
Innovation and the Persistence of Old Solutions

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Introduction

Interventions that result in school improvement are difficult to accomplish. The widespread failure of restructuring as a mechanism to achieve significant change has led to a greater focus on process as more effective in facilitating improvement (van den Berg, Vandenberghe & Slegers, 1999). Much of the process focus is aimed at creating schools that can best be described as learning organisations (Leithwood, Jantzi & Steinbach, 1995; Resnick & Hall, 1998; Scribner, Cockrell, Cockrell & Valentine, 1999). The burgeoning literature in this area has led to various conceptualisations of the term, but generally refers to the process whereby organisational members identify what they want to achieve and develop strategies that help them to learn about the effectiveness of their practice in reaching their goals. In education contexts, the development of organisational learning has been linked to increasing the capacity of schools to 'engage in and sustain continuous learning of teachers and the school itself for the purpose of enhancing student learning' (Stoll, 1999, p. 506). Newmann, King and Rigdon (1997) are more specific about what they consider to be involved. They described schools with high capacity as ones in which '... school staff developed explicit schoolwide standards that focused on student performance, mechanisms for collecting and reviewing relevant information, and a culture of peer pressure among teachers that served as potentially important consequences' (p. 63).

We have previously conceptualised organisational learning as organisational problem-solving (Robinson, 1995; Robinson, Timperley & Halliday, 1996) and it is this conceptualisation that underpins the analysis of the school improvement initiative reported in this paper. In common with other approaches to organisational learning, the motivation to learn arises from discrepancies between current and desired states of affairs. How it differs from other approaches is the strongly normative stance we take in evaluating the process in terms of the success organisational members experience in learning how to reduce the gap between the

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actual and desired outcomes. In education, what is desired usually reflects a complex mix of values which are often in tension with one another. For example, one frequently experienced tension, is between maintaining positive relationships between organisational members while challenging practices that are counterproductive to solving problems. Because of this complexity, the learning process is typically iterative rather than linear as organisation members refine their problem analyses and learn how to achieve a more satisfactory integration of their multiple solution requirements. Part of the process involves understanding how current practice is contributing to the problems experienced and how it needs to change in order to develop more adequate solutions.

The adequacy of the solution to a particular organisational problem is judged in terms of how well it meets the multiple requirements, both from the perspective of the problem solvers themselves, and our wider knowledge of what constitutes an adequate solution. The internal perspective is important because most problems are context-specific with only the participants able to appreciate the requirements of a given situation. The external perspective ensures that our best educational theories are brought to bear on judgements of adequacy. For example, a solution in which teachers develop more positive relationships, but children's achievement does not improve, would not be considered adequate in a school improvement context because the interpersonal requirements are privileged over those of children's achievement.

In this paper, we examine how a school improvement initiative that was initially framed in terms of promoting organisational learning and data-based problem solving, resulted in most of the effort and the funding being allocated to promoting more of the kinds of solutions that previously had been judged inadequate. The complexity of the situation and difficulties that arose led to greater emphasis being given to empowering schools and developing ownership of the process than to analysing what was problematic about current practice and building more effective solutions. In analysing this initiative, we identify barriers to developing data-based organisational learning processes in the school improvement context and indicate strategies through which they may be overcome.

The Research Context and Approach

Since early 1998, the New Zealand Ministry of Education has funded a major initiative to improve the quality of education offered in 35 schools in two districts in South Auckland, New Zealand. Nearly half the schools in the two low-income districts were identified as offering an inadequate education by an independent audit and review agency (Education Review Office, 1996). Various attempts to address the problems in the two districts over the previous twenty years had failed to have a significant impact. During the first six months of the initiative, a Ministry of Education team, headed by a co-ordinator, was established to spearhead the new initiatives. This team, together with Ministry officials, focused on consulting the communities and the schools about their perception of the problems and priorities for intervention. As a result of this consultation, a generic project - called 'Communities in Schools via Literacy' - was developed. The emphasis was on the

community because the consultation process had identified that the community wished to be more involved in the schools. In addition, community confidence in many schools was so low that 70% of the secondary-aged students (Years 9 - 13) in one of the two districts attended schools outside the district. Literacy was to be the focus of the community's involvement because the same consultation process identified concerns about the low literacy achievement of the students. Although no public data were available on literacy standards in the primary, intermediate and middle schools, pass rates in public examinations at secondary school level were very low. The generic project provided the framework for each school to develop their own project and write a submission to access the additional funding.

The submission process was designed to encourage schools to develop data-based problem-solving processes by delivering the additional funding through a funding provision agreement with each school. Each submission for this funding included a statement of the school's vision, and a rationale for the additional funding comprising a data-based needs analysis, and review of existing programs. The submission concluded with the details of a project designed to address the identified needs, including a budget, and predicted project outcomes. Schools were also requested to provide a brief outline of a research proposal to evaluate their projects.

