

This article was downloaded by:

On: 9 November 2009

Access details: *Access Details: Free Access*

Publisher *Routledge*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Leadership and Policy in Schools

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title-content=t713734379>

Instructional Leadership Challenges: The Case of Using Student Achievement Information for Instructional Improvement

Helen S. Timperley^a

^a University of Auckland, New Zealand

Online Publication Date: 01 January 2005

To cite this Article Timperley, Helen S.(2005)'Instructional Leadership Challenges: The Case of Using Student Achievement Information for Instructional Improvement',*Leadership and Policy in Schools*,4:1,3 — 22

To link to this Article: DOI: 10.1080/15700760590924591

URL: <http://dx.doi.org/10.1080/15700760590924591>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Instructional Leadership Challenges: The Case of Using Student Achievement Information for Instructional Improvement

HELEN S. TIMPERLEY
University of Auckland, New Zealand

Increasingly school leaders are being challenged to take a more instructionally focused role in their schools. This paper tracks the leadership challenges through a change process involving an assistant principal and a group of teachers, supported by a consultant, through four phases of an action research project. During the project the participants learned how to use achievement data to improve instruction for their low-achieving students. Initially, the teachers did not believe that they could influence the low literacy achievement of their students and so analyzing achievement data was irrelevant to their practice. Eighteen months later they were using the data to target their instruction more precisely and to test the effectiveness of their teaching practice and make refinements to their programs. The multifaceted challenges involved in leading such an initiative are discussed for each phase, together with conclusions about the realities of instructional leadership and the support that might be needed to undertake it effectively.

Since research on school effectiveness has demonstrated that schools can make a difference for the students who attend them (e.g., Reyes, Scribner, & Scribner, 1999; Reynolds & Teddlie, 2000), the search to find ways to improve schools with poor student outcomes has occupied many researchers. Not surprisingly, attention has often focused on the leaders of such

The author wishes to acknowledge the valuable research assistance of Irene Symes. The willingness of the assistant principal and teachers at Riverdale School to having their practice observed and critiqued and their openness to learning is also sincerely acknowledged.

Address correspondence to: Helen S. Timperley, School of Education, University of Auckland, Private Bag 92019, Auckland, New Zealand. Tel.: (64-9) 373-7599 Extension 87401. Fax: (64-9) 367-7191. E-mail: h.timperley@auckland.ac.nz

schools. Unfortunately, initial hopes that “a single ‘heroic’ leader standing atop a hierarchy and bending the school community to his or her purposes” (Camburn, Rowan, & Taylor, 2003, p. 348) could transform such schools have proved unrealistic for a number of reasons. They include problems with an insufficient number of such leaders (Copland, 2003) and the lack of appeal of this vision for many potential leaders (Gronn & Rawlings-Sanaei, 2003). Even more problematic is that when the heroic leader moves on, progress often comes to a standstill and previous practices re-emerge (Copland, 2003).

A more realistic and sustainable conceptualization of leadership in these situations involves thinking of it in terms of tasks, activities and interactions that are distributed across multiple people and situations with a focus on improving instruction (Camburn et al., 2003; Copland, 2003; Spillane, Halverson, & Diamond, 2004). Leadership involves many people, rather than the single visionary. Similarly, it is embedded in a variety of activities, so traditional dichotomies between leadership and management, for example, disappear because their integration is fundamental to being effective (Gronn, 2003).

Accompanying this shift in focus to notions of distributed leadership in schools focusing on instruction is a policy shift towards schools themselves taking greater responsibility for improving instruction through providing professional learning opportunities for their staff, rather than relying on externally delivered professional development. Improving the success of the students has been found to depend on both the learning of individual school professionals and improvements in the capacity of the whole school organization to solve problems and create new ways of doing things (Sparks & Hirsh, 1997). Fullan (1998) captured the central notions of this idea when he wrote “There is no external answer that will substitute for the complex work of changing one’s situation” (p. 6).

Generic delivery models of much external professional development have often proved ineffective in creating the depth of shared professional knowledge needed if staff are to address complex teaching and learning issues in their schools, particularly in those schools facing challenging circumstances (DuFour & Eaker, 1999; Louis & Leithwood, 1998; Wald & Castleberry, 2000). Part of the depth required is an understanding of the contextual conditions in which the new learning must be applied (King & Newmann, 2000). Every school contains a diverse mix of teachers and students with varying competencies and attitudes and a unique set of social, cultural, and political conditions, all of which have a powerful influence on teaching and learning (Bryk, Sebring, Kerbow, Rollow, & Easton, 1998; Lytle & Cochran-Smith, 1994). These complex conditions often present obstacles for teachers attempting to apply new “generic” learning from conventional professional development programs to their own classroom practice (Clement & Vandenberghe, 2000; DuFour, 1999; Hord, 1997; Lashway, 1998; Leo & D’Ette,

2000; Leonard & Leonard, 1999; Louis & Leithwood, 1998; McLaughlin, 1993; Rosenholtz, 1989; Smylie, 1995).

Although these reconceptualizations of leadership and professional development provide a more accurate portrayal of reality in the case of the former and greater leverage to improve schools in the case of the latter, they present school leaders with considerable challenges. If sending teachers out of school to courses is no longer an option, then it becomes the responsibility of the leaders throughout the school to develop internal systems where they and their teachers learn how to deliver programs that impact positively on student achievement. In-school processes, however, have as much potential to maintain the status quo as to challenge it if teachers rely on collectively held beliefs and familiar practices to solve difficult instructional problems (e.g., Coburn, 2001; Little, 1990; Timperley & Robinson, 1998).

