Le Fevre, New Zealand Annual Review of Education (2019) 24: 192-202

DOI: https://doi.org/10.26686/nzaroe.v24i0.6564

Complex Challenges in Policy Implementation

Deidre M. Le Fevre

University of Auckland, New Zealand

Efforts to improve education occur in complex landscapes, where policy, research, history, experiences, and communities shape practice in ways that have both intended and unintended outcomes. These landscapes change over time; however, there appear to be several core challenges that persist and which likely influence why it is difficult for policy to improve education in intended, effective and sustainable ways. Drawing on New Zealand and international research, this position paper identifies some of these key challenges and explores possible leverage points to navigate these. These include developing adaptive expertise, engaging key stakeholders in decision making, and developing a learning culture.

Keywords: complexity, implementation, policy, adaptive expertise, improvement, educational change, learning culture, systemic

Introduction

A look back through archived issues of the *New Zealand Annual Review of Education* over the past three decades reveals the educational policy landscape in New Zealand has been one of ongoing change. If there is one common theme it is that policy continues to be developed by governments and educators continue seeking to implement policy in ways that will improve education. Policy and reform implementation both in New Zealand and overseas face the enduring challenge that system-level changes continue to be difficult to implement and sustain in ways that achieve increased valued learning outcomes for learners (see for example, Bryk, Gomez, Grunow, & LeMahieu, 2015). Why is this the situation? One reason is that successful policy outcomes depend not only upon designing good policies but upon managing their implementation (Brinkerhoff & Crosby, 2002). Teachers and leaders are crucial to successful policy implementation. Indeed, in the same year that the first edition of the *New Zealand Annual Review of Education* was published, Fullan stated that "[e]ducational change depends on what teachers do and think, it is as simple and as complex as that" (Fullan, 1991, p. 117). There are several challenges that are important to understand and to navigate in implementing education policy.

Countries around the world (including New Zealand) are experiencing "policy environments of increasing urgency and complexity" (Hargreaves & Shirley, 2020, p. 110). Adding to the intensity of this observation, since Hargreaves wrote this, the global education community has needed to respond to a COVID-19 pandemic, which has required working with

unprecedented levels of urgency and a pace of change perhaps unseen before. Governments have needed to create new and complex responses in terms of what it means to lead, teach and learn in a rapidly changing and uncertain environment.

Evidence indicates that policy implementation is difficult to achieve in ways that bring about ongoing and sustainable improvement for our most vulnerable learners. In jurisdictions around the world, policy is designed with the intention of improving education; too often, however, it does not realise its potential to transform the lives of learners (Le Fevre, Timperley, & Ell, 2016). One of the issues is that policy is often intended to be successful in a range of contexts—however, policy cannot be successful for all contexts at all times (Honig, 2006). Honig suggests that, if we are interested in successful policy implementation that has a positive outcome for our learners, then we really need to be looking more closely at what conditions are needed for a policy to be successful.

The goal of this research-informed position paper is to make visible some of the inherent challenges in conditions for effective policy implementation and to consider possibilities for navigating these. The purpose of this paper is therefore twofold. First, to focus attention on understanding the challenges to implementing policy that can improve education in ways that transform the lives of students, and at the same time exploring how to navigate or work with these inherent challenges to promote the implementation of policy objectives that can result in sustainable and system-wide educational improvement. This position paper explores examples of educational change from New Zealand and internationally that have been successful in an effort to identify key challenges and possible ways to navigate these.

Complex Challenges

Implementing education policy for improvement is a complex and contested process. Just as there are multiple views about the goals and purposes of education, there are different and contested views about how best to meet these goals and purposes. While the nature of different policies can be contested, the focus of this paper is not on specific policies, but rather on challenges in the conditions needed for these policies to be successfully implemented. From this perspective, the paper assumes a normative view in terms of a policy objective as broad as 'strengthening the capacity of school leaders and teachers to deliver quality education in all schools' and 'promoting system-level policies that can improve the educational success of students from diverse backgrounds especially Māori and Pasifika students' which represents some key parts of New Zealand educational policy at the current time. The purpose of this position paper is to take a close look at what challenges are faced in the endeavour of effective implementation with the aim of contributing to understanding why *good* policy often fails and what we might do about it.

