaluative thinking, including differentiated teaching and personalised learning:

   - A considerable amount of time and professional learning (often more than 12 months) was required to ensure all teachers had a common understanding of the continuum standards and were capable of making consistent judgements. This involved, for example, comparison of student work samples demonstrating certain continuum standards. (Given the high level of teacher turnover in these schools, this is a never-ending process that suggests serious consideration is required about how teachers are inducted into the new way of doing business that has occurred in Action Plan schools). At a systemic level, instructional leaders themselves attended moderation sessions that ensured that judgements about achievements of standards across schools were comparable.

- The broader context of the Action Plan and its other key priorities of personalised learning, tiered intervention and increased student engagement were also key factors in helping teachers see that the time and energy devoted to developing evaluative thinking was purposeful rather than simply a bureaucratic requirement or passing fad. It is not possible to describe here all of the changes in pedagogy that occurred as a result of the Action Plan, but it is no exaggeration to say that the look and feel of the F–2 classrooms was totally transformed in the vast majority of schools. Old notions of teaching to the class average; grouping students as a means of classroom management; use of textbooks and worksheets; and at-risk students being sent to someone else to be 'fixed' have largely disappeared. Instead, the majority of classrooms now truly demonstrate what it means to be student-centred, have a growth mindset, teach explicitly and appreciate student voice.

4. Deeper understanding of the process of diagnosing student learning needs and the implications of this process for planning teaching and learning:

- There was a substantial change in the way that teachers used diagnostic assessment of students. Prior to the Action Plan, teachers used a variety of assessment tools, usually on an ad hoc basis to determine whether individual students should be referred to a specialist teacher or intervention program. Prior to schools' engagement with the Action Plan, there was little assessment carried out F–2 in a systematic way, and the data was seldom aggregated or reported a whole-school basis.

- In addition, an outcome of the processes adopted to enhance stronger evaluative thinking was that educators developed much deeper knowledge of the curriculum and much deeper knowledge of each student's needs, aspirations and abilities. The use of the data walls and regular data collections has meant that it is now much more difficult for children to 'slip through the cracks', and the teaching students receive is be more relevant, engaging and purposeful.

- The impact of these changes on students, as reported in the final report of the evaluation (Erebus International, 2017), has been a substantial improvement in the proportion of students in the participating schools who now meet or exceed the appropriate end-of-year standards.

Takeaway messages

The following points emerged as key lessons to be learned from the Action Plan experience:

- There needs to be an intellectual base to justify why changes in current practices are necessary.

Teachers and leaders need to accept the moral imperative for doing things differently from the past.

- Considerable time and effort has to be invested in developing teacher and school leader capacity to engage in evaluative thinking. This includes some of the basic concepts of data analysis, such as statistical significance, reliability of data, experimental design and inference.

- Time and space need to be created in teachers' timetables for analysis and reflection to occur. This must be seen as part of teachers' normal working day—not an add-on or extra task.

- Processes, structures and discipline are necessary to use the time effectively—and these need to be consistent across the school setting. The school leadership team has a key responsibility for developing these prerequisites for an effective culture of evaluative thinking.

- Application of evaluative thinking is best done in a collegial and collaborative setting. While an evaluative thinking capacity needs to become part of every teacher's toolkit, it is not something that can effectively be developed in isolation or in an abstract way. Teachers need to be constantly challenged in their understanding of data and supported to explore possibilities for responding to the conclusions drawn from their analysis of data. Involving all teachers in every stage of the evaluation cycle is important—otherwise, evaluation becomes 'someone else's job'. When this happens, teachers ultimately become disempowered and revert to implementing standardised programs with little ownership of the results.

- The measurement tools used to provide data to the evaluation matter. Narrow assessment instruments provide a narrow view of learning and promote 'teaching to the test'. The literacy and numeracy continuums had some inherent measurement issues (which are being addressed in current redevelopment) but were an effective foundation for fostering teachers' understanding of the linkages between the curriculum, student achievement, classroom teaching and intervention strategies.

- Evaluative thinking is a means to an end, not an end in itself. It must be focused on achieving enhanced teaching and learning practices that result in improved student learning outcomes. Unless the application of evaluative thinking is purposeful and consequential, it will remain an abstract concept or passing fad with little chance of sustainability.

- To build teachers' capacity to become productive, evaluative thinkers on a large scale, systemic leadership is required. This includes not only the provision of support material and professional learning but also strong accountability measures (including quality assurance or moderation processes) to ensure all schools understand and apply best practice.

Key points for discussion

Teachers' and school leaders' skills in relation to data analysis were observed during the evaluation to have increased considerably (often from a very low base). Data analysis and evaluation of teaching and learning were not well developed among F–2 teachers prior to the Action Plan. However, after some initial reluctance, the majority of teachers and leaders enthusiastically embraced the new opportunities provided to them. Significant changes in the way teaching and learning now occur in targeted schools were observed. Teachers' enthusiasm was spurred in part by their own observations of their success in helping students progress, in situations where improving student outcomes was formerly thought to be unachievable. The use of the data walls and continuums to provide a common yardstick for measuring progress was instrumental in this. While there has been demonstrable improvement across the state as a result of the Action Plan's emphasis on evaluative thinking, at individual school and teacher levels there are still some concerns. These include:

- the accuracy and consistency of teacher judgements against the continuum standards
- the validity of teacher analysis and attribution of causes of underachievement (including their attribution of student success to their own teaching, when it could have been due to other causes). The NSW Department of Education (2017) warns of 'cognitive biases' in interpretation, but there are other causes, including beginning teachers' lack of knowledge and experience, which may lead them to draw false conclusions from the data
- teachers' capacity to know what to do with the results of their analysis in terms of their pedagogy (i.e. to draw out the implications for subsequent teaching practice and intervention strategies). The Action Plan provided scaffolded support to enable further development in this area, but without the funding and leadership provided by this initiative, many schools will struggle to improve their practice. They are limited by their own experience.