The action research project reported in this paper of an assistant principal and a team of seven teachers, supported by the author as a consultant, illustrates some of the challenges faced by instructional leaders and possible strategies for overcoming them when developing internal systems to facilitate professional learning. The assistant principal wanted to use student achievement information during team meetings as a catalyst for professional learning about improving the delivery of literacy programs. Over the time of the study, the teachers shifted from initial beliefs that achievement was determined primarily by outside influences and, therefore, the data were irrelevant to their practice, to using the data to improve their practice. Indicative measures of student achievement showed that it improved as a result of their efforts.

ACHIEVEMENT INFORMATION AND INSTRUCTIONAL IMPROVEMENT

How might the examination of student achievement information serve to improve instruction? One way to answer this question is to take an historical perspective. Earlier attempts to improve the impact of teaching on student learning involved teacher-proofing sets of curricula and pedagogical approaches. These attempts inevitably failed because prescribing teaching activities and treating teachers as technicians did not allow them to respond flexibly to the varying instructional needs of their students (Louis, 1994; Louis, Kruss, & Marks, 1996). Calls for the greater professionalization of teachers through improved pedagogical and content knowledge were strongly supported, especially when it was shown that better-qualified teachers achieved better outcomes for their students, particularly in schools facing challenging circumstances (e.g., Darling-Hammond, 2000). For improved knowledge to result in greater responsiveness to students' needs, however, teachers need reliable ways to identify those needs. Assessment information,

particularly from diagnostic tests, can help teachers plan more individualized programs and create a better match between the instruction offered and the students' learning needs.

Achievement information can also be used for program improvement by providing opportunities for teachers to reflect on the impact of their teaching on the goals of that teaching (Guskey, 2003). Various studies have found that when schools have clear goals and standards of student performance, and teachers collect and review information to inform themselves about their levels of success with their students in reaching those standards, achievement improves (Newmann, King, & Rigdon, 1997; Timperley, 2004).

While the above rationale provides a tidy argument, learning in context, whether by students or their teachers, is typically messier than that portrayed. One side effect of this "messiness" is that data on outcomes frequently provide surprises. It is under these circumstances that the data can be particularly powerful for professional learning because what they show can challenge deeply held beliefs about students, their potential for learning, and the impact of teaching (Schutzwohl, 1998; Timperley & Robinson, 2001). These kinds of surprises may be particularly important in schools serving low socioeconomic communities where low expectations of student achievement are frequently entrenched and teachers' beliefs about their ability to impact on that achievement are fragile (Delpit, 1995; McLaughlin & Talbert, 1993).

RESEARCH CONTEXT

Although New Zealand is a small country of approximately four million people, its educational experiences have relevance for many other education systems. The population is roughly equivalent to the median American state and larger than most Australian and Canadian states that have constitutional responsibility for education in these countries (Fiske & Ladd, 2000). In New Zealand, this responsibility rests with a national Ministry of Education. New Zealand also faces many of the educational issues experienced by others, particularly the low achievement of indigenous and some immigrant groups.

New Zealand schools are essentially self-managing, in the sense that each is governed by a locally elected board of trustees which is responsible for the school's operational budget and has oversight of the quality of educational programs. Periodically, an independent national review and audit agency, The Education Review Office, visits and reports publicly on a range of educational processes and outcomes for each school.

Riverdale School is located in one of New Zealand's poorest suburban areas of South Auckland. Ninety-five percent of the children on the roll of 483 were Maori (New Zealand's indigenous people) or from one of the small Pacific Island nations of Samoa, Tonga, Fiji, or Nuie. These groups traditionally

underachieve in New Zealand's schools. Four years prior to the study the national audit and review office (Education Review Office, 1996) had reported that 45% of the 36 schools in this suburb and another close by were offering an inadequate education. No school was named and unlike many other Western jurisdictions there is no system of national testing at elementary school level, although standardized tests are available for use if schools wish to use them. As a result, no achievement data were available for comparative purposes and it was unclear which schools were considered adequate and which inadequate. Following this report, the Ministry of Education developed an initiative to strengthen schooling in the two suburbs by focusing on improving literacy achievement in partnership with the schools and their communities. Despite the additional funding given to each school for their literacy projects, no discernable improvements in student achievement had occurred as a result of their efforts (Timperley, Robinson, & Bullard, 1999).

The assistant principal at Riverdale School, who had responsibility for literacy leadership in the junior school, was very aware of the low levels of literacy achievement from the time the students entered school and invited the author to work with her on an action research project in which she hoped to help the teachers to use achievement information to raise literacy levels. In keeping with the idea that instructional leadership needs to be distributed across multiple people and situations, rather than residing with the principal alone, this study focused on the challenges faced by the assistant principal and the support she needed when attempting to promote the professional learning of the teachers through this activity in ways that impacted positively on student achievement.

DATA COLLECTION

The assistant principal worked with the author and a research assistant to develop the action research project. In the early stages of the project, the assistant principal met with the author to define the problem and develop strategies to address it. The research assistant observed (and audio-taped) a series of staff meetings attended by the assistant principal and seven staff in the junior school, interviewed (and audio-taped) a selection of teachers following each meeting, and provided feedback to the assistant principal. The author took on this role in the final phase. Because of the interventionist nature of the project, the interviewed teachers gave consent for the substance of their interviews to be reported to the assistant principal to inform the development of the project, although no individuals were identified. The interviewed teachers were nominated by the assistant principal as representing a range of opinion with regard to the relevance of achievement information to their instructional practice.

