

The Role of Leadership and Professional Development in a Design Approach to School Improvement

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The elusiveness of successful school reform

The literature on school improvement does not provide simple answers to guide those seeking quantum improvements in student learning outcomes. There have been many attempts at raising standards by one means or another, but reformers have invariably found that it is difficult to improve student learning in a sustained way across more than a handful of schools at any one time (Zywine, Stoll, Adam, Fullan, & Bennett, 1995).

Sarason (1990) in a book somewhat depressingly entitled *The predictable failure of educational reform*, has suggested that this is because most reforms fail to penetrate the classroom door and impact upon classroom teaching. While it is undoubtedly true that successful reform involves changing classroom practice, it is also increasingly clear that sustained and ongoing improvement in student outcomes generally requires totally re-designing the way in which schools currently operate. This is a major undertaking and one rarely attempted until quite recently.

In the USA, there are now a number of designs that adopt a comprehensive, whole-school approach to improvement of learning outcomes. The best-known of these are the nine designs of the New American Schools Corporation (see especially Stringfield, Ross, & Smith, 1996). Many of these designs have been conceived as a means of renewing inner city schools that have been fighting a losing battle with poverty and deprivation. These designs have been taken beyond the developmental stages and are now being implemented and evaluated in a large number of school sites. At this stage, the empirical evidence regarding their effectiveness is limited and by no means uniformly positive. For some designs the evidence is mixed, whereas for others it is consistently positive. Indeed, in one or two cases the evidence is so impressive that it justifies renewed confidence in the capacity of even our most disadvantaged schools to ensure success for all students.

In terms of their details, many of these designs have been developed with a particular context in mind and their relevance to other contexts may be limited. Simply adopting a design developed for use in a particular setting in one cultural context may not work at all if one attempts to implement that design in another setting in another cultural context. On the other hand, it would be argued that the effective designs always build (either consciously or unconsciously) upon a common set of design principles that are readily transferable to almost any context.

As part of a long-term project into the design of successful school improvement strategies, work has been undertaken within the Centre for Applied Educational Research of The University of Melbourne into identifying these common design principles or basic design elements that research evidence would suggest should underpin any specific school improvement plan. The work to date has been informed primarily by experience in designing, implementing and evaluating an approach to prevention and intervention as a means of ensuring that all students experience success in early literacy. This paper reports the outcomes of some of this work. The first part of the paper provides a brief outline of the basic design elements of a general model of school improvement. The latter part focuses on two of the most critical elements, leadership and professional development.

Design elements for a general model of school improvement

There is considerable research evidence to suggest that a limited number of factors are consistently associated with improvements in learning outcomes. Scheerens and Bosker, (1997, p.223) conclude on the basis of meta-analyses of findings and best-evidence syntheses that the basic factors are:

- time on task;
- closeness of content covered to assessment instrument;
- a structured approach: specific objectives, frequent assessment and corrective feedback; and
- types of adaptive instruction that can be managed by teachers (eg. no more than two within-class ability groups per classroom).

We would argue, on the basis of the same evidence, that the literature on effectiveness supports just three factors which closely resemble the four factors of Scheerens and Bosker, namely:

- high expectations of student achievement;
- engaged learning time, and
- structured teaching focused on the learning needs of students.

It will be noted that these three factors relate to general conditions within a general school, but more particularly to conditions within the classroom. Improving learning in schools thus involves focusing on those elements of the actual operation of schools and classrooms that determine whether expectations are high, whether students are engaged in learning and whether teaching is focused on the learning needs of students.

Figure 1 summarises diagrammatically the general design elements identified thus far in our search to identify those aspects of schools and classrooms that most require attention in any design approach to school improvement aimed at improving student learning outcomes.