Areas for further research

The Action Plan demonstrated that transformative change is possible at the F–2 level and has applicability at the Years 3–6 level. Whether similar processes can work as successfully in the secondary school level is yet to be tested. Secondary schools are typically less flexible and more timetable-driven than primary schools, and secondary teachers arguably have more fixed mindsets about their role in 'delivering the curriculum', particularly in the senior years. There remains a strong view among secondary school teachers that differences in student outcomes are inevitable, and that these differences are a product of individual students' effort and application or socio-economic backgrounds rather than the quality of the teaching. Changing these mindsets and transforming secondary school culture may be possible at the individual school level, but large-scale demonstration of change at a whole system level is an area that could profitably be explored further in future.

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Science of Learning Network of Schools:
The science of communities of practice

Andrew Jones
University of Melbourne

Andrew Jones is an expert in learning design and teacher professional development. He is currently completing his PhD at the University of Melbourne in the areas of learning culture and teacher beliefs, under the expert tutelage of Professor John Hattie.

He has been working in a range of school settings both as a teacher and as a school leader for more than 20 years. He led the closure and regeneration of four failing schools in the northern suburbs of Melbourne and is currently seconded to a national research project at the Australian Research Council's Science of Learning Research Centre.

He is a Research Fellow at the Melbourne Graduate School of Education, and he has a Master of Educational Leadership. He consults regularly with government, researchers and policymakers across Australia, and he has worked in New Zealand, Europe and the United States.

Andrew's research has strong application in the area of elite sport coaching development. In addition to his work with educators, he is working successfully with a number of elite sporting clubs and organisations across the country.

Frank Vetere
Point Cook Prep to Year 9 College

Frank Vetere is the Principal of Point Cook Prep to Year 9 College. Located in one of the fastest developing growth corridors in Victoria, Point Cook College has a current enrolment of 1530 students and has 125 staff. The socio-economic profile of families is high and aspirant. The school has a high proportion of students with English as a second language.

Frank is a graduate of the Principal Preparation Program through the Bastow Institute of Educational Leadership. To be an effective leader of a large and complex organisation, Frank realised the need to invest in the development of a strong and capable leadership team. This high-performing team operates through a true distributed model. Members of the leadership team are engaged in research-based school improvement practices.

Point Cook College has adopted an evidence-based professional learning cycle to support teams to measure the impact of professional learning on teacher practice and on student learning. This cycle is modelled on the work of Professor Helen Timperley.

Frank is the Chair of the Hobsons Bay network of schools, which is recognised for its outstanding growth as a community of practice. Frank is also a State Councillor for the Victorian Primary Principals Association.

Abstract

Frameworks referencing synthesised bodies of prominent research adorn education improvement policy like curiously named pieces of Ikea furniture—peculiar in their assemblage, ostensibly contemporary, and striking in their modular convenience. Amid this, most pundits still agree that we have an education advancement issue in this country. Despite significant increases in funding from successive federal and state governments, we simply haven't been able to shift the needle. What we can ascertain is that compliance-based improvement approaches don't work. They are unable to influence the cognitive maps, beliefs and understandings of the educator to the extent necessary to effectively improve outcomes for students at scale.

Paradoxically, advancements in learning research mean we know more about learning now than at any other time in human history. Neuroscience, cognitive psychology and pedagogic research offer empirical insights into better understanding, measuring and promoting human development. However, despite this increased emphasis on learning research, one must ask, 'What has been the impact of this new knowledge, really?' Schools are awash with professional development options. In an age of such proliferation of professional learning and new information for teachers, is it that our school-based practitioners are simply overfed and undernourished?

The Science of Learning Research Centre was established in 2012, funded as an Australian Research Council special research initiative, to improve learner outcomes in Australian classrooms. Five years later, the extensive transdisciplinary learning research is connecting with Australian schools in a very powerful way.

The Science of Learning Network of Schools (SoLNoS) is a research translation initiative designed to create the necessary platform for schools and researchers to work better together in the implementation, development and refinement of learning research. The best professional learning communities not only have access to quality research but are also capable of engineering and implementing adaptive structures and systems that respond to the changing external environment and demands. These schools have a strong learning culture.

The SoLNoS supports school leadership teams and syndicates of schools with critical guidance and access to the most relevant and reliable learning research available—research that is specifically related to their school improvement strategies and individual contexts. In doing so, the SoLNoS is able to assist school leaders in establishing the conditions for powerful professional learning to occur.

This is a case study of a true community of practice—one inhabited by both researchers and teachers; one that impacts both knowledge and belief; and one designed to bridge the divide between research and practice.

The Science of Learning Research Centre (SLRC)

The SLRC, established in 2012, was funded as an Australian Research Council special research initiative. Its aim was to improve learner outcomes in Australian schools. The SLRC was led by the University of Queensland and the University of Melbourne, with key stakeholders in both the Victorian and Queensland departments of education. By bringing together leading researchers from neuroscience, education and cognitive psychology, and by working together with schools, the SLRC is endeavouring to generate new findings and enhance the practice of educators.

Recent advancements in learning science research mean that we know more about learning now than at any other time in human existence. Neuroscience, cognitive psychology and pedagogic research offer empirical insight into better understanding, measuring and promoting human development.