The interviews were relatively unstructured in that there were no set questions determined in advance. However, they were underpinned by the methodological approach of problem-based methodology (Robinson, 1993) that seeks to map participant's theories-of-action by understanding the set of constraints that determine particular practices. These constraints can include a range of conditions including the participants' beliefs and skills and the resources available to them. The actions were those observed at the team meetings and their reported use of achievement information in instructional practice.

In summary, the data collection evolved through the following phases over an initial period of a school year with follow-up data collection taking place nine months later.

Phase One: Understanding the Problem

- Initial meeting with assistant principal to develop a shared understanding of the initiative and possible course of action (author);
- Observation of team meeting with follow-up interviews of the assistant principal and three teachers to understand participants' theories-of-action in relation to using achievement information (research assistant).

Phase Two: Making the Links

- Two meetings with assistant principal to provide feedback on interview findings and plan the next phase (author and research assistant);
- Observation of team meeting with follow-up interviews of assistant principal and the three teachers to understand participants' theories-in-use in relation to particular meeting events (research assistant);
- Meeting with assistant principal to feedback research findings and plan next phase (author and research assistant);
- Observation of team meeting (research assistant);
- Interviews with assistant principal and four teachers about their perceptions of the project so far (research assistant).

Phase Three: More Authentic Testing

- Meeting with assistant principal to design follow-up data collection (author);
- Interview with assistant principal and teachers to check the accuracy of the researchers' interpretation of the findings (research assistant).

Phase Four: Generalization

- Follow-up meeting observation and interview with assistant principal and three teachers one year later (author).

A two-dimensional categorization system was developed for classifying responses about how the achievement data were used. The first dimension

focused on whether it was used to simply describe achievement or used to inform teaching practice. The second dimension focused on the size of the unit of analysis to which the achievement data applied—an individual student or a cohort of students. These dimensions were developed because it became apparent that different understandings and skills were needed for the different categories within them.

RESULTS AND DISCUSSION

The results are presented and discussed for four phases. The discussion for each phase focuses on the leadership challenges involved in developing internal systems to use student achievement information to improve instructional programs.

Phase One: Understanding the Problem

As in most New Zealand schools, the assistant principal and teachers collected a range of literacy achievement information (Robinson, Phillips, & Timperley, 2002). It was kept as individual student profiles and held in each teacher's filing cabinet. The data included running records of reading accuracy, known high-frequency words, and writing samples. More formal data included reading tracking sheets (a record of students' reading levels) completed by the teachers and given to the assistant principal on a monthly basis, and the results of a nationally benchmarked Observation Survey (Clay, 1993) that included a range of students' reading skills administered by the assistant principal at the end of the first year of instruction. The Observation Survey took approximately ninety minutes per student to complete and provided a rich diagnostic profile of a range of student's reading skills and strategies and was developed specifically for diagnosing difficulties experienced by slow progress students. None of these data were used for accountability purposes, so the question to be answered was, "For what purpose were they used?"

The assistant principal used the Observation Survey data primarily to describe individual student achievement. Although she did not aggregate the data in any formal sense, her familiarity with the scores led to an awareness of the low levels of achievement compared with other students of a similar age in the country and formed the basis of her request for researcher involvement. She had been trained in using such data to develop sophisticated individualized programs for students, however, and she encouraged her teachers to do the same by providing them with written diagnostic summaries for each child she assessed. She also hoped that the teachers would use the monthly tracking sheets for program planning. However, she was concerned that the

teachers were failing to use either set of data for teaching purposes. "I actually don't see it in their planning. I don't see that it informs their next steps."

The first round of teacher interviews established that her assumptions were accurate. Teachers perceived that the Observation Survey was solely for the assistant principal's use, not theirs. Two of the three interviewed teachers explained that they did not even look at them; as one described, "They go into the file but you don't have time to look at it." The tracking sheets shared a similar fate, even though filled in by the teachers themselves. "I don't use it very often—just fill it in."

The full picture of how achievement data were used by teachers, however, was more complicated than that portrayed above. Teachers did use data for planning purposes, but it was the anecdotal observational data collected on a daily basis in their classrooms that was of more relevance to them. Each day they used this information to determine what to teach next. As one described, "As far as I'm concerned I know where my kids are at because I'm planning for them every week." Teachers reported feeling in control of these data and they regarded them as relevant and trustworthy in contrast to the more formally collected information.

The assistant principal was concerned about what she perceived to be the low quality of these anecdotal observation data, particularly because they did not give the teachers an understanding of the adequacy of their students' progress in comparison with other students in the country. She believed that the perceived irrelevance of the more formally collected data lay primarily with the teachers' lack of ownership and understanding of it. As she explained, "In the past they've given information to somebody else and they haven't done the process themselves . . . so I thought it was really important that they see the process themselves."