Improving education is complex work. Uncertainty is inherent in learning and teaching and this makes policy implementation to improve learning and teaching complex (Timperley, Ell, Le Fevre, & Twyford, 2020). There is uncertainty in outcomes as the way policy impacts on education for different students in different contexts is variable. Bryk et al. (2015) refer to this variation in outcomes as a "natural state of affairs in complex organizations" (p. 13). They state that "change ideas work in some places but not others" and promote the importance of directing attention "away from simplistic thinking about solutions in terms of 'What works?'

toward a more realistic appraisal of 'What works, for whom, and under what set of conditions?'" (p. 13–14).

Policy implementation is complex because it involves multiple levels of implementation and is ultimately dependent on the individual teacher in a classroom to implement it in the way intended if it is to be successful (Bryk et al., 2015). Variation in implementation is "the rule rather than the exception" (Honig, 2006, p. 4) and implementation can be described as "complex" resulting in interactions that are non-linear and creating outcomes that are difficult to predict. Understanding policy implementation as a complex phenomenon disrupts simplistic understandings of how policy implementation operates. Complex systems do not have clear, linear, causal outcomes but instead, "outcomes are emergent and unpredictable" (Cochran-Smith, Ell, Ludlow, Grudnoff, & Aitken, 2014, p. 6).

Another aspect of the complexity is the fact implementation happens within and across systems. Complex systems have multiple and interacting parts and they can "manifest behavior that no one intentionally deigned" (Bryk et al., 2015, p. 58). In this way, policy implementation practices are complex, sometimes invisible and can be unanticipated. Educators generally have to manage multiple and changing policies at the same time (Honig, 2006) and there are many factors that influence implementation success. Variation in implementation does not, therefore, need to be seen as a problem or something to be avoided, but rather it is part of the nature of how complex systems work (Honig, 2006, p. 21). Honig (2006) cautions that "a more complex view of education policy implementation may appear particularly unwelcome in the high-stakes accountability environments of many states and districts where short timelines for producing demonstrable improvements put a premium on swift and confident action" (p. 3). However, working in ways that address the inherent complexity is essential. One way of responding to complexity is through the development of adaptive expertise.

Developing adaptive expertise

Policy implementation has been navigated in a professional learning initiative studied in the New Zealand context by developing adaptive expertise. Adaptive expertise enables people to work effectively in complex systems and respond in complex ways (Hatano & Inagaki, 1986). A definition of adaptive expertise developed in research across New Zealand schools is:

> Adaptive expertise is a way of working in complex environments that focuses on learning and change for the purpose of improving valued outcomes. Adaptive expertise draws on deep conceptual knowledge and a well-honed skill set. It is driven by a holistic inquiry mindset, underpinned by curiosity, responsiveness and willingness to learn and change. Adaptive expertise is highly metacognitive and involves self- and co-regulated learning through continuous cycles of action and deliberate reflection. Individuals, organisations and larger systems can demonstrate adaptive expertise in the way they respond to evidence about outcomes, and create new understandings and ways of working in their attempts to improve them for learners. Adaptive expertise involves seeking transformative and sustainable improvement at all

> levels of the system. Policymakers, leaders, teachers and young people all benefit from development of their adaptive expertise. (Le Fevre et al., 2016, p. 314)

Taking a lens of adaptive expertise is one way of recognising and working with the complexity in policy implementation that is systemic. Adaptive expertise requires that people have deep conceptual understanding and knowledge that they can use to understand and work effectively to problem solve in new and unexpected situations. In contrast to routine expertise, adaptive expertise enables people to create new solutions to both existing and emerging problems (Hatano & Inagaki, 1986).

Adaptive expertise is needed throughout a system—from what happens in the policy development arena right through to what happens in the classroom. It is about creating responsive and flexible responses to change and improvement.

Developing adaptive expertise enables educators to be able to respond in adaptive and flexible ways to new and complex problems. However, for a system to be effective in policy implementation, adaptive expertise needs to be developed through all layers of the system, from those working in the policy development context to those in classrooms. This demands all players draw on deep conceptual knowledge, are driven by an inquiry mindset, and are willing to learn and change (Le Fevre et al., 2016). Effective policy implementation might therefore benefit from more continuous cycles of inquiry and deliberate action in responding to complexity at all levels. Questions to consider include: Do the ideas and practices that the policy implementation process involves have a chance of addressing the whole system, not just a few individual schools here and there? And how are teachers across the system making sense of these changes?