It is well understood that in order to impact learning, the scientifically validated learning strategies generated by the SLRC must to be connected in reliable and powerful ways with *school leaders and classroom practitioners.*

Getting the right frequency

Schools are awash in professional learning and so-called improvement stimulus. Professional bodies, publishers, consultants, research institutes, bureaucrats, policymakers, social media and collegiate networks—to name but a few—inundate schools with material that more often than not has simply no impact on the quality of learning inside the classrooms. Irrespective of truth and eminence, these propositions are unable to influence the cognitive maps, beliefs and understandings of educators to the extent necessary

to effectively improve outcomes for students at scale (Friedlander & Snyder, 1983). Furthermore, there is evidence within organisational learning research to suggest that these attempts to enrich can in fact have the opposite effect. They create a chaos and confusion as schools and teachers deviate from one piece of information towards the next, with inadequate focus and time to learn (O'Day, 2002).

This tension plays out in predictably destructive ways. In their perplexity, schools may choose to actively shut themselves off from these external influences entirely. In that case, isolation often ensues and idiosyncratic practice becomes the norm. Performance invariably slides and the centre is typically left to respond with a program of compliance and bureaucratic accountabilities that inevitably fails to promote widespread organisational adaptation (O'Day, 2002).

There does seem to be consensus that an intelligent model of improvement is required—a model capable of balancing the external accountabilities designed to influence the function of schools with the need to capitalise on the internal professional efficacy within and between schools. Highly effective school improvement programs need to be capable of encouraging growth in schools wherever they might be in their developmental journey. Commonly, schools and networks moving from 'poor to adequate' on the improvement continuum are known to subscribe to a suite of prescriptive tactics (Hopkins, Munro, & Craig, 2011). In the absence of a guiding philosophical framework that provides strategic direction, the flurry of surface-level professional development activity can manifest as adhocism. When considering the design for our community of practice, we understood that we needed to support schools to develop a coherent overarching strategy—one that connected the various components of their plan in a manner that promoted both depth and coherence.

Not *to* but *with*

For effective translation of learning research to occur at the school and practitioner level, we endorse the creation of new knowledge *with* the practitioner—and not *to* the practitioner. The role of practice-based evidence must be respected and supported. Personal and environmental factors influence behaviours in predictive and powerful ways and therefore should be acknowledged appropriately in the engagement. Capacity-building methods that take a social systems view of learning can also positively change the relationship between research and practice. A researcher–practitioner collaboration model succeeds because of its capacity to:

- empower the educator
- facilitate further research (analysis of implementation)
- contribute to the inquiry-based repertoire of the educator
- enhance the fidelity of implementation.

## The Science of Learning Network of Schools (SoLNoS)

In the simplest terms, the SoLNoS in Victoria is a learning partnership. It is a pilot network made up of 13 'pioneer' schools, representing all education sectors (faith-based, independent and government) and schooling all stages and ages of learner, from early years to senior secondary. The learning communities are both geographically and socially diverse.

The network's commitment to itself is to support leadership teams with critical guidance and access to the most relevant and reliable learning research available. As one of us has been a principal and leader for almost 10 years, we are acutely aware of the challenges across our school system in both the understanding of and access to quality learning research.

Wenger's (2009) research in the domain of communities of practice provides an excellent framework in delineating four key disciplines of an effective community of practice:

- *The discipline of domain:* What is our partnership about? Why should we care? Are we likely to be useful to each other? What is our learning agenda? What specific set of issues does it entail?

- *The discipline of community:* Who should be at the table so the partnership can make progress? What effects will their participation have on the trust and dynamics of the group? How do we manage the boundaries of the community?

- *The discipline of practice:* How can the practice become the curriculum? How can it be made visible and inspectable? What should participants do together to learn and benefit from the partnership?

- *The discipline of convening:* Who will take leadership in holding a social learning space for this partnership? How can we make sure that the partnership sustains a productive inquiry? Who are the external stakeholders and what are their roles? What resources are available to support the process? (p. 12)

These disciplines proved valuable in the establishment of the guiding principles and common beliefs of the SoLNoS network.
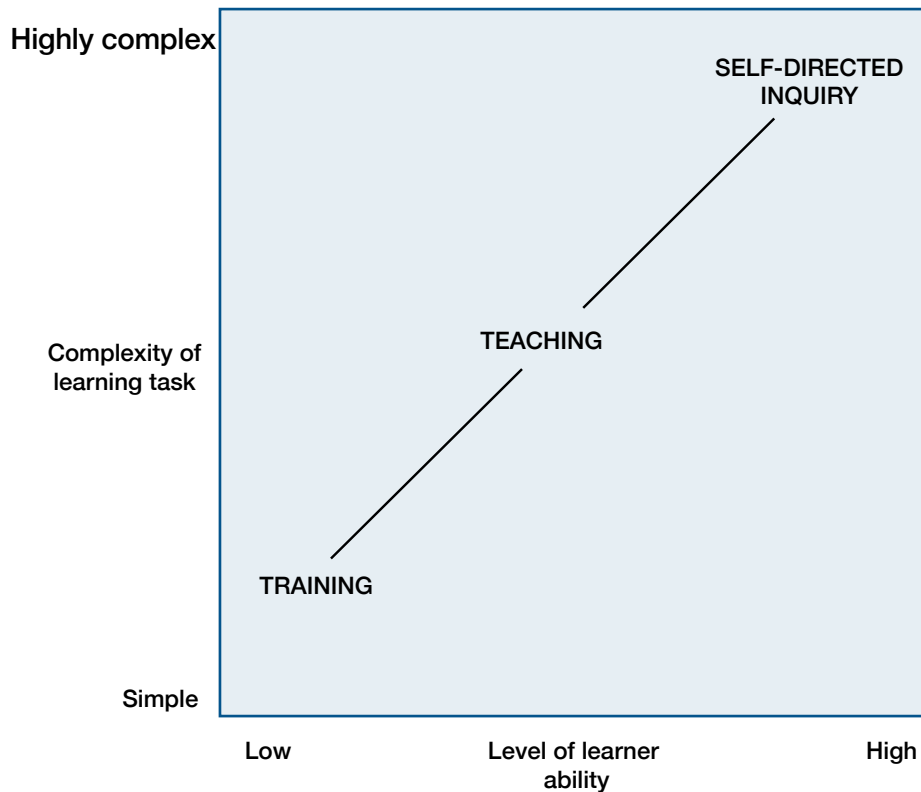
Figure 1 Model of task complexity and learner capability

Understanding how schools learn best

There were always going to be clear challenges in settling on an ideal networked learning model—one agile enough to be able to meet the diverse demands of a multiplicity of learning contexts. So what were the options? The research of Nadler (1970) and Glaser (1962) suggested that different theories of instruction are appropriate for different contexts. Few in education would dispute this. The complexity of the task and the capability of the learner are represented in a two-type taxonomy related to a corresponding model of instruction, shown in Figure 1.

