

THE ROLE OF PROFESSIONAL DEVELOPMENT AND LEARNING IN THE EARLY ADOPTION OF THE NEW ZEALAND CURRICULUM BY SCHOOLS

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ABSTRACT *This paper is set in the context of Phase One of the Ministry of Education Curriculum Implementation Exploratory Studies (CIES) project. The schools selected for this study were considered early adopters of the revised New Zealand Curriculum (NZC) (Ministry of Education, 2007). The paper provides theoretical insights and research evidence related to the role of professional development and learning in the early stages of implementation of the revised curriculum. A key finding common to most schools was the progressive development of a professional learning culture led by the principal that focused on pedagogy and student achievement prior to the introduction of the curriculum. The establishment of this culture involved processes that were task-oriented, reflective, consultative and collaborative. While there are strong parallels between the experiences of primary and secondary schools in the study, some important differences have also been noted.*

KEYWORDS

Professional development, professional learning, curriculum implementation.

INTRODUCTION

This paper has emerged from the Curriculum Implementation Exploratory Studies project jointly conducted by the Wilf Malcolm Institute for Educational Research, University of Waikato and the New Zealand Council for Educational Research under a New Zealand Ministry of Education contract. This ongoing research is examining the ways in which selected schools are working on implementation of the *New Zealand Curriculum* (NZC) released in late 2007 (Ministry of Education, 2007) due for full implementation in 2010. The main aim of the research is to

identify successful actions and processes in schools which have moved relatively quickly in their implementation so that useful ideas can be communicated to schools less advanced in their work on the curriculum. The schools in the study (eight in the case of this paper) were identified by the New Zealand Ministry of Education as schools relatively well advanced in their implementation or taking an interesting approach to the process of implementation. This paper reports on aspects of the first round of data collection conducted some six to eight months after the publication of the NZC. In recent years there has been an increasing emphasis placed upon professional development and professional learning as key determinants in how schools respond to and approach the implementation process. In this paper we use the term 'professional development and learning' as an overarching label for this critical aspect of the implementation process. The terms encapsulated in this label are often used interchangeably. However, recent educational literature does draw a distinction between the two.

Professional development is a well-established term generally understood by teachers for more than a century. Professional development can, in its simplest form, be defined as "the development of competence or expertise in one's profession", or "the process of acquiring the skills needed to improve performance" as a teacher (*Oxford English Dictionary Online*, 2008). Timperley, Wilson, Barrar and Fung (2008) suggest professional development is "an intentional, ongoing and systematic process" with the term having "taken on connotations of delivery of information to teachers to influence practices" (p. 3).

Professional development has become a rather negative term in the eyes of many due to the poor opinion many teachers have of many of the professional development programmes they encounter. Researchers have found that most teachers attend short-term professional development sessions that are selected by others, presented by outside experts and use direct instruction (Kwakman, 2003; Schlager & Fusco, 2003; Sandholtz, 2002). Teachers often describe such experiences as boring and irrelevant and forget most of what is covered (Lee, 2000; Allen, Osthoff, White, & Swanson, 2005). Much professional development is deficit-focused, assumes teachers need information from outside experts, and ignores key principles of adult learning by seeing teachers as passive receptors and not as sources of knowledge in their own right (Lee, 2000; Sandholtz, 2002).

Professional learning, on the other hand, is a more recent term that "implies an internal process through which individuals create professional knowledge" (Timperley et al., 2008, p. 3). This term began to be used in the late 1980s and early 1990s as a number of writers began to advocate that schools become learning organisations (Bolam, McMahon, Stoll, Thomas, & Wallace, 2005; Giles & Hargreaves, 2006). This school of thought suggests that learning communities draw on the "collective power of a shared vision and the collective intelligence ... of their human resources" (Giles & Hargreaves, 2006, p. 126). Learning organisations and communities are able to see the 'big picture' and the interrelatedness and interconnectedness of the whole 'system'. They also establish professional learning communities characterised by collaborative work and discussion, a focus on teaching and learning and the use of data to evaluate progress over time.