The starting point for thinking about the design elements identified in Figure 1 was the *Success for All* design of Slavin and colleagues (Slavin, Madden, Dolan, Wasik, Ross, Smith, & Dianda, 1996; Slavin, Madden, Karweit, Livermon, & Dolan, 1990). *Success for All* is an early literacy prevention and intervention program based on the design elements listed in the first column of Table 1. It has been used in inner city schools in the USA, but has been adapted for use in other contexts.

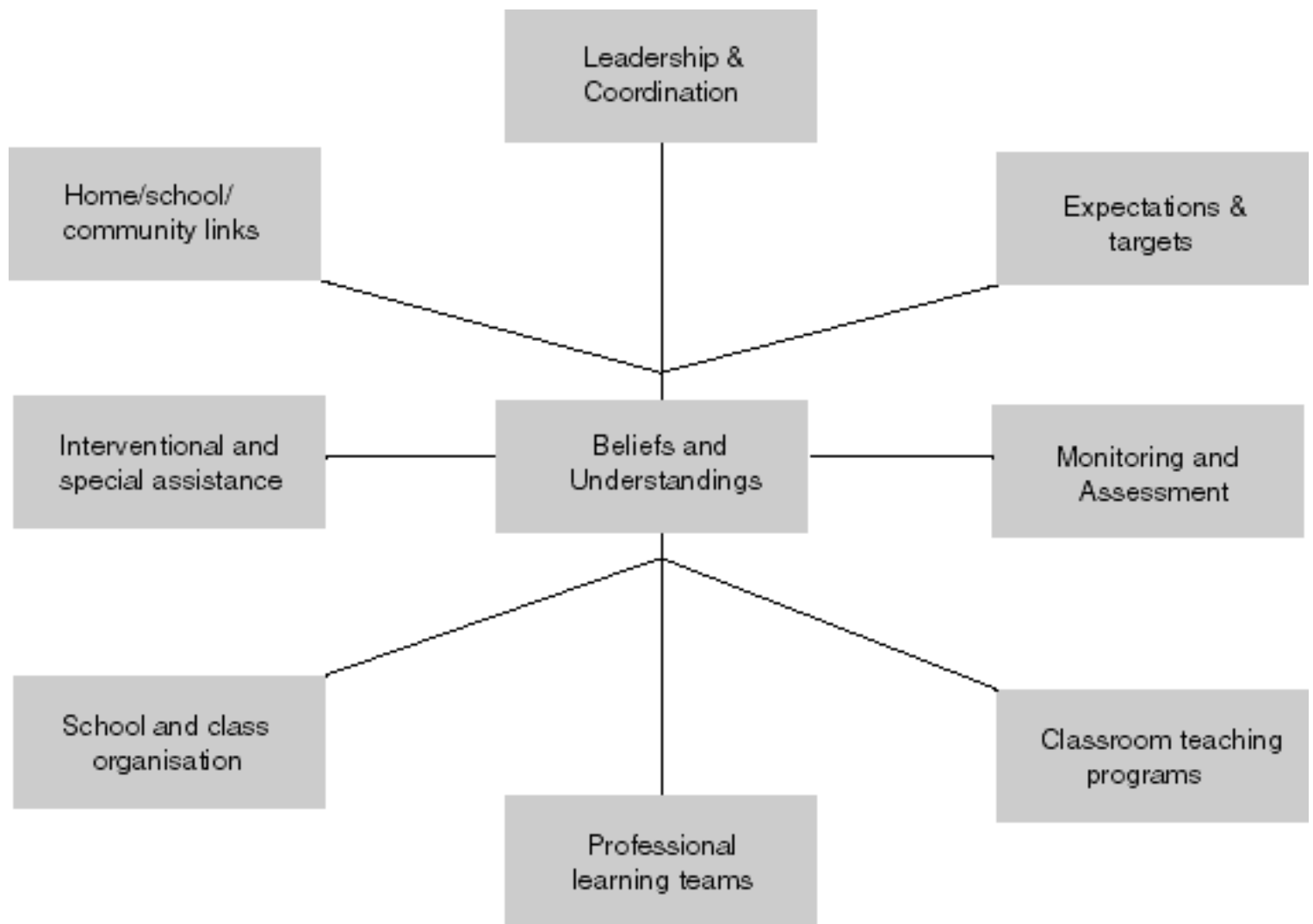


Figure 1. Design elements for a general model of school improvement

In seeking to implement a similar program in an Australian context, the authors have adapted the elements of *Success for All* to meet local requirements, building on best practice in Australian schools and incorporating a number of new elements. These design elements are listed in the second column of Table 1. The developmental work on this adaptation of *Success for All* was undertaken as part of the *Early Literacy Research Project (ELRP)*, a joint initiative of the Victoria (Australia) Department of

Education and The University of Melbourne. The aim of the *ELRP* has been to maximise the literacy achievements of ‘at risk’ students in the early years of schooling (ages 5-8). A brief description of the *ELRP* and the results of an initial evaluation of the first year of implementation are given in Crévola & Hill (in press). Over ten separate measures of literacy progress, effect sizes for participating schools in excess of 0.6 of a standard deviation have been achieved.

Table 1. Design Elements of *Success for All* and Corresponding Elements of the Early Literacy Research Project

Success for All	ELRP
Reading program	Balanced Classroom Literacy Program
Eight-Week Reading Assessments	Daily Running Records
Reading Tutors	Reading Recovery
Preschool and Kindergarten	Preschool Research Project
Family Support Team Advisory Committee	Home, School Support Team
Program Facilitator	School-Based Program Coordinator
Teachers and Teacher Training	Professional Learning Program
Special Education	Additional Assistance
Relentlessness	Expectations and Targets

The design elements listed in Table 1 quite properly reflect a particular focus on early literacy. The design elements of Figure 1, on the other hand, while they derive specifically from the experiences gained in implementing the *ELRP* are not specific to early literacy but are an attempt to make explicit the general or underlying principles that we believe should be taken into account in any educational design. These are captured in the set of nine design elements described below.

