School and System Improvement: State of the Art Review

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David Hopkins, Alma Harris, Louise Stoll and Tony Mackay

Introduction

Over the last twenty-five years or so, the school improvement research base has gained prominence and recognition on the international stage. In both a theoretical and empirical sense it has matured through a wide range of successful projects, interventions and innovations across a range of countries, about how to help schools become increasingly effective learning environments for all their students.

This review is also a reflection on how we achieve school reform at scale. Since the early 1980’s we have learned much about how to improve individual schools but successful efforts at systemic improvement have remained elusive. As we shall see in a little more detail later, there have recently been ambitious attempts to reform whole systems, but these have tended to be: i) oppressive and resulted in considerable alienation such as some of the State wide reforms in the USA; ii) well designed and centrally driven but with impact stalling after early success as with the literacy reforms in England; or iii) sustained, but usually due to factors outside the immediate control of educators and policy makers such as in Finland. What is needed is a ‘grand theory’ of system change in education that results in relatively predictable increases in student learning and achievement over time - this paper is a modest contribution to that worthwhile and necessary goal.

The main aim of this review however is to outline different phases in the development of the field and to draw together the key messages emanating from its broad empirical base. A review of the last two and a half decades of school improvement suggests that the field has evolved in a number of distinctive phases as practitioners and researchers have gained expertise in implementing and studying educational change. Almost ten years ago now, Hopkins and Reynolds (2001) provided an analysis of the field through the identification of three different phases of school improvement. Their three phases have clearly influenced the analysis that follows. The review also highlights the increasing shift from individual school improvement initiatives to system wide (i.e. national, state or district) change (Harris and Chrispeels 2008).

The artifice of dividing the review into a series of phases enables us to develop a stronger narrative about the evolution of the field and its potential future. As such the review claims to be conceptual and comprehensive rather than exhaustive. We are also conscious that this review is limited by our own experiences, knowledge and scholarship; this is another reason why we cannot claim that the review is fully comprehensive. We have however tested our narrative against reviews of the international evidence and are confident that it is
representative of the global experience. An overview of the five phases described in this paper are given in Table One below, and provides an advance organiser for the argument that follows.

At first glance these could be regarded simply as a sequence of rather loose chronological phases. In some ways they are, but they are also substantive, as most systems have progressed through them in this order as part of their school improvement journeys, for the simple reason that each phase builds capacity for the next. It should also be realised that given the existing knowledge base such a movement can be dramatically accelerated in those systems and schools just embarking on these endeavours.

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Table One – The Five Phases of School and System Improvement

Phase One - Understanding the organisational culture of the school

One can trace the development of organisation development (OD) back to the social psychological writings and practice of Kurt Lewin (1947) with his emphasis on the influence of the organisation on the behaviour of its members. From the early experimentation with group dynamics, through the emergence of T-groups, McGregor’s work with Union Carbide in 1957, and the ESSO experiment in the late 1950s, OD began to develop a distinctive character, with an attendant technology and philosophy (Hopkins 1984).

In the sixties it was Matthew Miles (1967) whose seminal paper on ‘organisational health’ advocated the adaptation of OD techniques to schools. Miles was one of the first
commentators to understand the dynamic between the organisational condition of schools and the quality of education they provide. This insight lays the foundation for much contemporary work in the area of educational change, school effectiveness and school improvement. Later Miles (1975:231) described organisational health as:

\*A set of fairly durable second-order system properties, which tend to transcend short-run effectiveness. A healthy organisation in this sense not only survives in its environment, but also continues to cope adequately over the long haul, and continuously develops and extends its surviving and coping abilities.\*

Miles describes ten dimensions of organisational health. His first three dimensions are relatively ‘tasky’ and deal with goals, the transmission of information, and the way in which decisions are made. His second group of three dimensions relate to the internal state of the organisation and with maintenance needs: more specifically the effective use of resources, cohesiveness and morale. His final set of dimensions are concerned with the organisation’s ability to deal with growth and change - notions of innovativeness, autonomy, adaptation vis-à-vis the environment, and problem solving.