Professional development and learning

Collaborative teacher-centered action research that focuses on specific problems which arise in classroom learning environments is proving to be a more fruitful approach to teachers' professional development and learning than traditional expert-led professional development programmes, which have been shown to produce little sustained teacher learning (Wilson & Berne, 1999). Within the teacher education community the move towards encouraging teachers to become reflective practitioners and research their own classroom problems has gained widespread acceptance as an effective means of achieving and sustaining long-term professional learning (Cresswell, 2005; Reis-Jorge, 2007). There has been a shift in agency from programmes that do things to teachers to programmes that regard teachers as active learners shaping their own professional growth through reflective practice (Clarke & Hollingsworth, 2002). Collaborative action research between educational researchers and teacher-researchers is one example of a way to facilitate teachers' long-term professional growth and build their capacity to solve problems of professional practice in context.

According to Timperley, Wilson, Barrar and Fung (2008), the most successful teacher development programmes "involve cycles of research and development" (p. 3). However, for professional development to become more consistently central to school and teacher change through inquiry-based approaches, thinking and planning for it needs to be guided by teachers' capacity to be reflective, flexible and visionary, and by teachers' varied individual experiences and expertise (Sparks & Loucks-Horsley, 1990). Whichever strategies are employed, professional development should provide opportunities to "deepen the discussion, open up the debates, and enrich the array of possibilities for action" (Little, 1993, p. 148). Furthermore, when "viewed as providing lifelong learning opportunities for teachers, professional development can encourage and promote a spirit of inquiry to teaching, learning and the vast field of knowledge and understanding" (Grant, 1996, para. 23), and the growth of professional learning communities. As Timperley et al. (2008) assert, "teachers should be treated as self-regulating professionals who, if given sufficient time and resources are able to construct their own learning experiences and develop a more effective reality for their students through their collective expertise" (p. 3).

Professional learning communities

With the emphasis now turning to collaborative models for professional development and learning, attention in schools has switched to professional learning communities as the means by which meaningful, long-term change can be achieved. As Fullan (cited in Eaker & Keaton, 2008) claims, "terms travel easily ... but the underlying concepts do not" (p. 15). Eaker and Keaton (2008) contend that while the term professional learning community has in many respects traveled easily, the reality of "transforming a school to become a professional learning community requires much more than a superficial understanding and feeble attempts at reorganizing" (p. 15).

The importance of establishing professional learning communities in schools is inherent in much of the discourse about collaborative models of inquiry for professional development. Certainly, the cultures of such schools differ from those of more traditional schools (Fullan, 2006; Eaker, DuFour & DuFour, 2002; Giles & Hargreaves, 2006), and while according to Eaker and Keaton (2008), “all professional learning communities do not look alike” they do suggest that all “reflect three critical cultural shifts” (p. 15). Professional learning communities shift their primary purpose from teaching to learning, and they acknowledge that all students can be supported in their learning when school leaders and teachers work collaboratively. To achieve a shared purpose educators in professional learning communities know they must provide empirical evidence of the impact of their collaborative efforts on students’ learning and then use their findings to inform and improve their own professional practice (Eaker & Keaton, 2008). One of seven elements for promoting professional learning identified by Timperley et al. (2008) was the opportunity for teachers to engage and interact in a community of professionals where teachers could “process new understandings and challenge problematic beliefs with a focus on analysing the impact of teaching on student learning” (p. xxvii).