Although not explicitly stated as such, these requirements were consistent with developing organisational learning processes. Schools, in effect, were being asked to analyse and solve an organisational problem. The identification of a vision, a need and how current practice was failing to meet that need, was consistent with identifying gaps between what was desired and the reality of what was occurring (Senge, 1990). The intention was that the funding would be used to close these self-identified gaps.

This paper reports how the authors evaluated the first eighteen months of the initiative against the organizational learning framework described above. The data collection and analysis were designed to answer the research question, 'To what extent did the submission process promote data-based problem-solving processes in the schools?' Data collection methods included document review, interviews and meeting observations. Background information on the initiatives was obtained from Ministry of Education papers setting out the rationale for the initiatives, interviews with relevant Ministry officials and school principals, and observations of six initial meetings between the Ministry, the schools and various community groups.

The main document analysis involved a review of the first 19 school submissions approved for funding. The first criterion used to analyse the documents was the extent to which school personnel identified internal rather than external causes of the problems outlined in their submission documents. There is little doubt that there are greater challenges involved in promoting literacy in children from low rather than high income backgrounds, but nearly half of the schools had been identified by the independent audit agency as offering an inadequate education. If they attributed all the achievement problems to external causes, or in Senge's (1990) terms to 'the enemy out there', there is little incentive to improve.

The second criterion was the extent to which the analysis of current programs included evaluation of their impact on students' literacy achievement. In the absence of this evaluation, schools would be unable to analyse program effectiveness. The third criterion we employed was the extent to which the additional funding was directed towards improving the regular daily classroom teaching and learning programs. If the funding was to have the greatest impact, then we suggest that it is these programs that have the greatest leverage over literacy achievement because they provide most of the opportunities for children to learn literacy skills.

The fourth criterion examined the extent to which the proposed projects were based on knowledge of effective programs offered in other schools. The literacy problems were being solved with differing degrees of success (Education Review Office, 1996). Learning from one's neighbour is more efficient than reinventing previously invented wheels (Hatch, 1998).

A more intensive analysis of the submission process, rather than just the submission documents, occurred in nine schools. In these schools, initial meetings with the intervention team were observed and follow-up interviews conducted with principals, project leaders and the intervention team co-ordinator. These interviews and observations were directed towards understanding the reasons why schools formulated their proposals as they did and why the Ministry agreed to fund them.

Two surveys were also conducted to determine the schools' perception of the intervention process. The first took place before the submission process began and the second six months later at its conclusion. This latter survey is referred to as the 'sign-off' questionnaire to differentiate it from the earlier survey. Respondents included principals and project leaders as well as Board of Trustees chairpersons. In New Zealand's highly devolved system of school governance, Boards of Trustees are ultimately responsible for the quality of the education offered at each school.

Problems and their Solutions

We begin our analysis by illustrating how the funding process fostered data-based organizational learning in one school. We then compare this process with that evident in most schools' submissions for additional funding. This comparison is followed with an examination of the reasons for these limitations and the reasons why they were funded despite them. Understanding these reasons is crucial if we are to make progress on developing better intervention theories. If we bypass issues that are responsible for limitations in practice, we lose opportunities to learn why intentions may not become reality (Robinson, 1993). We conclude by outlining the conditions that are needed for project development and organizational learning processes to be more closely integrated.

Tower School: Learning from self-review

Tower School's submission illustrates our view of organizational learning because their proposed project addressed gaps that had been identified and validated through their review and analysis of their current literacy programs.

In 1997, in response to a report from the national educational audit and review agency, Tower School decided to have a major focus on its literacy programs. The senior management engaged a literacy expert to observe every teacher teaching reading and to test a sample of the children. The project leader described how the literacy expert 'gave us a picture of what the quality of the reading was throughout the school.' This literacy expert then worked with senior staff and classroom teachers to introduce changes to the reading program based on this analysis.

In 1998, the project leader collected reading achievement data in both March and June to evaluate whether the program changes were having an impact on the students' literacy levels. Significant improvement was evident, but the students were still not reading at the national average. The target nominated in the school's submission for additional funding became:

By the time the children leave Year Six, we want every child to be reading to at least their chronological age, with complete understanding at the three levels of comprehension; ie, literal, inferential and beyond the text. We also want to see evidence of processing and applying this knowledge.

Many schools' submissions had similar aims. What was different about Tower School's submission was evidence of the close scrutiny they had given to the management and teaching of their regular literacy programs and the links they had made between the quality of these programs and student learning. At Tower School, connections between classroom practice and children's reading achievement were constantly under scrutiny.