First order: Training

Training or behavioural models are generally associated with specific actionable objectives. In schools, we see examples including compliance and certification modules. In this domain, learning is generally surface-level. Learners are often working with static content, by themselves, and because they have been instructed to. Consequently, the generic nature of the program renders it impotent in developing the capacity of the individual to think and act differently. In schools, learning design of this nature encourages an awareness of an organisation's first-order priorities, which are generally akin to keeping everybody alive, out of jail and off the front page of the morning papers.

Second order: Teaching

Cognitive models of instruction, such as didactic teaching, are associated with the development of a broader set of objectives than training models. This usually involves more complex tasks that require decision-making and professional judgement. Learners are also expected to draw from a set of established disciplines. Activity-based learning is a common feature of this methodology, and the learner outcomes are often predetermined and limited by the complexity of the task. Large institutions such as universities and government departments rely heavily on second-order learning strategies because they are conducive with the institutional mindset. They are also convenient; however, they are not overly effective in building more complex skills with highly competent learners.

Third order: Self-directed inquiry

Psychological models of learning are intended to facilitate greater connections between the learner and the learning. Developmental at this level is distinguished from second-order learning most notably by an increased focus on metacognitive strategies. Self-directed inquiry regularly requires a set of core learner capabilities to permit the level of independence necessary, and therefore teaching and training approaches can be deployed at times to complement third-order strategies and provide the necessary surface-level learning.

The effect of the professional development experience is strongly associated with the features of the activity rather than the format and content (Desimone, 2009). Given that teacher professional learning aims to improve student outcomes, it should be measured against its ability to impact the following aspects:

- the knowledge, beliefs and skills of an individual or group
- the practices evidently impacting student learning.

Consequently, it was necessary in the design of the SoLNoS to develop an associated evaluative framework and performance metrics.

In light of the research, when we contemplated the SoLNoS model of practice, it was essential that a school's engagement with learning science was positioned in a very specific way. Simply having the research on a website or as part of a series of attractive publications was obviously not going to be enough. The very principles that govern human learning needed to live in the experience for SoLNoS members. Relevance, autonomy, collaboration and authentic outcomes would be central to its success.

A school's experience

Point Cook Prep to Year 9 College is a large government school situated in the one of Australia's fastest developing growth corridors. Led by its principal, Frank Vetere—a co-author of this paper—and through the SoLNoS, Point Cook College has embarked on a schoolwide plan to better embed student-centred learning structures and related pedagogical practices within its curriculum and learning programs. The college aims to improve student engagement across the school so that every child is better connected and suitably challenged in their learning. Student voice, learner agency, assessment practices and student leadership are the lead research constructs.

The SoLNoS proposes to do three things:

1. support schools' understanding of the research constructs that sit behind their priority areas by helping them to move from potentially lightweight colloquial interpretations to a firmer grasp of more dependable definitions and frameworks
2. support schools to better interpret the data and evidence being used to inform their strategic

directions by encouraging deeper analysis of both validity and reliability
3. support the design and implementation of a professional learning strategy for the professional workforces in the schools.

The SoLNoS is assisting the professional workforce in schools like Point Cook College to understand, measure and promote learning more effectively.

The SLRC at the University of Melbourne is truly proud to be working with these 13 dynamic pilot school communities and early learning centres as part of the inaugural SoLNoS. In supporting our coalition of leadership teams to better connect learning research with school improvement strategy, we facilitate a powerful and authentic community of practice predicated on building capacity to build capacity.

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Looking for the X-factors: Contextualised learning and young Indigenous Australian children

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Associate Professor Karen Martin is a Noonuccal woman from Minjerripah (North Stradbroke Island – south-east Queensland) and also has Bidjara ancestry (central Queensland). She is a qualified early childhood educator who has taught for more than 15 years in Aboriginal community education services (early childhood, compulsory schooling, adult training) in remote, regional and urban areas of Queensland. She is a James Cook University Medallist (2007) and NAIDOC Scholar of the Year (2008) and has over 20 years of experience in higher education lecturing in Aboriginal Australian Studies, Aboriginal education and early childhood education. Karen is currently employed as Associate Professor in the School of Education and Professional Studies at Griffith University. She is Deputy Chair of the Griffith University Human Research Ethics Committee and also Deputy Chair of the Longitudinal Study of Indigenous Children (Department of Social Services). Her latest research is called: 'Looking for the X-factor: Contextualised learning and young Indigenous Australian children'. This project is a recipient of an Education Horizons research grant from the Queensland Department of Education and Training.

Stuart Fuller worked for a number of years in a sugar mill and then in a university maintenance department before completing his education degree. He has taught for more than 20 years, with most of this time spent as a teaching principal in small schools in the Lockyer Valley and south of Toowoomba. He began his teaching at Bwgcolman Community School on Palm Island, spent a year as a deputy principal at Kununurra District High School, and has been the principal at Cherbourg State School since the beginning of 2016.