Understanding the influence of underlying theories and beliefs

The implementation of policy initiatives depends on "what happens as individuals throughout the policy system interpret and act on them" (McLaughlin, 1987, p. 172). This is where theories and beliefs have a powerful impact because they influence both how people at various levels in the system and in different roles interpret policy and how they think about ways to implement it. Underlying theories and beliefs influence how people design professional learning initiatives, and they influence how teachers and leaders make sense of their experiences (Weick, 1995) and what they learn when they are engaged in professional learning. In essence, underlying theories and beliefs have a very powerful influence on opportunities for change and improvement. A further challenge in the implementation process is that people are often unaware of the underlying theories and beliefs that drive their actions (Argyris & Schön, 1974). Some theories and beliefs are helpful to implementation while others are problematic. The fact that many problematic theories and beliefs are held is particularly challenging because theories and beliefs about effective practice can be entrenched and difficult to change (Bransford, Brown, & Cocking, 2000).

Understanding individual and collective beliefs is crucial as these beliefs are central to local responses to policy implementation (McLaughlin, 1987). Humans have a tendency to revert to old and familiar ways, even when these are known to be ineffective or inefficient. In fact, people do this even when old ways are so ineffective that they might even be life

threatening. For example, Weick's study of firefighters showed that, in times of high danger and stress, firefighters reverted to their old ways of working and to keeping and using tools that were ineffective. Weick concluded that "… older tools tend to be overlearned. These are the tools that people regress to when under pressure" (Weick, 2007, p. 14). It would seem that similar patterns happen in policy implementation. When things become tricky, it is easier to revert to old, yet ineffective, ways of working.

Policies may be based on sound educational theories, and yet they fail to make the improvement intended (Bryk et al., 2015). Underlying theories might be effective, but people are not sure on how to put them into practice. Schön (1983) observed this to be the problem of enactment and suggested the problem is that there is a major difference between "knowing that" and "knowing how".

Getting beyond the zone of wishful thinking

Many policy and reform efforts contain a 'zone of wishful thinking' where the "targeted reform is dependent for its system-transforming success on a large series of related changes over which the proposed reform has no control" (Hill & Celio, 1977, cited in Sykes 1999, p. 162). This is a challenge to successful policy implementation. To address the 'zone of wishful thinking' it is imperative to make clear the mechanisms through which the model for change could result in desired changes in a specific school or context. For example, it is important to have, and be able to articulate, a testable theory about how the policy implementation effort may impact teacher practice and, ultimately, student learning. A part of this is inquiring into how people on the ground make sense of the policy as they seek to implement it, and this is an often-overlooked aspect of implementation.

***Avoiding a focus on quick fixes and* presentisim**

It is nearly 40 years since Dan Lortie–a sociologist working in the Chicago schools–argued that the culture of school teaching was characterised by three overlapping and mutually reinforcing *orientations* that impeded educational improvement (Lortie, 1975). Lortie described one of these orientations as presentism. Presentism refers to the overwhelming pressures of schools that keep teachers locked into short-term perspectives and unable or unwilling to envision or plan collaboratively for long-term, systemic change. Another orientation Lortie described was conservatism. This referred to the way teachers tended to mistrust reform initiatives and remain loyal to their older and established classroom practices, even when research findings or student learning outcomes suggested these were not effective. Individualism was the other orientation Lortie identified and he described this in terms of the way teachers generally preferred to work alone and independently in their own individual and separate classrooms with minimal engagement with other colleagues, administrators or leaders.

Two decades later, researchers Cohn and Kottkamp (1993) noted that these same patterns of behaviour continued to exist. In fact, they found that these three orientations were even stronger in shaping the workplace cultures of teachers in the 1990s than 20 years earlier in Lortie's study. Still later, Hargreaves and Shirley's work (2009) suggested that "[e]ven well-designed projects that offer collaborative opportunities and incentives to engage with long-range and short-term improvement can fail to eliminate presentism" (p. 2507). Hargreaves and Shirley further suggest that "[c]ontemporary educational change efforts are embedded

in a sea of social, economic, and cultural conditions that persistently pull people back to, and endlessly immerse them in, short-term orientations" (p. 2529). Today it would seem we still face many of these same challenges.