The staff's commitment to learning about their own effectiveness was evident in their early discussions of their submission with the Ministry intervention team co-ordinator. They presented both the achievement data obtained from informal prose inventories and nationally normed Progressive Achievement Tests for Vocabulary and Reading Comprehension. There were significant discrepancies between these test results, with the informal prose inventories indicating much higher levels of achievement than their nationally normed counterpart. This discrepancy between the two types of tests was common in the schools in the two districts and led to many schools rejecting the nationally normed data as invalid. The project leader at Tower, however, treated the discrepancy as a problem to be solved:

I don't think it's a test problem in terms of what the tests are. I am very aware that the children themselves are very bad at actually sitting a test and processing that information which is part of this whole problem. They need to be able to sit a test like that. They need to be able to read the instructions and follow it and do it, definitely. Many children are reading at age appropriate levels but are now having difficulty reading through the genre and gaining the more subtle text meaning. If they can't get

that complete comprehension, they can't access the rest of the curriculum because that's a whole part of it.

Tower's submission for additional funding included continuation and expansion of their current professional development for staff in literacy assessment and teaching. They had analysed the effectiveness of their current literacy practices by collecting data to test their impact on student learning. The staff could have chosen to explain their data in terms of factors over which they had no control, such as the socio-economic background of their students, or to revise their standards if they had been less committed to their own learning and improvement. Data do not stand independently of their interpretation, and in a complex task such as promoting learning in a group of students, it is usually possible to explain them away if one is motivated to do so. Rather than take a defensive stance, however, the staff chose to examine the relationship between their own teaching practices and student outcomes.

Other schools' submissions

None of the other 19 submissions met our criteria for organisational learning because their projects for which extra funding was requested, were not based on an adequate analysis of current practice. The following description is typical of other submissions. They usually began by describing a vision for what the school would like to achieve for its students and a statement of the discrepancy between this vision and current literacy achievement. The reasons given for the discrepancy were almost exclusively focused on factors related to the social environment or the children themselves, such as poverty, transience, limited early childhood education and second language difficulties. These analyses did not include how current school practices may or may not have contributed to the discrepancy. Underlying the analyses was the assumption that the problems were caused by factors over which the schools had no leverage.

The requirement in the submissions that schools state how they met the children's literacy needs potentially placed schools at the centre of the analysis. This potential could only be realised, however, if staff critically examined the impact of current programs on literacy outcomes. In nearly all cases, the submissions listed various literacy programs the school provided and omitted an analysis of their effectiveness. The programs included, on average, six different types of activities, such as, bilingual reception classes, reading recovery and reading support programs, bookworm clubs, supplying books in homes, teacher aide support and computer assisted reading. Half the schools did not include their regular literacy programs in these lists. In a few cases, data were provided on the outcomes of these activities but these data were rarely explained in terms of the adequacy of school practice. For example, one school described serious reading level regressions after students discontinued an individualised Reading Recovery program and returned to the classroom. This led them to evaluate the Reading Recovery program as ineffective. Given that this program has been researched both in New Zealand and internationally, and that this research demonstrates that children from low socio-economic groups and children with English as a second language normally make

long term gains in reading after completing the program (Smith, 1994; Sylva & Hurry, 1995), an adequate analysis would focus on reasons for the regression on return to the regular classroom.

Requests for extra funding were mostly for programs additional to those already offered (Table I). Most frequently these requests involved activities additional to the core literacy programs, such as the development of a creative literacy centre, a social skills program, an initiative to provide books in the children's homes, a new bilingual unit, the introduction of computer-assisted learning and a new phonics program. The absence of an analysis of the effectiveness of any program or its components left the teachers with little information on which to base judgements about what should be improved and what should be eliminated. The omission of any reference to the schools' regular literacy program in half the submissions left these programs outside potential scrutiny.

Table I: Funded Projects in 19 Schools

Strengthening current regular programs	Programs additional to the regular programs	New community-orientated programs
5 projects	14 projects	14 projects

We argue that the strategy of increasing the number of literacy activities rather than reviewing their quality was more likely to detract from rather than promote effective problem-solving processes. March (1996) cautions that too much emphasis on innovation consumes an organisation's limited resources and leaves insufficient means to evaluate and develop what already exists. In addition, the delivery of more activities and programs increased the complexity of analysing the relationship between the multiple program components and the children's learning outcomes. Schools had listed an average of six different literacy-related programs in addition to their regular classroom program in their submissions. The addition of more programs only increased the complexity of the task. Of greater concern is that the focus on additional programs diverted attention away from an evaluation of the regular classroom programs that formed the schools' core literacy activities. By bracketing out these programs from the problem-solving process, staff were unlikely to be motivated to review their quality.

The proposed community-oriented programs noted in Table One were all new. Little analysis was evident in the submissions about the reasons for low levels of parental involvement in the schools beyond what was commonly believed to be, 'A cultural acceptance that schools are responsible for the formal education of children' (Pleasant Road School submission, 21 October 1998). Their analyses did not include testing the accuracy of this belief, or the possibility that current school practices were contributing to the low levels of parent involvement.