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Stuart Fuller
Cherbourg State School

Abstract

This paper outlines an Education Horizons research project (Department of Education & Training, Queensland; July 2016– June 2017) of the same title. The project comprised two research activities: an online survey and a small case study of early childhood and early years education programs in Logan, Darling Downs and Far North Queensland regions.

This paper describes the small-scale case study of Cherbourg State School in Cherbourg Aboriginal Shire (Darling Downs south-west education region to identify its 'X-factors' in the contextualisation of curriculum, pedagogy and assessment for young Indigenous Australian learners. In particular, it will outline the X-factors pertaining to the school's Pre-Prep program.

Contexts

Australia

In the late 2000s, the Council of Australian Governments (COAG) introduced the Early Childhood Reform Agenda to bring a cohesive and consistent approach to early childhood services, including quality standards and curriculum. Two major components were the Early Years Learning Guidelines (Commonwealth of Australia, 2009) and the National Quality Framework (Australian Children's Education and Care Quality Authority, 2012).

At the same time, the COAG also introduced the Closing the Gap: Overcoming Aboriginal Disadvantage reform agenda (Commonwealth of Australia, Department of the Prime Minister and Cabinet, 2017). Early childhood development was identified as one of seven building blocks for reform. However, the main foci of the agenda were child health and development, and maternal health. Only one area focused on early childhood education, namely access to services or programs.

Queensland

These COAG reform agendas also informed the Queensland Government's education policies and strategies. This research in this paper also sits within the Queensland Government Department of Education and Training's Strategic Plan 2016–2020 and Every Student Succeeding reports on state schools strategies for 2014–2018 and 2017–2021.

Cherbourg Aboriginal Shire

The history of Cherbourg is one of Aboriginal people being forcibly removed and brought from all over Queensland and Northern New South Wales to a newly formed government reserve … . Under the *Aborigines Protection Act* of 1897 the settlement then called Barambah, was gazetted and established in 1904. In 1932, the name Barambah was then changed to Cherbourg due to a nearby property called 'Barambah Station' which caused confusion in mail delivery.

Located 375km north-west of Brisbane, Cherbourg covers 3130 hectares DOGIT [Deed of Grant in Trust] land and is within Wakka Wakka tribal boundaries and bordering onto Gubbi Gubbi (Kabi Kabi) territory to the east … The population is approximately 2000,

however, as a result of the relocation of indigenous people under past government policies, residents of Cherbourg have connections to many other tribal groups throughout Queensland. (Cherbourg Aboriginal Shire Council, 2017)

Cherbourg State School

Cherbourg State School (CSS) is a Band 8 school for Pre-Prep to Year 6 that caters for approximately 180 students. The school is located in the heart of the Cherbourg community, and is part of the Darling Downs West Education district. Approximately 50 per cent of school staff are Indigenous Australians, most from the local community. Table 1 provides details of Cherbourg State School student data.

Cherbourg State School Pre-Prep

The Pre-Prep class is seen as another class within the school not just a kindergarten located within the school grounds. Staff are seen as, and expected to be, part of the full school staff (i.e. attend staff meetings, undertake professional development). Enrolment for 2017 is 24 children and as the data in Table 1 suggests, the support offered to the students through this additional year of schooling is vital. Therefore, it was a deliberate decision to invest in Pre-Prep, especially through staffing (see Table 2).

The Pre-Prep program has many key features:

- it is based upon the *Foundation for Success* framework and corresponds well with the *Early Years Learning Framework*

- its aim is to ensure children are school ready (experience and understand school culture, gain pre- and early-reading skills, knowledge of basic numeracy concepts and 'language')

- it offers a play-based, positive learning environment

- it is a 'bucket filling' program that promotes healthy consideration of self and others (Cherbourg State School is a Positive Behaviour for Learning school and is striving for Tier II status)

- non-teaching staff are trained in the Abecedarian Approach (3A) to build knowledge of books and reading

- all teacher-aides (Pre-Prep to Year 3) are initially trained in the Abecedarian Approach and a staff member is able to train other staff

- a consultant who specialises in working with EAL/D students (developing awareness of their home language, Cherbourg lingo, and Standard Australian English) spends time with students in Pre-Prep in Term 4 as part of their transition to Prep the following year.

Table 1 Cherbourg State School and student demographics

Index of Community Socio-Educational Advantage rating: 2016	• Rating: 610 • School distribution: Bottom quartile – 94%
Australian Early Development Census: 2012	• 54% vulnerable on 2 or more domains • 34% vulnerable on 1 domain
Nationally Consistent Collection Data – School Students with Disability: 2016	• Approx. 30% extensive or substantial adjustments made for them in the classroom • 84% having adjustments made at some level by teachers

Table 2 Staffing arrangements: Cherbourg SS – Pre-Prep, 2017

Pre-Prep staffing	
Teacher: Bachelor of Education – early childhood trained (female; full-time)	Teacher Assistant: Diploma – Children's Services (female; full-time)
Teacher-Aide: Diploma of Education (female; 0.5)	Teacher-Aides: completing Cert III: Children's Services (male: 2 – full-time; female: 0.5)

Relationships

Cherbourg State School has worked hard to establish strong community links and this is reflected in our school vision: *Connecting community and school strengths to enrich students' lives.* Major relationships include:

- Cherbourg Early Years Leadership Circle, which includes staff from the school, a local child care centre, regional members of the Department's Early Childhood Education and Care team, Health, Cherbourg Council and invited guests.
- the Families as First Teachers (FaFT) program (children from 0 to 4 years)
- Invitation to elders to meet with Cherbourg State School principal (minimum once per term) to provide feedback and advice.