Beliefs and understandings. Beliefs and understandings about teaching and learning occupy the central position in the design summarised in Figure 1. Unless teachers believe they can make a difference and

have a commitment to do so, the impact of the other elements is seriously diminished. Therefore, the starting point of the design is a belief in the capacity of all students to make progress, given sufficient time and support. Recent research in the field of cognitive science has confirmed that almost all students can engage in higher-order learning given the right conditions (see especially Odden, 1995). This belief needs to be supported by teachers who have a clear understanding of how students learn, a strong theoretical base for this understanding and a relentless determination that they will succeed.

At the commencement of the ELRP, it was evident that in many of the trial schools there was a culture of low expectations and a tendency to make excuses for students, particularly with reference to the home backgrounds of students. These beliefs were challenged by collecting and analysing detailed observational data that demonstrated that the majority of students began school with sufficient knowledge of concepts about print and of letter knowledge to begin processing text.

Expectations and targets. In addition to believing in the capacity of all students to make progress, it is important that within schools such a belief is translated into appropriate expectations and a relentless determination to persist with those who are not experiencing success. The literature on school effectiveness has consistently drawn attention to high expectations as a characteristic of effective schools (see especially Mortimore, Sammons, Stoll, Lewis, & Ecob, 1988; Sammons, Hillman, & Mortimore, 1994; and Scheerens, 1992). To some extent, high expectations are assisted by the setting of national or system-level standards that embody challenging goals. These macro-level expectations need to be manifest at the level of the school and of individual teachers. Unfortunately, low expectations of students are frequently encountered in schools serving students from disadvantaged home backgrounds. In addition, many teachers also fail to establish high expectations for each of their students and give up easily when students fail to make progress. These low expectations need to be addressed by ensuring that clear learning goals and appropriate targets for sustained improvement are established for all students.