Learning from others' solutions

The initial Education Review Office Report (1996) on the district identified that the schools in the two districts were addressing the literacy problem with differing degrees of success. The effectiveness of an individual school's problem solving efforts, therefore, was likely to be enhanced through an analysis of other schools' attempts to solve the same literacy problem. Examination of the submission documents indicated that schools did look to their neighbours to develop their submissions. All but three of the proposed new literacy programs were listed by other schools as forming part of their current program offerings. Each school's apparently unique individualised solutions, therefore, were to a large extent a recombination of what other schools already offered.

Although it is desirable in organisational learning terms for schools to be open to learning from the practice of others, it also requires consideration of the effectiveness of that practice. Unfortunately, no data on program effectiveness was available to the schools to assist them to make this judgement. The complexity of program offerings made it difficult to assess the effectiveness of individual program components, but it was possible to assess the overall impact of the total literacy package offered in any one school by examining the literacy achievement of the students in that school. These data were not available because New Zealand primary school students are not assessed nationally and the schools themselves did not publish achievement data prior to the submission process. In theory, these data were available on completion of the submission documentation because each school was required to present this information for at least some of their students. Unfortunately, the diversity of literacy measures and reporting formats used in the submissions made it impossible to make comparative analyses between schools or statements about program effectiveness.

The absence of comparative achievement information meant that those schools that were solving the literacy problem more effectively than others could not be identified. The individualised project development process had left the schools unable to learn from their neighbours about how to solve the complex problem of promoting student literacy achievement in the two districts.

Understanding the Project Approach

In this section, we examine the reasons why the schools developed their project proposals as they did and why the Ministry agreed to fund them even though many had not fulfilled the requirement for a data-based needs analysis. By acknowledging the perspective of the Ministry intervention team and the schools, we can begin to identify some of the barriers to developing data-based problem-solving in similar interventions.

The Ministry of Education's perspective

The Ministry intervention team faced a set of competing demands of which promoting organisational learning was only one. How the additional demands on

the Ministry shaped the delivery of the intervention is identified in Figure One. Pressure for quick resource delivery arose as a result of the time delay between the release of the initial Education Review Office Report in 1996 and the start of the submission process. Background budget papers requesting the additional funding were prepared by Ministry staff in January 1997 (Smith, 1997) and details of the funding were released in March 1998 (Education Review, 4 March 1998). Individual schools began to write their submissions in June 1998. Although a great deal of background work had been completed over this time, many of the schools believed the delays to be excessive. Requiring a more detailed problem analysis would have exacerbated this perception and been interpreted as unnecessary by school personnel who believed they understood the problem and how to fix it.

In addition to making rapid progress, the Ministry was also under pressure to increase the confidence of the community in local schools and the confidence of both these groups in the capacity of the Ministry to deliver the funding in a timely and helpful manner. The level of community confidence in the schools was most evident in the enrolment statistics noted above. In addition, community members were very critical of the schools at the meetings held at the beginning of the initiatives. For example, one person announced,

We are here because the schools have failed. We need to do away with the traditional education approach.

Schools also greeted with some skepticism public statements by politicians and the Ministry that the initiatives would make a difference to the quality of education in the two districts. A survey conducted by the researchers immediately prior to the submission process showed that many had little confidence that the initiatives would lead to improved governance, management, student achievement or relationships between schools and their communities (Table II).

Table II: Respondents confidence that the projects would assist schools to achieve three goals (June 1998).

Goal	Principals		BoT Chairs	
	Mean	SD	Mean	SD
Improved governance and management	3.74	1.24	4.44	1.55
Improved student achievement	4.71	1.51	5.13	1.31
Improved relationships between schools & immediate communities	4.79	1.36	4.87	1.46

Note: All ratings were on a 7 point scale with an additional option for 'Don't know'. A rating of 1 represents 'no confidence'. A rating of 3 represents 'little confidence'. A rating of 5 represents 'reasonable confidence'. A rating of 7 represents 'great confidence'.

Part of the reason for these ratings was schools' lack of confidence in the Ministry to deliver resources on time, and in ways that were responsive to schools' needs and likely to provide an adequate return on effort. All these ratings were between 3.5 and 3.7 on the same 7-point confidence scale. Some of the negativity was created through intense media interest in the schools following publication of the critical Education Review Office Report (1996). The Ministry wished to turn around these negative perceptions by being supportive of the schools and positive about what they offered.