Others consider that a wider range of characteristics is needed in successful professional learning communities. Typically these are seen as:

- *shared values and vision* - a shared vision and sense of purpose with a strong focus on all students’ learning and being able to count on colleagues to reinforce objectives;
- *collective responsibility* - where members take collective responsibility for student learning which helps to sustain commitment, apply some peer pressure and ease isolation;
- *reflective professional inquiry* - reflective dialogue about serious educational issues; joint planning and curriculum development; seeking new knowledge and sharing knowledge through interaction; and applying new ideas and information to problem solving with solutions that address pupils’ needs;
- *collaboration* - staff in developmental activities that go beyond the superficial such as in joint review and feedback where collegial dialogue is substantial, open, frank but retains a spirit of mutual respect and interdependence; and
- *group, as well as individual, learning* - all teachers are learners with their colleagues and the school learning community interacts, engages in serious dialogue and deliberates about information and data, interpreting it communally and distributing it among them (Bolam, McMahon, Stoll, Thomas, & Wallace, 2005). Some add to this list the notion of results orientation or meaningful assessment (Eaker, DuFour, & DuFour, 2002; Reichstetter, 2006).

Principal as leader

In a recent best evidence synthesis, Timperley, Wilson, Barrar and Fung (2008) found that “teachers’ professional development is more successful when leaders and

principals are involved” (p. xxxix) and pointed out that a key aim for leaders of professional development is to support teachers’ professional learning around new initiatives and teachers’ own interests. Grant (1996) has referred to this as the “delicate balance of top-down/bottom-up efforts that build and sustain vital school communities” (para. 32). There is an interesting tension here. In much of the professional leadership and school effectiveness literature, it is suggested that the principal as ‘out-front leader’ and ‘driver’ is a vital ingredient in establishing and maintaining positive, purposive change in an implementation programme (Hallinger & Heck, 1996; Southworth, 2002; Leithwood, Harris, & Hopkins, 2008). On the other hand, in other literature it is suggested that unless teachers also see themselves as fully involved and as genuine co-leaders in the whole professional learning community, meaningful change will not ‘scale up’ to include all teachers and classrooms (Eaker, DuFour, & DuFour, 2002; Bain, 2007). The way the issues raised in the literature reviewed above were played out in the schools in this study will be discussed in the following sections.

METHODOLOGY

An interpretivist-based methodology (Guba & Lincoln, 1989) was used, in this research including a multiple case study approach and qualitative research methods focused on semi-structured interviews and document analysis. The case study approach was used in order to facilitate a holistic, interpretive investigation of events in context, with the potential to provide a more complete picture of how schools were implementing the NZC compared to other modes of research (Adelman, Kemmis, & Jenkins, 1980; Bell, 1999). The case studies comprised four secondary and four primary schools, and pairs of researchers carried out each case study. In every case study individual interviews were conducted with a member of the board of trustees, the principal and two teachers. In the larger schools a member of the senior management team with responsibility for school curriculum leadership was also interviewed, and in the secondary schools two heads of departments and at least two teachers. The interviews explored participants’ views on the school vision, the intent/potential of the new curriculum and how well implementation of the curriculum was proceeding in their school. Information was also sought on what professional development and learning opportunities had been organised to support implementation. Documents analysed for data relating to the research questions typically included school charters and strategic plans, and curriculum planning documents and guidelines such as teaching and learning schemes and unit outlines.

FINDINGS

The research questions in the overall study centred on the circumstances, events and processes that led to the case study schools being early adopters of the NZC. A clear finding emerging from the data was the planned establishment of professional learning communities in these schools and the pivotal role that professional development and learning of teachers appeared to play in determining how schools approached the NZC implementation. Across the case studies, common themes

could be identified that gave insights into how purposeful and timely professional development and learning is in promoting ownership and action on the NZC implementation, thus influencing the nature and pace of curriculum development in the schools. These common themes relating to professional development and learning are explored in the following sections.

The existing culture of a school was important, for it seemed to predispose these eight school communities to early exploration of the NZC. In these schools, a number of influential features were:

- the school direction as expressed in the school charter and vision;
- the manner in which decisions were made about school direction;
- the degree of emphasis on student learning and achievement and effective pedagogy; and
- the role of professional development in supporting the school direction and how professional development was promoted, delivered and owned by staff strongly influenced the ways the NZC was initially regarded and accepted by the school communities.