Within the ELRP, teachers have adopted a set of targets derived from those of Clay and Tuck (1991) in their '*three waves of teaching*'. They argue that with good teaching in the first year of schooling, one can expect 80 percent of students to have reading and writing under way. During the second year of schooling, with appropriate one-to-one intervention using *Reading Recovery* one can expect to have a further 18 percent under way. This leaves approximately two percent for whom further referral and special support will be necessary during their third year of schooling. These targets may be expressed as follows:

First Wave - Good first teaching (80% of students under way)

Second Wave - Intervention: *Reading Recovery* (18% of students under way)

Third Wave - Further referral/ Special Assistance (2% of students)

These targets have provided the impetus for the ELRP with respect to setting appropriate expectations

and have provided a benchmark for evaluating performance.

Monitoring and assessment. Regular monitoring and assessment to provide a detailed, systematic and on-going profile of the progress of all students is an important element of the design summarised in Figure 1. Effective teachers monitor and assess students as part of their daily practice. For teachers to ensure that students are operating within their zone of proximal development (Vygotsky, 1978), they must match their teaching to the needs of each student. This implies the use of structured and diagnostic observations of students.

Classroom teaching programs. Effective teaching is structured and focused on the learning needs of each student in the class. This constitutes the most difficult challenge faced by teachers, particularly given the wide range of abilities within the typical classroom. It requires teachers to have detailed understandings of how children learn and well-developed classroom routines, structures, organisation and management related to the teaching of groups. It also requires teachers to motivate and engage students while applying a range of classroom practices and strategies in response to the needs of students.

Professional learning teams. Arguably the most important element in any design aimed at improved teaching and learning in schools is the provision of effective, ongoing and practical professional learning opportunities for teachers. This implies opportunities that extend well beyond traditional models of professional development and in-service training. Effective professional learning involves intensive, sustained, theoretically-based yet practically-situated learning, with opportunities to observe good practice, to be involved in coaching and mentoring processes and to take time for reflection (Fullan, 1991, 1993; Hargreaves & Fullan, 1991).

School and class organisation. In order to maximise engaged learning time and to support focused teaching (ie., teaching focused on the learning needs of all students), it is necessary to ensure that sufficient time is allocated and that this time is free from external interruptions and internal disruptions. This raises a range of practical issues relating to class composition and approaches to within- and between-class ability grouping, for which there is, fortunately, considerable research evidence to guide effective practice (Kulik & Kulik, 1992; Mason & Burns, 1997; Veenman, 1995, 1997).

Intervention and additional assistance. Even with the best classroom teaching, a significant proportion of students fail to make satisfactory progress. For such students, early intervention is essential to enable them to catch up quickly to their peers. In the context of early literacy, Wasik and Slavin (1993) have found conclusive evidence to support the efficacy of various one-to-one tutoring programs, of which the most impressive evidence was for *Reading Recovery* (Pinnell, Lyons, DeFord, Bryk & Seltzer, 1991). Although relatively costly, Dyer (1992) has estimated substantial net cost savings of one-to-one tutoring. There is also a need for specialist assistance for students who after intensive one-to-one intervention continue to experience difficulties. This assistance might take the form of referral to specialists or placement in special settings. More generally, it will take the form of individual learning plans devised in consultation with the school principal, the classroom teacher, specialists and parents or care-givers.

Home/ school/ community links. There is a strong body of research to highlight the importance of supportive links between the home, the school and the community (Epstein, 1995; Teale, 1986; Tizard, Blachford, Burke, Farquhar & Plewis, 1988; Toomey, 1993). In seeking to develop these links it is necessary to recognise that the three major contexts in which students learn and grow - the family, the school and the community - may be joined together or pulled apart. There are some practices that schools, families and communities conduct separately and some they conduct jointly in order to influence students' learning and development (Epstein, 1995). Schools need to establish programs that address issues such as school attendance, parental involvement in student learning, student welfare needs including access to community services, and so on.