Literature

Although the first wave of early childhood education policy for Indigenous Australian children focused on access (DEET, 1989; MCEECYA, 2011), more recent policy foci have widened to encompass care, development and education (Arcos Holzinger & Biddle, 2015; Harrison, Goldfeld, Metcalfe & Moore, 2012; Hewitt & Walter, 2015; Wise, 2013). Therefore, unlike compulsory schooling for Indigenous Australian children, early childhood education programs operate within regulatory frameworks such as the Early Years Learning Framework (2009) and the National Quality Framework (Australian Children's Education, 2009). Each framework identifies particular expectations for these services and programs regarding the role of Indigenous Australian culture.

Subsequently, in Queensland, the Foundations for Success Guideline (first developed in 2008, then revised in 2013) has been employed by educators to contextualise and implement the Early Years Learning Framework in Indigenous Australian early childhood education programs. However, Kearney, McIntosh, Perry, Dockett & Clayton (2014) found 'educators struggle to situate their own knowledge and experiences in relation to the knowledge and experiences of others in both the educational and cultural contexts in which they work' (p. 338). This serves to remind us that teachers do not only draw on professional knowledge, but also draw on personal, cultural experiences and capabilities in their professional roles. Their cultural competence (Guilfoyle, Saggers, Sims, & Hutchins, 2010; Sims, 2011) sometimes frustrates their curriculum competence.

Methodology

The aims of the research project were to understand the types of decisions and adjustments educators make in their planning, curriculum, pedagogy and assessment, and the role of professional development in supporting early childhood educators to contextualise early childhood education programs for young Indigenous Australian children.

The overall project used two research activities:

- an online survey (not discussed in this paper)
- case studies of early childhood education programs with Indigenous Australian enrolments.

The case studies did not seek to identify and develop 'best practices', or to compare services within and across regions. They sought to identify the factors teachers demonstrate to contextualise curriculum, pedagogy and assessment for young Indigenous Australian learners. This also required understanding the contexts of schools and communities to ensure these macro and micro contexts were not erased or bracketed (see Mellor & Corrigan, 2004). The design was therefore exploratory and analytical.

Data collection

The methods for data collection were:

- document analysis: policy, community, school (October 2016 – May 2017)
- teaching-learning artefacts (April 2017)
- classroom observations of long daycare, Pre-Prep, Prep, Year 1 (April 2017)
- teacher interviews (April 2017).

Research findings

The regulatory contexts of early childhood services prior to compulsory schooling are found to add significantly to the roles of early childhood educators. This impacts some educators' efficacy to make professional decisions; for others, it impacts upon their professional identity. If educators are teaching out of their specialisation, these systems expectations can generate disconnections in their work to contextualise the curriculum, pedagogy and assessment for young Indigenous Australian learners. Table 3 outlines the number and types of system expectations required of early childhood education services and programs.

* While not an expectation of early childhood educators, some educators apply aspects of these curriculum guidelines

Given the above, and keeping in mind the factors outlined earlier (Cherbourg Aboriginal Shire, Cherbourg State School), a major X-factor in the Pre-Prep program is the investment in staffing, which specifically:

- exceeds regulation requirements in having five staff for 24 children enrolled
- employs two Aboriginal, male teacher-aides (one mature-aged, one young adult)
- represents two non-Aboriginal staff; three Aboriginal staff.

In terms of understanding how curriculum, pedagogy and assessment is contextualised, Table 4 outlines the Cherbourg State School Pre-Prep X-factors.

Table 3 Systems expectations regarding Indigenous early childhood education, early years education curriculum, pedagogy, assessment

Education setting	Systems expectations
Childcare/ Children's Services: Educational Leader	• Foundations for Success: Guideline for extending and enriching learning for Aboriginal and Torres Strait Islander children in the kindergarten year. • Early Years Learning Framework. • ACECQA National Quality Standards: 7 Quality Areas; Quality Rating & Assessment process.
Pre-Prep programs: Educational Leader	• Foundations for Success: Guideline for extending and enriching learning for Aboriginal and Torres Strait Islander children in the kindergarten year. • Early Years Learning Framework. • ACECQA National Quality Standards: 7 Quality Areas; Quality Rating & Assessment process.
Prep classes	• Foundation Year: National Curriculum • Curriculum into the Classroom • Queensland Kindergarten Learning Guideline; Early Years Curriculum Guidelines*
Year 1 classes	• Year 1: National Curriculum • Curriculum into the Classroom • age appropriate pedagogies • Australian Early Development Census data collection

Table 4 Cherbourg State School – Pre-Prep X-factors

Education setting	Systems expectations
Curriculum	• contextualisation of curriculum was intentional and explicit • expectations stated in curriculum guidelines had been competently mediated
Pedagogy (teaching)	• planning for teaching was explicit • teaching plans were designed for the term and subsequent weeks and days
Pedagogy (learning experiences)	• pedagogy was learner-focused • it was intentional in demystifying the culture of the classroom for children • it was intentional and explicit in making expectations for learning and interacting with adults and other children clear • responsiveness to children was intuitive • it was explicit in building the children's identity as learners • play was unstructured and educational
Assessment	• reflections of teaching were explicit • reflections children's learning were intentional and implicit • learning was documented daily • learning was reported daily and weekly

Take away messages: How to look for the X-factors

- Understand how the level of regulatory burden in early childhood education programs impacts educators in contextualising curriculum, teaching and assessment. This shouldn't be an excuse to lower the expectations of children, families, educators, schools and communities.

- Look for ways educators apply professional knowledge and demonstrate capabilities to mediate systems expectations and contextualise these in classrooms (don't solely focus on the 'gaps' or deficits as per testing outcomes).

- Look for in and across the contexts of classroom, year level, school level and community (this is an ecological approach).

- Look for evidence of the culture of the classroom and the culture of the school (and not only the culture of Indigenous Australians).

- Look for curriculum competence that engenders and facilitates cultural competence.