At the next team meeting, she gave each teacher the Observation Survey data taken from her records and showed how she had started to graph the results, which indicated that the students were not progressing at a rate expected for their age. Her perception that the teachers did not understand the data was well founded. They were quite open at the meeting that they had very little idea of what the graph was telling them. Following an explanation, the assistant principal asked the teachers to transpose the student's individual scores from the tracking sheet onto a similar graph and thus obtain a visual representation of how their students were progressing in relation to nationally benchmarked expectations. When asked for feedback on the usefulness of the task, there was general agreement that the process had not been particularly helpful. They indicated that they already knew that the students were reading below expectations for their age. Various comments alluded to the belief that national expectations were unrealistic for their students. For example, one teacher asked in an aside when the assistant principal indicated the expected level after six months at school, "Is that according to real life?" This undercurrent at the meeting was more

explicitly stated in the follow-up interviews. For example, another teacher explained,

I don't know if I agree on the national averages . . . There's the ones that don't come to school every day, there's the ones who don't have lunch, there's the one's who are scared when they come to school so they are running round and they're scared when they go home because they won't do their books at home.

Another reported,

I've got a vague idea off the top of my head and I just tend to teach them the best I can and I mean if they're below and I'm teaching as much as I can and to the best of my ability—I don't see that knowing exactly where they should be, or how much below they are, is going to do anything.

The leadership challenge in this situation was considerable but not atypical in schools in similar circumstances. Although there was a shared understanding of the problem of low achievement, there was no shared understanding of responsibility with regard to how it might be addressed. The assistant principal believed that using data to develop a better instructional match with the students' learning needs would lead to improved achievement. The teachers attributed the problem of poor achievement to factors beyond their control and, therefore, did not believe they had responsibility beyond teaching as well as they could in difficult circumstances. The specifics of the data were irrelevant.

An interesting parallel exists between what is expected of teachers with respect to their students in such circumstances and what is expected of leaders with respect to their teachers. Teachers were expected to address students' needs through a detailed diagnosis of their learning challenges, including their attitudes, skills, and knowledge, and then to develop programs based on this diagnosis. If leaders are to be successful in addressing teachers' learning challenges, solutions need also to be based on an accurate diagnosis of these attributes. Yet, how often do we expect such an analysis by leaders or any other school change agents? In this case, the assistant principal's initial diagnosis of the learning challenges was partially accurate in that her teachers did not understand the specifics of the data or the analysis process, but it was incomplete because it did not include a range of other influential factors such as the teachers' attitudes towards their responsibility for addressing the problem of low achievement or their belief that change was possible.

Her theory of change was based on a hope that by involving the teachers in the data analysis process they would develop greater ownership of it. Once ownership was established, they would then use the data to inform and

improve their teaching practice. A major problem with this theory was the lack of clarity about what was to be owned. Was it the data themselves or responsibility for addressing the problem of low achievement? Unfortunately, making the problem explicit through plotting the data did not improve ownership of either the data or the problem they already knew existed. Nor did it improve their skills in data use for instructional improvement. As a result, no changes occurred in teachers' perceptions about the relevance of the data, their teaching practices or their expectations of student achievement.

The issue of how to diagnose professional learning needs is not one faced by this educational leader alone. Compared with the technology available for diagnosing students' learning needs, there are few recognized tools or strategies for leaders to use under these circumstances. However, the use of internal systems to promote professional learning has an advantage over the external delivery of professional development because these internal systems are more likely to provide opportunities to revisit such situations in the light of new evidence if the leaders use these events as an opportunity to learn. In this case, the leader sought feedback on initial change efforts through the research assistant's interviews and then used this information to refine her diagnosis of the problem and her theory of change.

Phase Two: Making the Links

In this next phase, after discussing the issue with the author, the assistant principal decided that if she wanted the teachers to use benchmarked achievement information for planning instruction, then they needed to be shown explicitly how to do this. She decided to use the Year One and Two student cohort data to work with the teachers to identify a specific and manageable student learning problem and to develop strategies to overcome it. The difficulty arose, however, that although she was highly skilled in making these links for individual students, she had not previously analyzed data for a cohort of students and was unsure how they might be used to inform teaching practice. Skills and understandings at the individual student level did not necessarily apply when considering cohorts of students. She experienced the same kinds of difficulties at this level of analysis as her teachers experienced at the individual student level of analysis when asked to use the data for instructional purposes.

A review of the Observation Survey (Clay, 1993) data with the author revealed a large discrepancy in benchmarked scores between the students' ability to hear and record sounds in words at the letter level and their ability to write words. The former scores approached national levels of achievement and the latter clustered around stanines one and two.¹ The agreed

¹ The Observation Survey uses stanine scores on a scale of 1–9. They follow the normal curve with 50% of scores falling in stanines 4, 5, and 6. The other 50% are distributed between stanines 1, 2, 3 and 5, 8, 9.

problem was that students required assistance to use their letter-level knowledge to write words. The assistant principal decided to graph these results and to work with the teachers to identify the problem and to develop appropriate instructional strategies.

Her approach at the team meeting was still guided by a theory of ownership, but it was becoming more sophisticated. She realized that what needed to be owned was the teachers' responsibility to develop better strategies to accelerate the students' progress. At the next team meeting, she presented the data for the two subtests and identified the discrepancy in the scores. She then asked the teachers to identify what it was that they did to contribute to the high scores at the letter level and followed this with a request to consider how those same techniques might be used to improve word-writing skills. The tenor of the discussion during this meeting was very different from the one before. The teachers still struggled with the meaning of the data but took a more problem-solving perspective. For example, when one teacher began to understand the discrepancy, she said, "I don't understand why—their hearing and recording sounds—and they can't link it to the writing vocab."