Leadership and coordination. Strong educational leadership has consistently been identified as a key characteristics of effective schools (Edmonds, 1979; Rutter, Maughan, Mortimer, Ouston, & Smith, 1979). This has typically been taken to involve such things as:

- establishing priorities, goals and a vision for the future;
- developing a positive ethos or culture that values learning and holds high expectations for all students;
- securing, managing and allocating resources to support agreed priorities;
- building up the commitment and capacity of staff.

The current wave of school reform, with its emphasis on teaching and learning and the design approach represented by Figure 2 implies a renewed focus on classroom teaching and on instructional leadership. In larger schools, the principal may have the capacity to delegate much of the work associated with instructional leadership to middle-level professionals. In smaller schools, a hands-on role is unavoidable. In all cases, however, the principal has major responsibilities in ensuring that the necessary leadership is being exercised in an effective manner.

The role of leadership and coordination in improving student learning outcomes

The importance of school leadership has been widely recognised in school reform initiatives in recent years. Policy makers have placed a great emphasis on the transformational role of the principal and the leadership team within the school and have increasingly targeted principals as readily accessible and powerful agents of change.

This emphasis is hardly surprising. Strong educational leadership as exercised by the principal has been the most consistently-cited characteristic in the research literature on school effectiveness and improvement (Levine & Lezotte, 1990). This is especially true of qualitative case studies that have investigated the organisational characteristics of schools that are evidently performing much better than others with which they might legitimately be compared, taking into account their student intakes.

More recently, the empirical evidence in support of the importance of the principal's role has begun to be queried. Reviews of quantitative studies that have measured both student achievement and aspects of leadership have revealed a very mixed picture, with some Dutch researchers, for example, finding little or no evidence of a link between leadership and school effectiveness (van de Grift, 1990, Witziers & Bosker, 1997).

A careful analysis of research published between 1980-1995 by Halinger and Heck (1996), however, suggests that this distinctly counter-intuitive conclusion itself needs substantial qualification. Their review of 44 studies powerfully demonstrates that it is necessary to distinguish between direct effects and mediated effects. Studies that assume some direct influence of principal leadership on student progress typically reveal no effects. On the other hand, there is evidence of admittedly small but nevertheless positive effects in studies that assume that the influence as exerted by the principal on student progress is mediated by a number of intervening variables (such as class/teacher variables) and is also affected by a number of antecedent variables (such as the characteristics of the school community). Halinger and Heck conclude that the models used in most previous research linking the principal's role and student learning outcomes have been over-simplistic and under-specified. They comment:

...the most theoretically and empirically robust models ... tell us that principal leadership that makes a difference is aimed toward influencing internal school processes that are directly linked to student learning. These internal processes range from the school policies and norms (eg., academic expectations, school mission, student opportunity to learn, instructional organization, academic learning time) to the practices of teachers." (p.38)

We believe this to be an accurate analysis of the relationship between leadership and school improvement but would wish to make two additional points. First, we would argue that the most helpful way of conceptualising the relationship between leadership and student learning outcomes is in terms of the extent to which the three effectiveness-enhancing factors cited earlier have been built into key aspects of the functioning of the school. Furthermore, we would argue that the key aspects of the functioning of the school requiring the principal's attention are the nine design elements described in the previous section, namely:

1. Beliefs and understandings about teaching and learning
2. Expectations and targets
3. Monitoring and assessment of student progress
4. Classroom teaching programs
5. Professional learning teams
6. School and class organisation
7. Intervention and special assistance
8. Home/ school/ community links
9. Leadership and coordination

Each of the above elements needs to be functioning effectively and in alignment with the other elements so that they reinforce one another.

The second point we would wish to make is that it is not just the school principal that exercises leadership with respect to teaching and learning within a school. Leadership can and frequently must be exercised by others, including deputy principals, senior teachers and persons external to the school such as superintendents of schools and consultants engaged to work with the school. This is particularly relevant in the implementation of educational designs, which typically place heavy reliance on external, university-based trainers to effect change.