Those schools with existing clear vision for the school focused on student learning and achievement and effective pedagogy, and they planned curriculum aims and goals with well-resourced staff professional development and learning aligned with this vision. They generally displayed an early willingness to adopt the NZC philosophy, structure and content. With their sights already on improving teaching and learning, these schools found that their aspirations were strongly aligned with those of the NZC, and they were ready to adopt and own the revised NZC with little change needed in school direction and structures. One school without an existing vision containing clearly defined learning and pedagogical goals linked to student achievement was a little slower in their initial adoption of the NZC.

The primary schools in the study typically had charters and strategic plans emphasising pedagogy for improving student achievement that had been in place for some years. This planning had often been initiated and supported by staff involvement in professional development and learning programmes which explored and shifted teachers' pedagogical thinking. Commonly, these programmes were undertaken in cluster groups of several schools. For example, in one school a significant change in how pedagogy was viewed and practised occurred through participation in the EnviroSchools programme, a Ministry of Education funded Trust that promotes and facilitates environmental education in school, beginning in 2005 where "it became our pathway into the curriculum being meaningful" (Principal). In another school cluster, teachers participated in an information and communication technologies (ICT) development programme from 2003 to 2006. A key outcome of this strategic development was a schoolwide inquiry model for learning and its subsequent implementation resulted in a shift to an integrated approach to learning and teaching, now a central feature of classroom practice. Teachers in another school saw involvement in the Enhancing Higher Standards in Schools (EHSAS) project in 2005 as a major catalyst for change in direction at their

school, and they had established a shared belief in a philosophy based on developing lifelong learners and compatible pedagogies.

Development of similar school visions and charters at the secondary schools tended to be more recent developments. Four years prior to the release of the draft and final forms of the NZC, one school's leaders had set in motion a process involving an initial think-tank group that laid the foundation for the design of the school charter and vision in 2006. Planned professional development opportunities, both internal and external, enabled and encouraged teachers to be involved in professional learning related to student learning and pedagogy. These opportunities included professional readings, outside speakers, and interschool electronic links. Such learning experiences by teachers helped to inform the planning process, resulting in a charter that featured students' learning journeys and the enduring understandings they would develop during their schooling. Events at the other secondary schools occurred along similar lines. For example, the board and teachers at one of them began exploring a vision for 21st century learners several years before the draft NZC. They worked in professional learning groups with the assistance of external speakers and facilitators. This period of exploration allowed staff to crystallise philosophies underpinning their learning and teaching vision and they developed common language and understandings. The stories were similar in the other schools. In one, cross-curricular approaches were a feature.

It seems that this preparatory phase of establishing a school vision where student learning and pedagogy were paramount was an important pre-cursor to the early adoption of the NZC. Teachers were ready and able to engage with the draft NZC as soon as it arrived in schools and few major adjustments had to be made in their thinking when accepting the philosophies and approaches of the revised national curriculum, especially in the primary schools. Most schools in the study quickly began to analyse the draft NZC and could identify and discuss key ideas and possible implications for their teaching and learning programmes with relative ease. Even so, two secondary schools faced challenges in professional development programmes initiated by the principal, challenges that turned out to be necessary groundwork to embarking on further curriculum review.

THE PRINCIPAL AS A LEADER IN PROFESSIONAL LEARNING

In these early adopter schools the principal was a vital agent of change and fully supported by his/her board of trustees and senior management teams. Usually these principals had been involved in some kind of leadership training, professional development or personal academic learning that promoted professional learning as a key requirement for school change to occur. Several principals had experienced the First Time Principals Programme (FTPP). Three primary principals were members of a principals' professional leadership group in the local area, where collaborative professional learning about school development was facilitated. Most principals attended principals' conferences and engaged regularly in their own professional reading, and encouraged teachers to do the same.