In the international context, research in educational change has continued to show that forced or rushed attempts to raise student achievement have tended to result in a focus on easily tested basic skills. The problem with this is that this skill development has been at the expense of more in-depth student learning and meaningful professional learning to improve the quality of learning and teaching.

The political structure of short-term election cycles in many countries possibly creates a pressure on governments to 'get results fast'. This can limit well-thought-through implementation strategy plans and ultimately to how effective policy implementation happens in practice. The challenge here is the drive towards a quick-fix solution. Complex problems demand complex policy responses (Timperley et al., 2020) and quick-fix solutions are unlikely to be successful. Bryk et al. (2015) report the common story in improvement initiatives in the United States of "going fast and learning slow" (p. 6). By this, they refer to the tendency to expect to see quick and dramatic positive results and, when these do not occur, the tendency to then move on to the next thing that is expected to bring about dramatic results. Avoiding a focus on quick fixes and presentism is an important aspect of effective policy implementation.

Engaging key stakeholders in decision making

As Cohn and Kottkamp (1993) observed some time ago, "the absence of teachers from the dialogue and decision-making on reform has been a serious omission. It has yielded faulty definitions of the problem, solutions that compound rather than confront the problem, and a demeaned and demoralized teaching force" (p. xvi). Understanding and engaging with teacher perspectives on policy implementation is central to systemic improvement. Also missing from engagement in ways that can influence policy impementation decision making is the voice of our children and students, whom educational reform is intended to benefit.

The perspectives of young people are often absent in policy discourse and this is a challenge. Education is about young people; however, these are the very people who often have the least voice in decisions about the future. Young people are usually the targets of educational policy changes but rarely do their views have any influence on these changes (Hargreaves & Shirley, 2009). The challenge of finding ways to listen to and act on the views of young people is important as "[c]hildren and young people are 'expert witnesses' to their lives and can provide unique perspectives on and reasons for, and modes of, educational change" (Thompson, 2010, p. 810). Young people are "our educational call to wake up, listen and act" (Bourke & Loveridge, 2018, p. 1).

Developing a learning culture within policy implementation

This final section poses possibilities for navigating these challenges and focusses on the affordances of developing a systemic learning culture. Elmore (2016) maintains that the critical role of learning in educational reform is often ignored. He argues that "implementation" is

> [S]omething you do when you already know what to do; 'learning' is something you do when you don't yet know what to do. The casual way policy-focused people use the term obscures this critical distinction. The knowledge of what to do has to reside not in the mind of some distant policy wonk or academic, but in the deep muscle-memory of the actual doer. When we are asking teachers and school leaders to do things they don't (yet) know how to do, we are not asking them to 'implement' something, we are asking them to learn, think, and form their identities in different ways. (p. 531)

Elmore's call for an intentional focus on learning is an important one. Young people, leaders, teachers and professional developers are central to effective policy implementation and the quality of their "individual-level responses determines the quality of policy implementation" (McLaughlin, 1987, p. 177). Capacity building is a policy instrument or mechanism that has the potential to translate substantive policy goals into actual actions (McDonnell & Elmore, 1987). Investments in professional learning for leaders, teachers and professional developers are examples of recent capacity-building initiatives in the New Zealand context that can have the potential to have a powerful role in supporting policy implementation. However, a learning culture that is inclusive of those working at all levels in policy implementation is critical and this includes our young people (Bourke & Loveridge, 2018).

Positive learning cultures enable people to feel safe to take risks (Le Fevre, Timperley, Twyford, & Ell, 2020) and provide access to necessary knowledge and skills (Bryk et al., 2015). Opportunites for continuous learning throughout the system have the potential to create the conditions necessary for successful implementation of powerful education policy that has the capacity to improve outcomes for our most vulnerable students (Timperley et al., 2020).

Data are important tools in a learning culture that has the capacity to create improvement. Data can be used to deepen understanding of current ways of working and to generate insights about how best to focus efforts to improve. Using data that include the view of young people (Bourke & Loveridge, 2018) to better understand how people are interpreting policies, what impact they are having on them and how they are in turn implementing them (or not) is a key anchor to an effective learning orientation in policy implementation (Bryk et al., 2015). Therefore a "commitment to empirical evidence" (Bryk et al., 2015, p. 9) is central to navigating some of the challenges in effective policy implementation.