Issues about realistic expectations of achievement were still evident, but they were now expressed in ways that could be more constructively challenged in terms of teaching practice. For example, one teacher said, ". . . writing the words for themselves, they will never be able to do the work by themselves." The assistant principal interrupted by responding that after one year at school ". . . they need to write more words and it is about how do we help them to do that." Suspicion still remained about the usefulness of the data; as one teacher stated, "It seems a bit pointless to do the Observation Survey . . . that just tells you what they're like on that day."

The teachers agreed on some strategies they could use to help their students needed to use their letter level knowledge to write words. Reservations were still expressed that student progress could be accelerated. One teacher suggested that progress was unlikely until students ". . . achieved a certain stage in development."

The assistant principal then proposed that baseline data be collected by asking students to write as many words as they could in five minutes and to repeat the same test each week to determine progress.

Of the three teachers interviewed following this meeting, two continued to reject the usefulness of data on the basis that it was untrustworthy. They expressed the belief that student progress could not be accelerated and teachers could do little to assist. They were concerned also that the introduction of the five-minute test might lead some teachers to "teach to the test" and not to teach words in context. The third teacher was more positive and expressed an intention to use the data to inform her teaching.

The leadership dilemma faced by the assistant principal in this situation is one faced in many change situations. Was it better to introduce change

when many were unconvinced of its merits, or was it better to spend time convincing the skeptics of the value of the process on which the leader wished them to embark? By moving ahead she risked the collapse of the process through resistance, but if she had delayed she may never have convinced the teachers that it was worth their effort.

One of the ways in which data can be powerful in creating change is the possibility that they may be discrepant with previous beliefs and create surprise, thus challenging those beliefs (Schutzwohl, 1998; Timperley & Robinson, 2001). This surprise was evident for two of the teachers when they shared their results from the weekly tests. For example, one said,

I was surprised with some of mine, some who wrote nothing the first time suddenly realized that that was what a list of words was and one student who had nothing the first time had 27 words the second time.

All expressed enthusiasm about continuing with their new approach.

Surprise also took another form and influenced how the teachers responded to the data. A month after the beginning of the initiative, the assistant principal collected the weekly test from the teachers and graphed the difference between the initial scores and recent scores for a random sample of students from each class. In some classes only small gains had been made, in others, large gains were evident. Although the data were presented anonymously, the teachers asked to hear about the strategies used in the class where the students had made the greatest gains. When the assistant principal identified this teacher, she was as surprised as the others. Previously she had offered little at the meetings believing that she had little expertise to share. Her strategies had not focused on teaching the students to write words out of context as some of the more skeptical teachers had believed, but had focused on the transfer of knowledge from letters to words in reading and writing contexts.

The final round of interviews in this phase revealed an enthusiastic and energized group of teachers. They had just completed the third monthly test and collated the results, which showed considerable improvement. They described how they contextualized their teaching of writing words in both their reading and writing programs and reported anecdotal evidence of the greater use of words in the students' stories and their independence in trying new words. Expectations had also increased. One teacher described how five words were acceptable to her before, now it was thirty. Another reflected,

I've never really looked at the Observation Survey data before so I didn't really know that it was a problem . . . You know the performance was actually below average. It didn't click with me that those were the strategies we should be using. Once we started putting strategies into place, we could see it working.

Understandably, the assistant principal was pleased that her teachers had shifted from regarding the results as irrelevant to their practice to actively participating in their collection and analysis for teaching purposes. She continued to attribute the success to the theme of ownership, "Ownership. It's really ownership and if I told them how to do it, why would they buy in? If I knew everything, why would they bother?" While her theory of ownership had evolved, the complexity of the process in which she had engaged remained largely implicit. A variety of conditions probably contributed to the outcome. One such condition involved undertaking a manageable task that directly addressed the teachers' professional learning needs in terms of skills related to data analysis and attitudes about expectations of student achievement. A second condition related to feedback. Achieving such tangible success in a short timeframe was undoubtedly reinforcing and motivating. A third condition related to accountability. By requiring participation and making the outcomes on student achievement public, the assistant principal created an accountability process that did not allow reluctant participants to be passive about change. There was no overt coercion as such, but requiring an account of the impact of one's actions can be a powerful incentive to ensure that account is positive (Tetlock, 1998).

Phase Three: More Authentic Testing

Only one teacher remained skeptical about the reliability and validity of the classroom testing. She was concerned that the teachers were teaching to the test and that this was not an authentic writing task. The failure of either the assistant principal or the team to take her concerns seriously revealed another level of skill needed to use assessment information for instructional improvement. The assistant principal initially had difficulty either understanding the need for or then developing tests for two possible reasons—that the improved achievement was no better than could be expected over a three-month period, and that the students were not generalizing their word-level skills to their daily writing tasks.

At the author's suggestion, the first possibility was assessed by examining the number of words students wrote after one year at school in the writing vocabulary test of the Observation Survey that was used to identify the initial concern. In this way, the age of the students remained constant. The average number of words had increased from 19 (stanine 2) to 26 (stanine 3). It was agreed that the second possibility, that the newly acquired words were not being used in daily writing, would be assessed by counting the number of different words a random sample of students used in their writing prior to the intervention and then following it. The assistant principal reported to the author that the writing samples showed that the number of words had improved from zero to more than twenty-five. Further questioning revealed that the "random sample" consisted of two students (out of

176) whom she knew had made good progress. A more representative sample of 35 students' work showed that the average number of different words used in their daily writing increased from 7 before the intervention to 15 after it—an encouraging but less spectacular result.