All primary principals were considered by their teachers to be the leaders of professional development and change, and this was increasingly the situation in the

secondary schools. Such principals were gatekeepers of professional knowledge in the sense that they actively sought out and were alert to issues, trends and research emerging from the wider educational community and they modelled professional learning through their own actions. These school leaders see in-depth professional learning as the major teacher contributor towards improved student achievement and they provided opportunities for teachers. Professional development has changed from episodic to ongoing and integral, such that professional tasks like curriculum implementation are part and parcel of accepted school development. In a sense these principals prepared their schools and staff for early adoption of the NZC through purposeful professional development that had encouraged professional learning about student achievement and pedagogy to occur.

There was evidence that principals were appointing teachers to key leadership positions who held philosophies that were similar to or compatible with their own. For example, one primary principal actively pursued a teacher with curriculum strengths needed in the school, and several senior management teachers in a secondary school were recruited because they shared similar views on school direction.

LONG-TERM PROFESSIONAL DEVELOPMENT AND PROFESSIONAL LEARNING

There was a shared awareness among teachers in the case study schools that for a culture of learning to be sustained within their school communities and for change in teachers' pedagogical practice to be maintained, long-term professional development is necessary. School leaders were aware of the need for time to allow teachers to be challenged, communicate with one another, think critically and have hard conversations in safe environments. Many teachers reported that such planned opportunities assisted them to gradually develop a shared understanding about school direction and a common language, for example the term 'learning lifelong'. Many appreciated the value of a collegial and collaborative approach to professional learning and could see how this learning would shape their ideas related to curriculum. Teachers acknowledged the value of strategies such as the use of external speakers, working with other schools and opportunities like e-fellowships in reshaping their thinking about pedagogy. One head of department commented that schoolwide professional development had convinced the department's teachers that not all learning within their courses needs to be discipline driven and that this change in teachers' views had been vital in curriculum development and innovation within the department. It appeared that across the schools ongoing professional development created more openness to change in teachers and an inclination to take responsibility for their own learning.

All schools in the study have set up structures to promote and support school wide professional learning. The main features are summarised as follows, recognising that there were specific variations across schools:

- Whole school staff meetings emphasised professional development rather than administration. Staff meetings at the primary schools were organised as occasions for professional learning. In one, for example, weekly professional

development meetings were based on topics related to teachers' classroom programmes and generated by staff. Professional readings were often given to teachers to read beforehand and used as stimulus for ideas or to inform discussion at the meetings. In one school each teacher had a professional development folder, which included readings with accompanying key questions for discussion. At other schools teachers kept portfolios as records of learning. Sometimes guest experts gave talks to provoke and stimulate teachers to think outside the square or ran workshops on particular themes, such as curriculum mapping or inquiry-based learning. Effective pedagogical strategies were frequently and purposefully used at these meetings. One secondary school had set up cross-subject groups; in another, teacher groups had conducted small-scale action research based on a critical inquiry model of teaching and learning.

- Staff responsibilities, particularly in top and middle management, had been changed to put more overt emphasis on student learning and pedagogy and thus align roles more with the aims and goals of the NZC. The change was shown in one secondary school where heads of departments were renamed leaders of learning and in another school leaders of curriculum and learning. These groups were seen as strategic to 'seed' new ideas across the teachers. All secondary schools had a senior management teacher in charge of curriculum.
- Significant resources were allocated to professional development in the study schools. Most boards of trustees were guided by recommendations from principals when considering the professional development needs of staff. Across the schools there was strong trustee support for teacher development, with generous time and budgetary allocations. Boards supported community consultation processes. For example, in one secondary school, board members were particularly knowledgeable about professional education issues related to curriculum and sympathetic and open to the need for professional learning to realise change. Monetary resources at this school were used to buy time for staff reading, release groups of teachers for planning and trialling new pedagogical approaches and visits to other schools with innovative programmes. Extensive ICT resources were also provided for teachers and students to enhance teaching and learning. Teachers at the school see this resourcing as recognition of the value placed on professional learning by the board and school management. The principal educates the wider school community by providing readings to the board of trustees and using the school newsletters and website to comment on topical education issues. These kinds of attitudes, policies and practices were typical of these early adopter schools.
- Appraisal systems at many of the schools were aligned with professional learning. The appraisal process in one primary school was focussed on how teachers could enhance student learning outcomes through their teaching practice. In all schools there was an emphasis on the identification of teachers' needs and professional learning opportunities to meet them in relation to schoolwide curriculum needs. In a secondary school, pairs of teachers

annually develop a research question related to positive learning outcomes for students and report to the principal on their findings.