A word of caution is necesary here. Simply maintaining that a learning culture is necessary risks over-simplifying what is a highly complex challenge. For example, what may appear on the outside to be teacher disinterest or incompetence might rather reflect teacher isolation or lack of opportuity to learn (McLaughlin, 1987). What might appear as teacher resistance may actually be teacher perceptions of risk and concern about possible potential negative outcomes of changing their practice (Twyford, Le Fevre, & Timperley, 2017).

Learning cultures are complex and often difficult to understand and an important part of developing such a culture is gaining buy-in for policy direction. Those on the ground need to have a sense that it is worthwhile, that they have the necessary time and resources to do

the job, and that they feel equipped and capable. This means inquiring into how people are feeling and providing support as needed.

The challenges raised in this position paper are unlikely to go away; it is more likely that they are inherent in policy implementation and educational improvement work. McLaughlin concluded back in 1987 that

> it is incredibly hard to make something happen, most especially across layers of government and institutions. It's incredibly hard not just because social problems tend to be thorny. It's hard to make something happen primarily because policymakers can't mandate what matters. We have learned that policy success depends critically on two broad factors: local capacity and will. (p. 172)

Over thirty years later, these same challenges McLaughlin refers to continue. What we know more about now, however, is the crucial role of learning throughout the system. Policy implementation is challenging work. A systemic approach is needed wherein people througout the sytem are involved in ongoing learning with constant inquiry into core questions. Questions to focus on incude those such as Bryk et al. (2015) pose. They claim improvement science is disciplined by three deceptively simple questions that we need to continue to ask throughout all levels of our systems. First, what specifically are we trying to accomplish? Second, what change might we introduce and why? And third, how will we know that a change is actually an improvement?

Policy does not end the day it becomes policy, rather, the processes of ongoing learning throughout implementation are of central importance to the chance of it being effective. People interpret policy in different ways and create different procedures and processes for implementing it. Challenges in implementation are never 'solved', rather the complexity means they continually evolve in non-linear and unpredictable ways (McLaughlin 1987). It is not enough to hope that teachers, school leaders, professional developers and others in our education system will effectively implement policy, but rather, support is needed to guide those implementing policy and those who are creating it in ongoing learning and inquiry. Engaging all players in the reasoning and theories of action behind the policy and in ongoing learning will likely increase the possibility of good policy being enacted with integrity.

Conclusion

The goal of education policy is not to improve a few isolated and individual schools, but rather to bring about improvement throughout whole systems (Fullan, 2009). Effectively addressing the existing disparity of outcomes for learners requires policy makers, leaders and educators to increase effectiveness by bringing a systemic focus to educational improvement (Bryk et al., 2015). This demands recognising the complexity of policy implementation and acknowledging that working with individuals or small groups of stakeholders is insufficient for sustained, system-wide change.

Creating coherence is important in effective policy implementation that has a systemic focus. Fullan maintains governments often make the same mistake of having too many policy

initiatives that then overwhelm schools. Instead, they would be better to have a small number of ambitious goals that are clear and relevant in terms of a systemic focus for improvement (Fullan, 2009). Simply said, this would mean "fewer initiatives and more initiative" (Hargreaves & Shirley, 2020, p. 98).

This position paper has highlighted the complexity of policy implementation, the importance of engaging key stakeholders in policy implementation, and the important role of young people. The significance of adaptive expertise has potential in terms of creating a learning culture that can support effective policy implementation. Merging the lines between policy maker and implementers is key as implementers shape how policy is implemented (Honig, 2006).

References

Argyris, C., & Schön, D. A. (1974). *Theory in practice: Increasing professional effectiveness*. Oxford, United Kingdom: Jossey-Bass.

Bourke, R., & Loveridge, J. (2018). Using student voice to challenge understandings research, policy and practice. In R. Bourke & J. Loveridge (Eds), *Radical collegiality through student voice*, (pp.1-16), Springer.

Bransford, J., Brown, A., & Cocking, R. (2000). *How people learn: Brain, mind, experience and school.* Washington DC: National Academy Press.

Brinkerhoff, D. W., & Crosby, B. L. (2002). *Managing policy reform*. Bloomfield, CT: Kumarian Press.

Bryk, A. S., Gomez, L. M., Grunow, A., & LeMahieu, P. G. (2015). Learning how to improve: How America's schools can get better at getting better. Cambridge, MA: Harvard Education Press.