Phase four: Generalization

The follow-up visit a year later found the team now focusing their attention on student's reading of text. At the meeting they were examining each student's text-reading levels plotted on a nationally benchmarked graph which was color coded so that teachers could be readily identified. The meeting time was spent discussing how the progress of each student who had failed to reach the benchmark for that quarter could be accelerated. During the interviews following the meeting, all teachers gave positive reports about the process because it allowed them to identify those students they should target and the strategies they could use to improve student achievement. A noticeable shift occurred in all the teachers' responses from the previous year in that their reference point now was what they could do to assist struggling students to reach national benchmarks. The interviewed teachers described it like this: "You can identify where you need to put more effort in," "We all support each other—we ask, 'Hey, what are you doing to get yours [text levels] up,' and 'What do we need to do?'"

When asked about the use of national benchmarks, an issue that had been so contentious a year earlier, no teachers questioned their appropriateness. For example, one explained,

I think you have got to have expectations and you have to have something to aim for. I guess it comes down to what the vision is where we collectively want the kids to be as well.

An analysis of the text-reading levels from the Observation Survey for students assessed after one year at school indicated that they had improved significantly ($t(62) = 2.05, p < .05$).

CONCLUSIONS

Developing internal systems for promoting professional learning that impacts on student achievement presents a multifaceted challenge for school leaders and maybe an unrealistic one if not supported by the necessary expertise. If instructional leadership is to be distributed across people and situations, then skills in promoting such learning need also to be distributed. Improving the capacity of individuals and whole school organizations may make sense in the school improvement context (Newmann, King,

& Youngs, 2000; Sparks & Hirsh, 1997) and it is unlikely that if the teachers in this case had attended external courses on either assessment or instruction, they would have achieved the changes that were evident. By contextualizing the learning within the teachers' actual work situations, issues related to transfer of skills and knowledge from the learning environment to the classroom disappeared. However, enthusiasm for developing internal capacity in this way needs to be tempered with the reality of the leadership challenges involved.

In this case, the leader set up a particular set of circumstances that allowed the teachers to learn from the data about how to improve their instructional practice. For data to form the catalyst for this function, rather than reinforcing existing assumptions, a number of issues needed to be addressed simultaneously.

The first concerned identifying and developing the knowledge and skills required to use achievement data. At the beginning of the initiative, each group (students, teachers, assistant principal and author) was expert in using their knowledge for the purpose and unit of analysis with which they were familiar. Expertise was situated in a particular context (Brown, Collins, & Duguid, 1989). Expertise in one unit of analysis and data type, however, did not guarantee expertise in another, yet those who already had the needed competence assumed that it could and should be generalized to a more sophisticated level. For example, students who had acquired expertise in letter-level knowledge surprised their teachers that they had difficulty using this knowledge to write words. By moving to the next level in the hierarchy it became evident that the teachers experienced similar problems in transferring their skills in the absence of specific instruction. They had developed expertise in using daily anecdotal observational data to inform planning and teaching but did not use more formally assessed diagnostic information for this purpose because it was perceived to be irrelevant to their practice. Their leader, who was expert in the process of using these more formal data at the individual student level, was puzzled by their inability to see the relevance of the data or to use it in ways in which she had developed expertise. The leader had been trained in, and was able to use, the formally assessed diagnostic information for individual student teaching purposes but did not know how to use it to diagnose or test the effectiveness of programs for a cohort of students. The author was surprised that the leader, who had far more sophisticated knowledge about writing at the individual student level than she possessed, could not immediately see the implications of the cohort data for teaching practice.

For each group, specific assistance was required to generalize existing skills to allow more sophisticated use. When advocating that leaders become more instructionally oriented, the complexity of the multilevel challenges inherent in these types of change situations is often not recognized. The situation faced by this leader—to develop the expertise of the teachers in working

with data so that they could develop better instructional programs to address student performance problems while she herself was working with data in unfamiliar ways—is typical of many such instructional leadership situations.

No doubt many well-intentioned school improvement initiatives suffer from similar sorts of assumptions. What is obvious to change initiators with particular expertise may not be so obvious to those whose practices they seek to change. Nor might the change initiators understand the multilevel tasks involved in executing those changes. Detailed diagnosis of the type of expertise at given units of analysis may assist the initiators to support the leaders to address the complex learning challenges involved.

In addition to new skills and knowledge, change is often dependent on simultaneously challenging entrenched beliefs and assumptions, thus adding to the complexity of the leadership task. Motivation to acquire new skills and knowledge may depend on the recipients' perceptions of their worth in terms of the likely benefits. Challenging the teachers' initially low expectations of student achievement is a good example of such situations because expectations are frequently associated with low performing schools and their counterpart of high expectations are consistently associated with schools with high achievement (McLaughlin & Talbert, 1993; Reyes et al., 1999; Reynolds & Teddlie, 2000). What is rarely addressed in this school effectiveness literature, however, is the process by which such expectations might be challenged, yet we expect leaders to do so within their own schools as part of the complex task of improving instruction.