Attention to the design elements summarised in Figure 1 within the *Early Literacy Research Project (ELRP)* trial schools has required substantial change in school organisation and practices. This change has affected curriculum, instructional practices, assessment, intervention programs, promotion and retention practices, parent and community involvement, relationships with pre-school providers and the internal school organisational arrangements and processes. It has placed responsibility for student achievement on all staff members. It has demanded dramatic changes in daily teaching practices for teachers who may have had years of operating in entirely different ways. It has required a reconceptualisation of the role of the school in ensuring the success of every student.

The role of the principal has been crucial throughout the implementation process. (Fullan & Pomfret, 1977). During the first stage, initially the principal expressed interest in being involved in the project. Not surprisingly, principals then found themselves trying to convince the staff of the value of such an involvement. The classroom teachers who would be directly involved in the change process needed to be convinced that the priorities addressed by the *ELRP* were significant for them and their practice.

The vision of one person imposed on an organisation may command compliance but not commitment (Fullan, 1993). The challenge for the principals within the *ELRP*, has been to function as a 'lead learner' who builds a culture of 'team' and shared vision. A shared vision is created as individuals reflect and rediscover what they really care about (Senge, 1992). Within the *ELRP* the notion of a shared vision has been constantly challenged by external factors. *ELRP* principals have often been torn between their belief in the goals of the project and other competing pressures and demands. Effective reform efforts generate broad-based support throughout the school community, with all involved strongly advocating the need for change. These efforts are often dependent upon the ongoing work of individuals who are seen as the change agents. For many principals in the initial stages of the *ELRP* this was a significant role.

Within the *ELRP*, it has been the particular responsibility of school-based project coordinators to support and promote the project. They have actively supported reform initiatives, helped to shape the workplace, and have established and strengthened a culture that values school improvement.

A critical element of the *ELRP* has been the appointment of experienced early years teachers who have been released from direct classroom teaching duties to act as coordinators to support the project and to assist the change process. Releasing teachers from classroom duties to undertake this kind of role has required a substantial whole-school commitment. The roles performed by the coordinators have also been new within the local school context and have required the coordinators to operate on a number of levels: peer coach, mentor, change agent and most importantly 'linker'.

The leadership role exercised by the project coordinators in the *ELRP* trial schools has greatly attributed to the success of the project. A major component of the coordinator's role has been to work with classroom teachers as a coach and mentor, assisting them to develop skills critical improved student outcomes. The release from the classroom has allowed time for them to develop resources to further support the classroom program and to work with the school community to maintain and establish the literacy programs within the school.

The implementation of the *ELRP* has often left those involved feeling overwhelmed and consistently challenged. The importance of the project has often placed those involved under considerable pressure. This pressure, metred by the support provided by the coordinators, has been one of the major influencing factors associated with maintaining commitment to the project under often difficult circumstances.

The university-based project coordinator has also exercised a critical leadership role, primarily through articulating the need for change, through providing a clear design for improvement, through school visits and through design and implementation of an intensive, ongoing professional development program for the coordinators and the classroom teachers. The university-based project coordinator has been the catalyst for change, by exerting pressure the classroom teachers to reassess their practice and on school coordinators to ensure fidelity of program implementation.

The role of professional development in improving student learning outcomes

Educational change involves changing teachers' beliefs and understandings as a first prerequisite to changing teaching practices. It is a multifaceted, complex and inherently unpredictable process (Fullan, 1993). It involves the implementation of new ideas, programs and structures. Teachers need a thorough understanding of the meaning of educational change before there is an acceptance and adoption of new programs and approaches. The *ELRP* has involved a on ongoing program of teacher professional development to support the implementation of change within the trial schools. There has been a wide range of professional learning opportunities provided to all trial school learning teams.