Cochran-Smith, M., Ell, F., Ludlow, L., Grudnoff, L., & Aitken, G. (2014). The challenge and promise of complexity theory for teacher education research. Teachers College Record, 116(5), 1-38.

Cohn, M. M., & Kottkamp, R. B. (1993). *Teachers missing vice in education*. New York, NY: State University of New York Press.

Elmore, R. (2016). "Getting to scale…" It seemed like a good idea at the time. Journal of Educational Change, 17, 529-537.

Fullan, M. G. (1991). *The new meaning of educational change*. New York, NY: Teachers College Press.

Fullan, M. G. (2009). Have theory, will travel: A theory of action for system change. In A. Hargreaves & M. Fullan (Eds.), *Change wars* (pp. 275–293). Bloomington, IN: Solution Tree.

Hargreaves, A., & Shirley, D. (2009). The persistence of presentism. *Teachers College Record, 111*(11), 2505–2534.

Hargreaves, A., & Shirley, D. (2020). Leading from the middle: Its nature origins and importance. *Journal of Professional Capital and Community*, *5*(1), 92–114.

Hatano, G., & Inagaki, K. (1986). Two courses of expertise. In H. Stevenson, H. Azama, & K. Hakuta (Eds.), *Child development and education in Japan* (pp. 262–272). New York, NY: Freeman.

Honig, M. I. (2006). Complexity and policy impementation: Challenges and opportunities for

the field. In M. I. Honig (Ed.), *New directions in education policy implementation: Confronting complexity* (pp. 1–24). New York, NY: State University of New York Press.

Le Fevre, D. M., Timperley, H., & Ell, F. (2016). Curriculum and pedagogy: The future of teacher professional learning and the development of adaptive expertise. In D. Wyse, L. Hayward, & J. Z. Pandya (Eds.), *The SAGE handbook of curriculum, pedagogy and assessment* (pp. 309–324). Los Angeles, CA: SAGE.

Le Fevre, D. M., Timperley, H, Twyford, K., & Ell, F. (2020). *Leading powerful professional learning: Responding to complexity with adaptive expertise*. Thousand Oaks, CA: Corwin Press.

Lortie, D. (1975). *Schoolteacher.* Chicago, IL: University of Chicago Press.

McDonnell, L. M., & Elmore, R. F. (1987). Getting the job done: Alternative policy instruments. *Educational Evaluation and Policy Analysis, 9*(2), 133–152.

McLaughlin, M. (1987). Learning from experiences: Lessons from policy implementation. *Educational Evaluation and Policy Analysis, 9*(2), 171–178.

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. Harper Collins.

Sykes, G. (1999). Teacher and student learning: Strengthening their connection. In L. Darling-Hammond & G. Sykes (Eds.), *Teaching as the learning profession: Handbook of policy and practice* (pp. 151–177). San Francisco, CA: Jossey-Bass.

Thomson, P. (2010), "Involving children and young people in educational change: Possibilities and challenges", in A. Hargreaves, A. Lieberman, M. Fullan and D. Hopkins (Eds), *Second International Handbook of Educational Change*. Springer, New York, pp. 809-824.

Timperley, H., Ell, F., Le Fevre, D. M., & Twyford, K. (2020). *Leading professional: Practical strategies for impact in schools*. Melbourne, VIC: Australian Council for Educational Research.

Twyford, K., Le Fevre, D., & Timperley, H. (2017). The influence of risk and uncertainty on teachers' responses to professional learning and development. *Journal of Professional Capital and Community*, *2*(2), 86–100.

Weick, K. E. (1995). *Sensemaking in organizations*. Thousand Oaks, CA: Sage.

Weick, K. E. (2007). Drop your tools: On reconfiguring management education. *Journal of Management Education*, *31*(5), 5–16.

Associate Professor Deidre Le Fevre is a researcher and academic program leader for postgraduate studies in educational leadership at the University of Auckland. Her research and teaching focus is on leadership and learning for organisational change and development. She explores practices that support practitioners to address complex leadership problems.

Deidre brings knowledge and skills in understanding organisational change, the development of professional capability, and effective leadership to her work consulting with leaders and organisations. Her research includes several large-scale projects investigating leadership, professional learning, and educational improvement.

Email: d.lefevre@auckland.ac.nz

ORCID: http://orcid.org/0000-0002-7422-0431