One way of showing support was to empower schools and the two communities to develop their own projects, and to avoid imposing a Ministry solution on the two districts. One principal, who had been involved in the appointment of the co-ordinator described it this way:

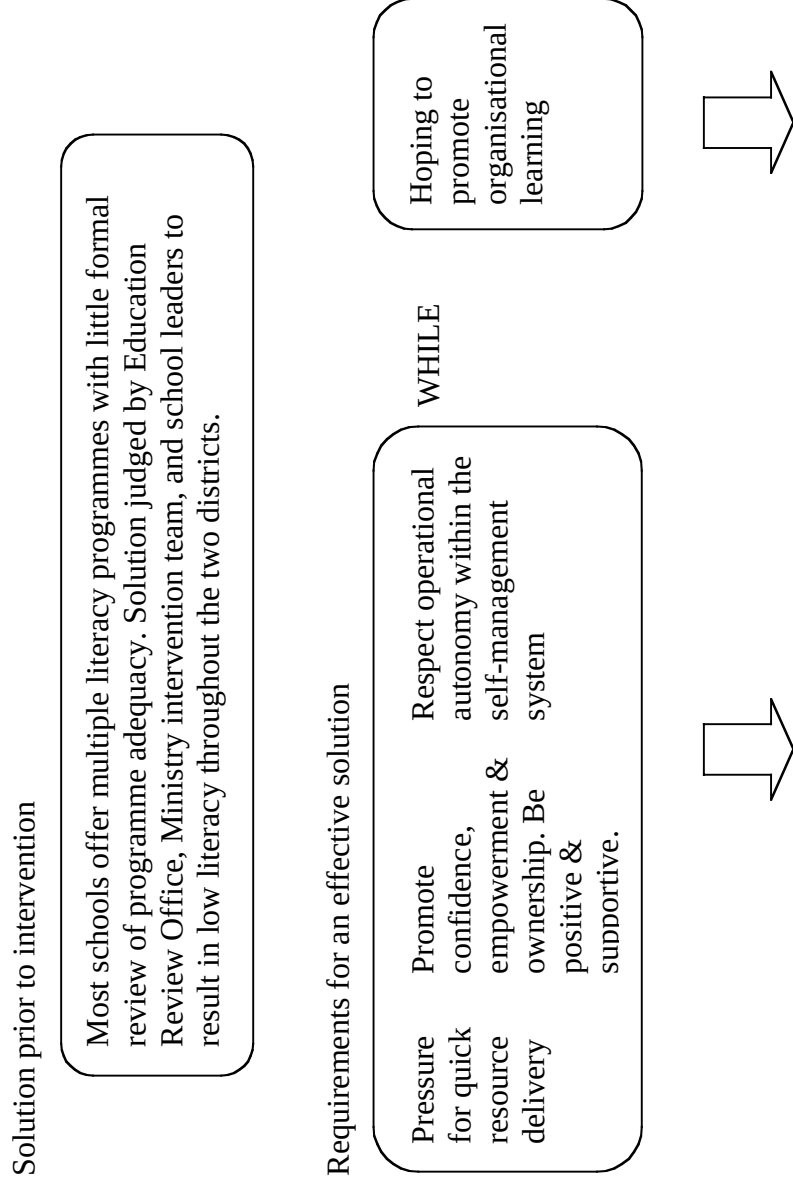
I believed, through our many pre-appointment meetings and discussions that here, for once, was an intervention and support for [the district] which would achieve its stated objective of empowerment - of schools and community.

One aspect of this empowerment was the high value placed on project ownership. As the intervention team leader explained to one principal, 'part of the process ... is to make sure you take ownership of what you are doing'.

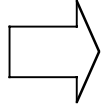
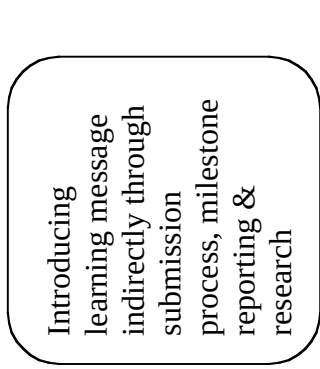
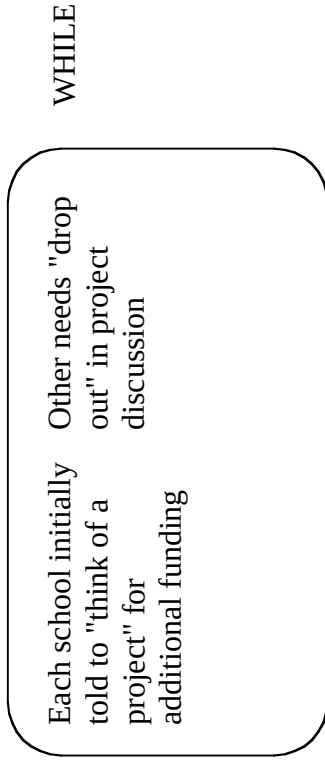
Another challenge the Ministry faced was how to provide support in ways that strengthened rather than undermined the schools' self-management capabilities. In 1989, New Zealand introduced a highly decentralised education system, with parent elected Boards of Trustees and the principal responsible for the governance and management, respectively, of the schools' operations (New Zealand Government, 1989). To intervene more directly was perceived as potentially undermining of the schools' operational autonomy, and therefore, their self-management.