In this case study, setting up a situation whereby the data on initial improvement in the students' writing scores challenged the teachers' initial assumptions, undoubtedly contributed to changes in their perceptions of their students' potential abilities. However, a number of other processes were also evident and may have been equally important in creating this change. Alongside the changes in the achievement data was a realization that it was their teaching practices that made the difference. Over the short period of a month, the teachers had made a measurable difference to what the students learned and were able to do. Providing opportunities to express their surprise on both counts (student achievement and how their teaching made a difference) and building on the emerging awareness of the group was an important part of the process.

The third factor in the process of changing expectations was the opportunity provided by the leader for the teachers to make explicit how they might teach differently to improve achievement, by identifying the most successful teacher and confirming that she did not “teach to the test” but used more authentic tasks helped to convince her more skeptical peers. This triadic combination of higher achievement than expected, new ideas about instruction, and changed beliefs about self-efficacy that were contextualized in their work place, worked together to change expectations of how well those students might achieve.

Creating a professional learning context within the school that simultaneously addresses knowledge, skills, and expectations is a demanding task for the most competent and experienced leader. In this case, it took the combined expertise of the leaders' knowledge of the context and the open relationship she had with her teachers, the author's more specialized knowledge about using data to challenge teachers' beliefs and practices, and the continuing feedback from teacher interviews to inform the process. It also took more than a year to embed it into regular practice.

This case describes the leadership challenges involved in trying to address issues of student achievement in one subject in one part of one school at a particular time and place. Yet the leadership issues faced are evident across the globe. Irrespective of country, raising the achievement of students from minority and indigenous groups (e.g., Roderick, Jacob, & Bryk, 2002), impacting on teachers' expectations of that achievement (e.g., Delpit, 1995), and skills in data analysis and use (e.g., Earl & Katz, 2003) pervade the research literature. School leaders are asked to do much more than before when developing the capacity of staff to improve instruction and student achievement. No longer can the leader be thought of as someone who can achieve this alone, but rather it must be the responsibility of many throughout the organization. However, greater distribution of leadership means greater challenges for more people over a wider range of tasks, not the least of which is the challenge of instructional improvement through examining the impact of that instruction on the intended beneficiaries.

The complex set of issues identified in this case with an already quite sophisticated leader, who was very willing to learn, helps to temper the ideal of instructional leadership distributed across many within an organization with a little of the reality of what might be involved. It also raises the question of whether expectations that most school leaders will be able to take on the mantle of instructional leadership without the help of special expertise is realistic. Unpacking some of the complexities, together with identifying the assistance needed, may help both the research and practitioner communities better understand more precisely what is involved.

REFERENCES

- Brown, A. L., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32–41.
- Bryk, A. S., Sebring, P. B., Kerbow, D., Rollow, S., & Easton, J. Q. (1998). *Charting Chicago school reform: Democratic localism as a lever for change*. Boulder, CO: Westview Press. (ED421594).
- Camburn, E., Rowan, B., & Taylor, J. E. (2003). Distributed leadership in schools: The case of elementary schools adopting comprehensive school reform models. *Educational Evaluation and Policy Analysis*, 25, 347–373.

- Clay, M. M. (1993). *An observation survey of early literacy achievement*. Auckland, New Zealand: Heinemann Education.
- Clement, M., & Vandenberghe, R. (2000). Teachers' professional development: A solitary or collegial (ad)venture? *Teaching and Teacher Education*, *16*, 81–101.
- Coburn, C. E. (2001). Collective sensemaking about reading: How teachers mediate reading policy in their professional communities. *Educational Evaluation and Policy Analysis*, *23*, 145–170.
- Copland, M. A. (2003). Leadership of inquiry: Building and sustaining capacity for school improvement. *Educational Evaluation and Policy Analysis*, *25*, 375–395.
- Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives*, *8*(1), 1–32.
- Delpit, L. (1995). *Other people's children: Cultural conflict in the classroom*. New York, NY: The New Press.
- DuFour, R. (1999). Challenging role: Playing the part of principal stretches one's talent. *Journal of Staff Development*, *20*(4), 1–4.
- DuFour, R., & Eaker, R. (1999). *Professional learning communities at work: Best practices for enhancing student achievement*. Bloomington, IN: National Educational Service (ED426472).
- Earl, L., & Katz, S. (2003). Leading schools in a data rich world. In K. Leithwood & P. Hallinger (Eds.), *The second international handbook of educational leadership and administration (chapter 29)*. Dordrecht, NL: Kluwer.
- Education Review Office. (1996). *Improving schooling in Mangere and Otara*. Wellington, NZ: Education Review Office.
- Fiske, E. B., & Ladd, H. F. (2000). *When schools compete: A cautionary tale*. Washington DC: Brookings Institution Press.
- Fullan, M. (1998). Leadership for the 21st century: Breaking the bonds of dependency. *Educational Leadership*, *55*(7), 6–12.
- Gronn, P. (2003). Leadership: Who needs it? *School Leadership and Management*, *23*, 267–290.
- Gronn, P., & Rawlings-Sanaei, F. (2003). Recruiting principals in a climate of disengagement. *Australian Journal of Education*, *47*, 172–184.
- Guskey, T. R. (2003). How classroom assessments improve learning. *Educational Leadership*, *60*(3), 6–11.
- Hord, S. M. (1997). *Professional learning communities: Communities of continuous inquiry and improvement*. Austin, TX: Southwest Educational Development Laboratory [On-line]. Available: www.sedl.org/pubs/catalog/items/cha34.html.
- King, M. B., & Newmann, F. M. (2000). Will teacher learning advance school goals? *Phi Delta Kappan*, *81*, 576–580.
- Lashway, L. (1998). *Creating a learning organization*. ERIC Digest, Number 121: ED420897.
- Leo, T., & D'Ette, C. (2000). Launching professional learning communities: Beginning actions. *Issues about Change*, *8*(1), [On-line]. Available: www.sedl.org/change/issues/issues81/
- Leonard, L. J., & Leonard, P. E. (1999). Reculturing for collaboration and leadership. *Journal of Educational Research*, *92*, 237–242.
- Little, J. W. (1990). The persistence of privacy: Autonomy and initiative in teachers' professional relations. *Teachers College Record*, *91*, 509–536.