Before the commencement of the first year of the project, all teachers and coordinators in the *ELRP* trial schools were brought together in school learning teams for initial introductory sessions and for training in the administration of the instruments used to assess students. During the school year, class teachers and support personnel in the trial schools were involved in four professional development days. These days were devoted to developing learning teams and to consolidating teachers' understanding and practical application of effective literacy strategies.

While teaching approaches have been introduced to teachers during the *ELRP* professional development sessions, teachers have come to understand fully the new instructional strategies as they have practised, discussed, modified and refined them in the classroom and as their understandings have developed through interaction with their peers and coordinators. Coordinators have been able to consolidate and further support the teachers' learning, creating opportunities for modelling and demonstration and through the provision of additional coaching and mentoring as required.

The teachers and coordinators in the trial schools have placed great importance on the off-site professional development days. They have constantly articulated the importance of these days for providing the extra impetus from the 'outsider', as represented by the university-based project coordinator. The role of the outsider in the change process has been one of instigating and renewing professional discussion and thinking within the learning team at the individual school level.

A vital component of the professional learning program has been at least two full-day visits to each of the trial schools by the university-based project coordinator. These visits have been critical in making a direct connection between understandings gained during professional development sessions and the actual working knowledge (classroom practice) of the teachers and coordinators involved. They have also provided opportunities for the project coordinator and the principal to raise school-specific leadership issues. The importance of these visits has continued to grow as the leadership teams within schools have grappled with ongoing implementation issues. The 'outsider' role of the university-based project coordinator has embraced that of mentor for the leadership and coordination team at the school level, as well as for the teaching team.

For teacher learning and professional development practices to be effective, teachers need a reason to learn and a purpose to collaborate and co-operate. The *ELRP* has provided the impetus for the trial schools to develop a change culture, where cooperation and collaboration are inherent in the daily practices. The project has created meaningful learning opportunities for teachers with direct links to student outcomes, challenging teachers to develop their understandings and to work and learn together. Professional development has become an experience that is embedded within their work. As the teachers share ideas, plan and teach together they create opportunities to learn from each other, solving problems together as a team. This has been a most significant aspect of the change process, as defined by the teachers themselves.

The fundamental premise on which the *ELRP* professional development model has been based is one that sees the growth in teacher change as a direct result of the development and consolidation of each individual's core beliefs and understandings regarding literacy learning. As the model of Figure 1 suggests, the remaining eight elements of the design for school improvement are dependent on these beliefs and understandings. For example, without a firm theoretical understanding of the impact of one-to-one intervention, the leader is unlikely to appreciate the need to implement a proven one-to-one intervention program. Or again, if the leader does not understand change to be a process, then he or she will not place great value on the need for ongoing professional learning opportunities as part of the formalised approach to professional development. This is true for each of the design elements.

In line with this view of change, the *ELRP* has provided regular professional development sessions for the principals of the trial schools. These sessions have focused on data collection and on implications for teaching and learning. They have also provided opportunities to expose principals to a wide range of relevant research findings. The response to these sessions has continued to be positive with full attendance at each session.

The impact of the school improvement process can only be measured by the extent to which it impacts on student learning. The data collected from the *ELRP* schools have indicated that the trial schools have been able to effectively implement changes in the literacy practices within their early years classrooms. This alone is not sufficient and so it is also important to note that analysis of pre- and post-test data clearly indicates that the classroom program, the intervention, the ongoing assessment and monitoring, the beliefs and understandings, the leadership and coordination, the professional development, the expectations and targets, the school and class organisation and the home/school/community links have all impacted upon the students learning outcomes. The results of the *ELRP* send strong messages to schools and systems regarding the re-conceptualisation of professional development. The power of focused learning opportunities for teachers, from within and outside of the school setting can be measured by the improved student learning outcomes, as achieved by the *ELRP*.

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