The strategies adopted by the Ministry intervention team to address this complex set of requirements and issues are identified in Figure 1 as the 'Process for developing the solution'. Schools were invited to be part of the initiative by asking them to think of a project within the generic framework of 'Communities in Schools via Literacy'. As part of the project discussion, schools were told that other needs would 'drop out' during the negotiation. The project became the foreground for each school's submission. The organisational learning messages were introduced indirectly through the requirements for the submission documentation. The rationale underlying these requirements was not explained to the schools in ways they understood.

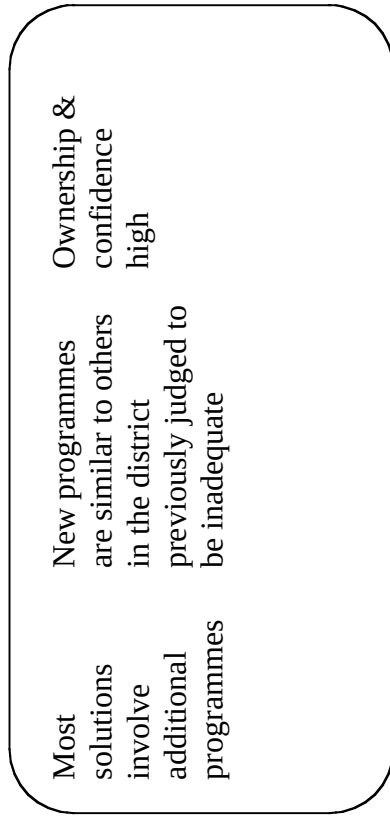
Figure 1 The Ministry intervention team's approach to strengthening education



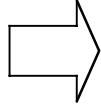
Process for developing the solution



Consequences



AND



The consequences of using this process were mixed. As described above, most projects involved additional programs that were similar to those offered by other schools in the district. Confidence that the projects would make a difference was high. The 40 respondents to the sign-off questionnaire rated their confidence that their projects would improve literacy achievement at an average of 8.4 on a 10 point scale. They rated their feelings of project ownership at the similarly high level of 8.1 on the same 10-point scale. Both school personnel and interventionists commented on their feelings of ownership in these terms:

Assoc. Principal:	The content came from our school and community needs.
Board Chair:	I initiated the concept and the writing of it.
Interventionist:	Concepts came from the school - particularly the Associate Principal.

Others proudly stated that, despite the submission process: 'Our projects did not change. Our ideas survived the process. They were exactly what we proposed at the beginning'.

While there is clear evidence of ownership of the proposed project, it is less certain that they owned the learning process through which it was developed. In Figure 1 we identify three different reactions from schools to the organisational learning messages. In some schools, personnel understood and accepted that the process was one of school and community review and development. For example, the request for a data-based needs analysis led some schools to collate their students' literacy achievement data for the first time. As a result of this exercise, eight of the twenty-seven school respondents indicated on the sign-off questionnaire that they had 'Learnt a lot more than before' about the effectiveness of the school's literacy programs and sixteen of them indicated that they had 'Learnt a little more'. Nearly half of their comments were about learning from the data. One example included:

Having to submit a case necessitated a long hard look at our achievement records thus far and highlighted for me just where [the students] are currently failing and the areas which must be worked on.

Other schools, however, became frustrated with apparently irrelevant details and what they perceived to be changing demands coming from the Treasury as the final approval body for the additional funding. As the personnel at one school explained:

Principal:	The thing I found most frustrating is what we thought we were doing at the start, all of a sudden all these extras were coming in. They're just subtly coming in....
Project leader:	We went and did the first bit which was for us. But from then on, for the next six months of the rehashing for Treasury – there was no more benefit for us. The re-hashing didn't give us anymore did it? The initial [formulation of the project] we needed that and that was ours. But the re-hashing which went

on for a long, long, time was not.

Researcher: My understanding of what was behind that was to help schools learn how to do a needs analysis. Does that make any sense to you now?

Principal: It makes sense but it was never ...

Project leader : But we were writing a submission to Wellington weren't we? And we had to follow those procedures to have it accepted.

Others, as illustrated in the following quote, expressed resentment that the organisational learning message was not more explicit at the beginning:

If school review and development was recognised as being our [the district's] need, let's do something about that. If that is the assumption underneath the projects, let's talk about it openly. Don't pretend to do something else. It's all been so foggy. If it had been clear like that from the start, we would have been way down the track by now Projects are like talking about the lunchroom, should we have tomato sandwiches or ham sandwiches? Should we have finger phonics or computers? That's what the projects have been like.