- External facilitators were employed by some schools to work alongside teachers and support changes in classroom practices as teachers trialed innovations and new approaches. Some examples were existing projects such as the Assessment to Learn programme, the EnviroSchools project and the Literacy and Numeracy projects. Facilitators in these projects were able to respond to diverse individual teacher needs in a tangible way.
- Government-funded resources were accessed to varying degrees by teachers at the schools in the study. Primary schools made use of the Te Kete Ipurangi (TKI) website Ministry of Education powerpoint presentations but this practice was less common in the secondary schools.

THE FOCUS ON THE ‘FRONT END’ OF THE NZC DOCUMENT

In all case study schools the ‘front end’ of NZC has received the greatest attention. These first 16 pages deal with the vision, structure and philosophies that underpin the new curriculum. In schools, time was devoted to examining the vision for student learning and what are termed the key competencies and values that students should possess, and exploring how they have implications for current school goals and practices. Three key emphases were evident: first, implications for existing schools curriculum; second, an interest in lifelong learning; and third, the integration of learning areas into cross-curricular programmes. All primary schools were focused on values and key competencies initially, and at the time of data collection were beginning to look at the learning areas. The principals all believed it was important to understand the vision, values and key competencies before examining the learning areas. Key competencies seemed to have come to occupy a prominent position, although it was difficult to pinpoint the reasons. One primary cluster worked collaboratively on developing their understandings of the key competencies, and they were being integrated into units with an emphasis on teachers working towards ensuring the key competencies become part of the school culture. The secondary schools were also focusing on the key competencies, values and pedagogy themes and several had trialed cross-curricular units in their junior classes.

THE PRIMARY AND SECONDARY SCHOOL EXPERIENCES

In all schools in the study emphasis was given to the importance and relevance of creating purposeful professional learning communities. Some were already developed. Some were internal to a school and some were external, such as school clusters or part of a contract. Contracts emphasise learning as the fundamental purpose, and teachers are encouraged to gather evidence to show student achievement gains. It was the intention of the schools’ leaders that professional learning community practices become embedded in order to develop school cultures that lead to improved teaching and learning.

There were some primary – secondary differences. The secondary schools saw improved pedagogy as the key area for professional development to further a staff

culture of professional learning that in turn prioritises student learning. The primary schools already had school professional learning cultures that were student-centered and their pedagogical practices had undergone significant change as they worked towards improved student learning. The development and implementation of inquiry models for learning and teaching that drew on schools' existing pedagogy and vision seemed to be key actions that the primary schools were concentrating on.

In secondary schools, developing a staff culture of professional learning which includes breaking down traditional learning area boundaries is problematic. The leaders in one secondary school emphasised a perceived importance of developing a schoolwide vision before working at departmental level, with the aim of getting teachers to think more globally about schooling and meeting learners' needs. Belonging to externally led cross-curricular professional development projects like Assess to Learn (AToL) helped this process. The establishment of cross-curricular groups facilitated the development and delivery of interdisciplinary thematic units based on charter goals. Similarly, cross-curricular staff groups in another school changed the culture of staff development, at least according to the principal. It was argued that teachers became comfortable taking risks, found the learning to be relevant and began taking ownership of their own learning. Three of the secondary schools had attempted cross-curricular programmes with mixed success but most were still encouraged to keep working in this way.