- Louis, K. S. (1994). Beyond managed change: Rethinking how schools improve. *School Effectiveness and School Improvement*, 5, 2–24.
- Louis, K. S., Kruss, S. D., & Marks, H. M. (1996). Schoolwide professional community. In F.M. Newmann & Associates (Eds.), *Authentic achievement: Restructuring schools for intellectual quality* (pp. 179–207). San Francisco: Jossey-Bass Publishers.
- Louis, K. S., & Leithwood, K. (1998). From organizational learning to professional learning communities. In K. Leithwood & K. S. Louis (Eds.), *Organizational learning in schools* (pp. 275–285). Lisse: Swets & Zeitlinger.
- Lytle, S. J., & Cochran-Smith, M. (1994). Inquiry, knowledge, and practice. In Sandra Hollingsworth & Hugh Sockett (Eds.), *Teacher research and educational reform: 93rd NSSE yearbook, Part I* (pp. 22–51). Chicago: National Society for the Study of Education, University of Chicago Press.
- McLaughlin, M. (1993). What matters most in teachers' workplace context? In J. W. Little & M. McLaughlin (Eds.), *Teachers work* (pp. 79–103). New York: Teachers College Press.
- McLaughlin, M. W., & Talbert, J. E. (1993). *Contexts that matter for teaching and learning: Strategic opportunities for meeting the nation's education goals*. Stanford, CA: Center for Research on the Context of Secondary School Teaching, Stanford University.
- Newmann, F. M., King, M. B., & Rigdon, M. (1997). Accountability and school performance: Implications from restructuring schools. *Harvard Educational Review*, 67, 41–74.
- Newmann, F. M., King, M. B., & Youngs, P. (2000). Professional development that addresses school capacity: Lessons from urban elementary schools. *American Journal of Education*, 108, 259–299.
- Reyes, P., Scribner, J. D., & Scribner, A. P. (Eds.) (1999). *Lessons from high-performing Hispanic schools: Creating learning communities*. New York, NY: Teachers College Press.
- Reynolds, D., & Teddlie, C. (2000). The processes of school effectiveness. In C. Teddlie & D. Reynolds (Eds.), *The international handbook of school effectiveness research* (pp. 134–159). London: Falmer Press.
- Robinson, V. M. J. (1993). *Problem-based methodology: Research for the improvement of practice*. Oxford: Pergamon Press.
- Robinson, V. M. J., Phillips, G., & Timperley, H. (2002). Using achievement data for school-based curriculum review: A bridge too far? *Leadership and Policy in Schools*, 1, 3–29.
- Roderick, M., Jacob, B. A., & Bryk, A. S. (2002). The impact of high-stakes testing in Chicago on student achievement in promotional gate grades. *Education Evaluation and Policy Analysis*, 24, 333–357.
- Rosenholtz, S. (1989). Workplace conditions that affect teacher quality and commitment: Implications for teacher induction programs. *The Elementary School Journal*, 89, 421–439.
- Schutzwohl, A. (1998). Surprise and schema strength. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 24, 1182–1199.
- Smylie, M. A. (1995). Teacher learning in the workplace: Implications for school reform. In T. R. Guskey & M. Huberman (Eds.), *Professional development in*

- education: New paradigms and practices* (pp. 92–113). New York: Teachers College, Columbia University.
- Sparks, D., & Hirsh, S. (1997). *A new vision for staff development*. Alexandria, VA: ASCD.
- Spillane, J. P., Halverson, R., & Diamond, J. (2004). Towards a theory of leadership practice: A distributed perspective. *Journal of Curriculum Studies*, 36, 3–34.
- Tetlock, P. E. (1998). Losing our religion: On the precariousness of precise normative standards in complex accountability systems. In R. M. Kramer & M. A. Neale (Eds.), *Influence processes in organizations: Emerging themes in theory and research* (pp. 121–144). Thousand Oaks, CA: Sage.
- Timperley, H. S. (2004). School-based influences on teachers' learning and expectations. In F. Columbus (Ed.), *Teaching and Teacher Issues*. Nova Science (forthcoming).
- Timperley, H. S., & Robinson, V. M. J. (1998). Collegiality in schools: Its nature and implications for problem solving. *Educational Administration Quarterly*, 34 (Supplemental, December), 608–629.
- Timperley, H. S., & Robinson, V. M. J. (2001). Achieving school improvement through challenging and changing teachers' schema. *Journal of Education Change*, 2, 281–300.
- Timperley, H., Robinson, V., & Bullard, T. (1999). *Strengthening education in Man-gere and Otara: First evaluation report*. Auckland: University of Auckland.
- Wald, P. J., & Castleberry, M. S. (Eds.) (2000). *Educators as learners: Creating a professional learning community in your school*. Alexandria, VA.: Association for Supervision and Curriculum Development. (ED439099).