As in any school improvement initiative, the task faced by the Ministry was complex. Relationships were strained, confidence was low and for most schools, the process of data-based problem-solving was unfamiliar. Given this set of pressures, it is understandable that the Ministry accepted the schools' analysis of the problems and hoped that through their ongoing engagement in the initiatives, the schools' capacity and willingness to engage in data-based problem-solving would improve.

The Schools' Perspective

The schools' submissions were based on their understanding of the requirements of the task. They had been asked to develop a project for which they could request additional funding within the generic project of 'Communities in Schools via Literacy'. As the intervention team co-ordinator explained to a project leader, 'We've given you the Communities in Schools via Literacy concept and then we've said, right, go away and you write the project'.

Given the indirectness of the organisational learning messages, it is not surprising that some did not fully understand the learning concepts that underlay the submission process. When asked to develop a project, school personnel typically thought of something for which they either had the expertise or knew where they could access it. They subsequently discovered they must identify a problem or need to justify their choice. As the senior management people at one school expressed it:

Project leader: We wanted to set up the Samoan bilingual unit for some time. When [the funding] came along this seemed like a good opportunity to do it.

Researcher: In your submission, the data you give on the six year reading assessments for the Samoan children is very little different from the others.

Project leader: But that's because the whole school is mainly Polynesian

- Researcher: I was wondering why a Samoan bilingual unit?
Project leader: Because we had the resource in Nua. If we had a Tongan person we might have looked at doing Tongan. It wasn't Samoan over the rest of the groups, no.
Researcher: So let's just capture that. You knew what you wanted, you knew how to do it. Then you had to write about justifying a need.
Project leader: Yes, why we needed it.
Principal: All of sudden all these extra requirements came in. We had to rewrite it.

The foregrounding of the project, rather than the learning message, led many schools to perceive the funding to be for programs additional to their regular classroom programs. One project leader explained it this way when questioned by the researchers:

- Researcher: You listed eight ways in which the community was involved and nine different extra programs for reading. That seems to me to be a huge number.
Project leader: That's why we were very defensive to start with
Researcher: Why don't the schools identify their mainstream regular programs [in the submission]
Project leader: Because we just do that, we do it anyway. That's our responsibility. That's not what we thought it [the initiative] was about.

Our interviews also established that many of the project leaders thought of effectiveness in terms of the number of programs offered, and assumed their quality. Using this logic, the way to improve the quality of the education was to increase the number of different literacy programs available to the students. As one project leader explained:

We are catering for a range of learning styles. If one type of program doesn't work, then another probably will. We take an eclectic approach.

Another possible reason why the schools proposed additional programs, rather than undertaking a review of the quality of those programs already offered, was that the latter process has the potential to surface some difficult interpersonal and professional issues. Reviewing program adequacy inevitably involves critique of teachers' professional practice because it is not possible to analyse how teaching programs impact on children's literacy achievement while avoiding judgements of teaching effectiveness. Teachers' reluctance to judge their colleagues is not unique to these districts, but has been documented in both New Zealand (Timperley & Robinson, 1998) and internationally (Lipman, 1997; Little, 1990). For example, Little (1990) contends that supportive collegial norms among staff in schools in the United States usually preclude discussions about curriculum or instructional practice when such discussions might imply concerns about a colleague's competence. The

absence of such a critique leaves schools with few options when looking to introduce new solutions to existing problems. If the adequacy of current practice cannot be discussed, then those seeking new solutions cannot delete, revise or rationalise current programs. The only option for those seeking to solve problems becomes the addition of something new.

Discussion

While the particular set of issues the Ministry faced in this intervention was situation-specific, their complexity is not unique. Most school improvement initiatives involve personal and interpersonal challenges in which confidence, empowerment and ownership are the main concern. But these same initiatives are typically designed to improve what already exists, so require intervention in some of the more dysfunctional aspects of the schools' operations. The research literature tends to emphasise one or other of these two issues. Hatch (1998), for example, documented how a group of renowned interventionists coming from different theoretical perspectives had difficulty agreeing on anything except that achieving the commitment of school staff and the wider community was crucial to the success of the reform process. Others, such as Elmore (1993), have challenged the worth of developing commitment per se, because there is no insurance that the commitment will be exercised towards any particular educational vision. In similar vein, Newmann et al. (1997) emphasise the importance of developing the schools' capacity to collect and review relevant information against explicit standards.

In the school improvement context, both sets of requirements need to be part of the solution. A strategy that achieves ownership and improved confidence without tackling dysfunctional aspects of the status quo is likely to be as ineffective as imposing a solution on teachers who have ample opportunities to sabotage reformers' best efforts.