FACTORS THAT HINDERED IMPLEMENTATION

So far in this paper we have looked at factors that link positively to early adopter schools. However, individual teachers respond in different ways to urgings to consider change. In several schools comments came through from those interviewed that some of their colleagues found the pace of change, coupled with the lack of time, too demanding. As a result these teachers lacked ownership of new ideas, and their professional learning and inclination to learn suffered. It is not possible to quantify the extent of these reservations. Many interviewed commented that still more resources were needed to support the kinds of professional learning that was required for the implementation process. Particular mentions were made of ICT facilities and training, time, and provision of exemplar materials. Secondary teachers who were designing and trialling cross-curricular approaches and units felt the need for exemplars most keenly. Their experiences to date indicated that implementation of such approaches into teaching and learning programmes was not, for them, a straightforward process. The size and complexity of a school needs to be considered. In a small primary school it is probably easier to achieve a degree of whole-school commitment to common goals and practices than in a larger school, especially a large secondary school.

CONCLUSION

We have considered the role of professional development and learning in the early adoption of the *New Zealand Curriculum* in schools. In our sample schools it was evident that there was an increasing understanding by school leaders that the

provision of opportunities for “professional development and learning are inextricably linked to fostering the professional culture in a school” (Grant, 1996, para. 7). All of the schools in the study had employed, or were beginning to employ inquiry-based professional learning community approaches to professional development and learning. They encompass formal and informal ways of supporting teachers’ learning about the NZC and what it means. Support for teachers was also needed to adapt their approaches to curriculum design and implementation in the classroom. It was clear that the schools had a common view that professional development needed to be a continued and sustained process which valued and supported teachers’ ongoing professional learning (Grant, 1996). Timperley et al. (2008) aptly point out that if “teacher engagement with new ideas and practices is to be more than a brief encounter, there are issues of sustainability to be considered” (p. 218), such as ongoing professional learning which facilitates continued improvement.

Notably, sound leadership contributed in a major way to teachers’ ownership of their professional learning and the implementation process. School principals worked tirelessly to facilitate the variety of approaches referred to in this paper and to create professional learning cultures in their schools. For the most part, this initiative has resulted in more frequent opportunities for teachers to actively and meaningfully engage in discussion, dialogue and reflection with experts. Professional learning seemed more focused and relevant. Clearly, the leadership of school principals was central to the effectiveness of professional development and learning activities in creating inquiry-based professional learning communities to facilitate work on the complex task of implementing the NZC.

Without exception, the schools in this study advocate opportunities for professional development and learning as critical to successful implementation of the NZC. They have focused on action and change by fostering and valuing cultures of collegiality, collaboration, reflective practice and discourse. The schools in the study have recommended that others beginning the implementation phase should:

- review the school vision to make values, expectations and the professional learning culture more explicit in conjunction with NZC related professional development;
 - build on existing school culture for collaborative professional learning (within, and with other schools);
 - take a long term view of the professional development and learning process;
 - prepare for implementation by developing professional learning communities in which staff have ownership of the process and the learning;
 - focus on several aspects to ensure change does not overwhelm but over time becomes embedded in teachers’ pedagogy and practice;
 - revisit and recap frequently to trace the journey;
 - schedule regular meetings so that staff remain connected;
 - plan and structure professional learning activities based on the needs of staff;
- and

- examine in depth the ‘front end’ of the NZC to gain insights into pedagogical practice and consolidate understandings.

The findings suggest that the schools reported on in this paper are in the process of becoming places of intellectual challenge and learning where thinking, reflection and action that leads to change will prevail, thus effectively setting the scene for lifelong learning as the direct result of effectively led and designed professional development and learning. Schools need to “find ways to take what has been learned about professional development for learning and use these understandings to create sustainable professional learning communities” (Timperley et al., 2008, p. 218), which are focused on the effective and successful implementation of the NZC and improved student learning. To what extent teachers and students own and benefit from such learning communities will be important to investigate in future research. Among the challenges facing each school will be how to sustain change, interest and commitment among teachers, and how to find credible evidence inside the school that the changes are indeed working for teachers and students. Ideally, this evidence should be directly linked to student achievement.

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