Key points for discussion and conclusion

The X-factor project was never intended to be a study of an educational intervention. Its purpose was to understand what is happening in some early childhood services for young Indigenous Australian learners. It has identified some core concepts that are foundational to any educational setting (i.e. curriculum competence), but then also identified concepts that emerge out of their particular contexts. Where these are intentional, made explicit and articulated by educators, especially for children and families, they also serve to demystify the culture of teaching and of classrooms.

Where school-level decisions are made as both short-term and long-term goals, the X-factors are logical and strategic and a worthy investment.

As schools are a major employer of people from the local community, many, like Cherbourg State School, can boast another X-factor – the inter-generational stories of 'an education community' (as different to a school-community). An education community documents its factors, similar to those outlined earlier (also seen in newsletters and annual reports). When studied closely, another X-factor emerges – that of an 'educated community'. This pertains to the capabilities, achievements and successes of current and former students of the school. For example, the Aboriginal staff who are now employed in the same school where they were once students.

Finally, along with the administrative data available from many sources, there needs to be a pool of data (and

therein, evidence) regarding not just 'what' is taught and 'what has been learned' (Mellor & Corrigan, 2004), but 'how' this has been intentionally designed and also made explicit in pedagogy, monitoring and measuring children's learning. Gaining an understanding of how curriculum, pedagogy and assessment is contextualised, and focusing on curriculum competence (and not solely cultural competence), will provide insights to closing the gaps in educational outcomes. Then, the small, localised (and seemingly insignificant) X-factors of the present, could be the benchmarks of the future.

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Conference program

CONFERENCE TIMETABLE

NETWORKING FUNCTION

We look forward to you joining us at the networking function to mingle and socialise with new contacts or catch up with friends in a relaxed atmosphere.

Entertainment	featuring *Sugar Blue Duo*
Venue:	Melbourne Convention and Exhibition Centre 104 and 105 Foyer level
Time:	5.00 – 7.00pm

DAY 1   MONDAY 28 AUGUST

8.00 – 8.30	Registration
8.30 – 8.45	Welcome to Country
8.45 – 9.00	Conference opening Prof Geoff Masters AO, CEO, ACER
9.00 – 10.15	Keynote 1: Capabilities required for leading improvement: Challenges for researchers and developers Distinguished Prof Viviane Robinson, University of Auckland, NZ
10.15 – 10.45	Morning tea

10.45 – 12.00	**Block 1: Concurrent session**		
Session 1A Concurrent Melbourne Room 2	**Session 1B** Concurrent Room 203	**Session 1C** Concurrent Room 204	**Session 1D** Conversations with a keynote Room 208
Nourishing teachers' leadership for learning: Insights from practitioner research Prof Simon Clarke University of Western Australia	Enhancing instructional leadership: Lessons from the NSW Literacy and Numeracy Action Plan Dr Tim Wyatt Erebus International	Courageous and coherent leadership required for excellent and equitable outcomes Dr Linda Bendikson University of Auckland, NZ	Conversation with a keynote: Digging deeper Prof Viviane Robinson University of Auckland, NZ (Limited places)

12.00 – 1.00	Lunch

Lunchtime session (12.15 – 12.45) Room 203

Learn about graduate study with ACER
This presentation will provide you with an overview of higher education at ACER, including the existing courses of study and future plans. (Bring your lunch.)
Dr Anne-Marie Chase, ACER

1.00 – 2.15 Keynote 2: Stronger Smarter: A sustained and enduring approach to Indigenous education (whether education researchers know it or not!)
Prof Chris Sarra, University of Canberra

2.15 – 3.30	**Block 2: Concurrent session**		
Session 2A Concurrent Melbourne Room 2	**Session 2B** Concurrent Room 203	**Session 2C** Case study of research/practice Room 204	**Session 2D** Conversations with a keynote Room 208
Pre-service and in-service teacher education: A leadership model for collaborative learning Prof Jo-Anne Reid Charles Sturt University	Principals as Literacy Leaders: A strategy for improving reading engagement and achievement in Australian schools Prof Tony Townsend Griffith University	An education system improvement tool: Improvement-focused leadership Prof Pauline Taylor-Guy, ACER Anne Ryan and Prue Horan, Catholic Education Office, Wagga Wagga	Conversation with a keynote: How can, and does, research inform pedagogy and leadership in schools? Prof Toby Greany University College London Institute of Education, UK (Limited places)

3.30 – 4.00 Afternoon tea

4:00 – 5.15	**Block 3: Concurrent session**		
Session 3A Concurrent Melbourne Room 2	**Session 3B** Concurrent Room 203	**Session 3C** Case study of research/practice Room 204	**Session 3D** Conversations with a keynote Room 208
Leading empowered evaluations to develop trust and improve learning: Insights from qualitative research Dr Peter McClenaghan and Dr Kerrie Ikin University of New England	Developing a professional certification system for school principals: The Principal Australia Institute certification project Prof Lawrence Ingvarson ACER	Developing evaluative thinking and evidence-based practice: A synthetic case study Dr Tim Wyatt Erebus International	Conversation with a keynote: Digging deeper Prof Chris Sarra University of Canberra (Limited places)