We are suggesting that these two sets of requirements, that are so often treated independently, can be integrated. Messages about ownership and commitment should not be delivered separately from those about solving problems of quality. Rather than owning a project, the organizational learning message is about owning and becoming committed to processes through which staff learn whether their projects are having their anticipated impact on student achievement. Interventionists promote such commitment by disclosing their agenda for reform, and learning what it might mean from the schools' perspective. Once an agreed learning agenda is established, the intervention role becomes one of support and challenge as schools work through the difficult process of learning about their own effectiveness in delivering literacy instruction. Both the interventionists' and schools' learning is likely to continue throughout the life of the intervention, because the process of identifying problems and solutions tends to be iterative rather than linear, for one becomes more cognisant of the dimensions of problems as one tries to solve them.

Possibly the greatest barrier to this approach is that naming and discussing problematic practices must be part of the process, but talk of problems is often

perceived as negative, and negativity is considered disempowering and demotivating. We believe that the process can be a positive one if it is collaborative and provides both parties with an opportunity to deepen their understanding of what needs to change in order to improve. A collaborative process precludes the privileging of the interventionist's diagnosis but similarly precludes a self-diagnosis that fails to address significant issues. Similarly, the development of solutions is shared in ways that enable those involved to contribute their perspectives, debate the significance of the solution alternatives and, most importantly, check how their suggestions will solve the diagnosed problem. If agreement cannot be reached, then the effectiveness of whatever intervention is implemented is reviewed against criteria that are important to both parties.

If schools and their communities are to take responsibility for solving educational problems in anything more than a symbolic sense, then they must know the nature of the problem the solutions are designed to address. These problems typically include relationship issues and those of the quality of educational instruction. Both need to be included in a sustainable and effective solution.

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References

- Education Review Office (1996). Improving schooling in Mangere and Otara. Wellington: Author.
- Elmore, R., F. (1993). School decentralization: Who gains? Who loses? In J. Hannaway & M. Carnoy (Eds.) *Decentralization and school improvement..* San Francisco: Jossey-Bass.
- Fiol, C. & Lyles, M. (1985). Organizational learning. *Academy of Management Review*, Vol. 10, No. 4, pp. 803-813.
- Hatch, T. (1998). The differences in theory that matter in the practice of school improvement. *American Educational Research Journal*, Vol. 35, No.1,
- Hedberg, B. (1981). How organizations learn and unlearn. In P. Nystrom & W. Starbuck (Eds.) *Handbook of organizational design (Vol. 1)*. Oxford: Oxford University Press.
- Lipman, P. (1997). Restructuring in context: A case study of teacher participation and the dynamics of ideology, race, and power. *American Educational Research Journal*, Vol. 34, pp. 3-28.
- Little, J. (1990). The persistence of privacy: Autonomy and initiative in teachers' professional relations. *Teachers College Record*, Vol. 91, pp. 509-536.
- March, J. (1996). Exploration and exploitation in organizational learning. In M. Cohen & L. Sproull (Eds.) *Organizational Learning*. Thousand Oaks, CA: Sage.
- Nickles, T. (1988). Questioning and problems in philosophy of science: Problem solving versus directly truth-seeking epistemologies. In M. Meyer (Ed.) *Questions and questioning*. Berlin: Walker de Gruyter.
- Robinson, V. (1993). *Problem-based Methodology: Research for the Improvement of Practice*. Oxford: Pergamon Press.
- Robinson, V. (1995). Organisational learning as organisational problem solving. *Leading and Managing*, Vol. 1, No. 1, pp. 63-78.
- Robinson, V., Timperley, H., & Halliday, J. (1996). *Facilitating organisational learning in schools: Report of Phase three: Organisational learning for self managing schools*. Report to Research and Statistics Division, Ministry of Education, Wellington, New Zealand.
- Senge, P. (1992). *The fifth discipline: The art and practice of the learning organization*. Milsons Point, NSW, Australia: Random House.

- Smith, P. (1994). Reading Recovery and children with English as a second language. *N.Z. Journal of Educational Studies*, Vol. 29, No. 2, pp. 141-159.
- Stoll, L. (1999). *The power of school culture in school improvement*.
- Sylva, K., & Hurry, J. (1995). *An evaluation of Reading Recovery and Phonological Training*. A short report prepared for School Curriculum and Assessment Authority, London.
- Timperley, H. & Robinson, V. Collegiality In Schools: Its Nature And Implications For Problem Solving. *Educational Administration Quarterly*, Vol. 34, Pp. 608-629.
- Timperley, H. & Robinson, V. (2000 – in press). Workload and the professional culture of teachers. *Educational Management & Administration*.
- van den Berg, R., Vandenberghe, R., & Sleegers, P. (1999). Management of innovations from a cultural-individual perspective. *School Effectiveness and School Improvement*, Vol. 24, No. 3, pp. 321-357.
- Weick, K. (1995). *Sensemaking in organisations*. Thousand Oaks, CA.: Sage.