END DAY 1

DAY 2   TUESDAY 29 AUGUST

| 9.00 – 10.15 | Keynote 3: Opening or closing doors for students?
Equity and data-driven decision-making
Prof Amanda Datnow, University of California, San Diego, US |

| 10.15 – 10.45 | Morning tea |

10.45 – 12.00	**Block 4: Concurrent session**		
Session 4A Concurrent Melbourne Room 2	**Session 4B** Concurrent Room 203	**Session 4C** Communities of practice: A case study Room 204	**Session 4D** Conversations with a keynote Room 208
Teacher leader and teacher leadership: A call for conceptual clarity Assoc Prof Susan Lovett University of Canterbury, NZ	Leading age-appropriate pedagogies in the early years of school Assoc Prof Bev Flückiger Griffith University	Science of Learning Network of Schools: The science of communities of practice Andrew Jones University of Melbourne Frank Vetere Point Cook Prep–Year 9 College	Conversation with a keynote: Digging deeper Prof Amanda Datnow University of California, San Diego, US (Limited places)

| 12.00 – 1.00 | Lunch |

1.00 – 2.15	**Block 5: Concurrent session**		
Session 5B Concurrent Room 203	**Session 5C** Concurrent Room 204	**Session 5D** Case study of research/practice Melbourne Room 2
National School Improvement Tool: Leading an explicit improvement agenda Prof Pauline Taylor-Guy and Dianne Pekin, ACER	Leadership that transforms schools and school systems Emeritus Prof Brian Caldwell Educational Transformations	Looking for the X-factors: Contextualised learning and young Indigenous Australian children Assoc Prof Karen Martin Griffith University Stuart Fuller Cherbourg State School

| 2.15 – 3.30 | Keynote 4: Karmel Oration
Leading schools and school systems in times of change–A paradox and a quest
Prof Toby Greany
University College London Institute of Education, UK |

| 3.30 – 3.45 | Conference close |

VENUE FLOOR PLAN

Melbourne Room 1

Melbourne Room 2

Foyer

Foyer

Foyer

205 206

203 204 207 208 209 210 211

212 213 216 217 218 219 220

214 215

1

2

3

Plenary

Meeting rooms

Back of house

Organisers' Offices

Speaker Preparation Room

Dressing rooms

Windows

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ACER Professional Learning courses

Using and interpreting data in schools

This course is a foundation level professional learning program focussed on developing teachers' expertise in using and interpreting different types of data in a school context. It is designed for teachers and school leaders who wish to build solid shared understandings about the kinds of data used in schools, the different ways in which data can be represented and what they can tell teachers about student learning.

Online Facilitation

The course is intended for educators new to online facilitation or aspiring to roles in online facilitation. It will equip participants with the skills and knowledge to be an effective online facilitator. The focus of the course is on the theory and practice of online pedagogy, how to facilitate online discussion and collaboration, and support student learning in the online environment.
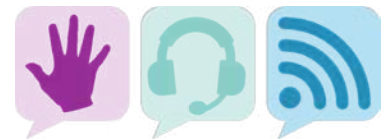
The Westmead Feelings Program 1

This course has been developed in partnership with The Children's Hospital at Westmead. The course is intended for educators and allied health professionals who work with children with autism and intellectual disability. The course demonstrates strategies to provide training in the Westmead Feelings Program to children, their parents and teachers. On successful completion of the course, participants will receive a certificate of achievement, certification to deliver the program, and the opportunity to register their names on an ACER register of preferred facilitators.

Developing PAT Schools

This course is for participants from schools and educational systems who are currently using PAT and wish to deepen their knowledge, practice and staff capacity through a shared understanding of the PAT assessment suite. The focus of the course is on providing participants with an in-depth knowledge of the purpose of assessment, how to use PAT data to plan for learning, and how to promote a culture of professional learning.

PAT- R Comprehension for Action Research: from administration to impact

This course is for participants from schools and educational systems who already have established processes for PAT data analysis, and who wish to deepen their knowledge and practice related to PAT-R Comprehension assessment and use PAT data to inform teaching and student learning through an action research approach.

PAT- Maths for Action Research: from administration to impact

This course is for participants from schools and educational systems who already have established processes for PAT data analysis, and who wish to deepen their knowledge and practice related to PAT-Maths assessment and use PAT data to inform teaching and student learning through an action research approach.

On successful completion of the course, participants will receive an ACER certificate of achievement.

For more information

☎ : 03 9277 5403
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Assessment of Student Learning

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Exclusive to ACER, this nationally accredited qualification is available globally. Delivered wholly online, with the flexibility to study any time, anywhere, participants will gain an in-depth understanding of the importance of assessment, strengths and limitations of different assessment methods, principles that underpin reliable and valid estimates of student progress as well as a focus on the application of collected assessment data.

The aim of this course is to provide research-based insight into the nature of learning and the underlying principles and purpose of assessment for learning. Participants will have an opportunity to develop the required understanding to make informed choices relating to appropriate assessment methods. The course promotes accurate assessment through exploration of the core principles involved, including valid and reliable estimation of student progress. The ultimate focus is on the developmental needs of each student, based on the gathering of evidence and on observing empirically based learning progressions (Masters, 2013), resulting in the application of effective teaching practices informed by assessment evidence.

Masters, G. (2013). *Reforming education assessment: Imperatives, principles and challenges* (Australian Education Review No. 57). Retrieved from Australian Council for Educational Research website: http://research.acer.edu.au/aer/12/

Gayle Appleby

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If you have any questions, queries or would simply like more information on our Graduate Certificate program, please make contact with our Student Administration Officer.

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'Assessment of Student Learning' is delivered online to offer maximum flexibility. It comprises four units, which can be completed across a twelve-month period of part-time study or over a period of up to three years.

Unit 1
Develop an in-depth understanding of the purpose and importance of assessment for learning, and build a foundational knowledge of assessment.

Unit 2
Explore the strengths and limitations of different assessment methods, develop an enhanced understanding of criteria for selecting different assessment methods, and the application of these criteria in a variety of contexts.

Unit 3
Investigation of principles underpinning reliable and valid estimates of student progress. The aim is to equip participants to judge student progress accurately, helping to develop core components of teaching practice.

Unit 4
Collection of assessment data, with a particular emphasis on using collected data to inform teaching practices and learning decisions. It is designed to help participants harness assessment evidence in practical ways, leading to more effective teaching and learning practices.

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