When Miles subsequently analysed schools as organisations against these criteria he diagnosed them as being seriously ill! His analysis presaged subsequent descriptions of the pathology of schools as organisations such as Weick’s (1976) characterisation of them as ‘loosely coupled’ systems, and comments such as schools ‘are a collection of individual entrepreneurs surrounded by a common parking lot’, or a ‘group of classrooms held together by a common heating and cooling system’. This also explains the twin emphasis in authentic school improvement strategies on the organisational conditions of schooling as well as the teaching and learning process.

Miles then described a series of strategies designed to induce a greater degree of organisational health such as team training, survey feedback, role workshops, target setting, diagnosis and problem solving, and organisational experiment. Some of these strategies may have an anachronistic ring to them by today’s standards, but there are a number of common themes flowing through all of them that have a more contemporary flavour. These are for example, self-study or review, the promotion of networking, increased communication, culture as a focus for change, the use of temporary systems, and the importance of external support.

The publication of *OD in Schools* (Schmuck and Miles 1971) was the first mature expression of the impact of OD in education. In a later ‘State of the Art’ paper, Fullan et al. (1980) concluded that OD in schools had ‘diffused to a larger extent than we and others had realised’. An example of a well-developed approach to institutional self-renewal based on OD techniques is found in the *Handbook of Organisational Development in Schools* (Schmuck and Runkel 1985). This work also served to provide insights into what constitutes the school’s capacity for problem solving. According to Schmuck (1984:29) it is reflected in a series of meta-skills - systematic diagnosis, searching for information and resources, mobilising collaborative action, ‘synergy’, and the staff’s ability to evaluate how effectively the previous meta-skills were implemented.

Three conclusions can also be drawn from this brief analysis. First, OD approaches emphasise the importance of the organisational health determinant of effectiveness.
Second and consequently, a major emphasis in many school improvement interventions is based on an approach that attempts to ‘humanise’ the organisational context within which teachers and students live. Third, and possibly underemphasised at the time, was the empirical support given to the effectiveness of strategies, such as survey feedback, that diagnosed the internal conditions of the organisation as a precursor to development. It is on such approaches to OD in schools that much of the process emphasis in school improvement interventions was initially based.

Running parallel to the specific application and development of OD techniques was the beginning of widespread research into, and understanding of, the change process and the school as an organisation. The OECD-CERI project ‘Case Studies of Educational Innovation’ (Dalim 1973), and the Rand Corporation ‘Change Agent’ study (Berman and McLaughlin 1977) for example, highlighted the limitations of externally imposed changes, the importance of focussing on the school as the unit of change, and the need to take the change process seriously. Similarly, the research on schools as organisations, of which Sarason’s (1982) The Culture of the School and the Problem of Change is an outstanding example, demonstrated the importance of linking curriculum innovation to organisational change. This emphasis on user led improvement provides the transition into the second phase.

**Phase Two – Action research and individual initiatives**

During the 1980s, school improvement tended to be mainly practitioner-oriented, located in the work of those involved. This work was typified by the ‘teacher as researcher’ movement that had the iconic Lawrence Stenhouse as its guru (Stenhous 1975, Rudduck and Hopkins 1985). Stenhouse died prematurely and it was John Elliott who picked up the mantle and through many projects and networks in the UK and elsewhere developed the movement (Elliott, 1980; 1981).

So there was a marked change in the character of school renewal efforts in the late 1970’s and early 1980’s. Three influences accounted for this change in emphasis: an increase in demands for school accountability; more focus on school leader development; and the international trend towards whole scale national educational reform that began in the 1980’s (Hopkins 1994).

During the early 1980’s school-based review or evaluation, despite confusion over purpose, established itself as a major strategy for managing the change process and institutional renewal. The empirical support for its success as a school improvement strategy is at best ambivalent (Clift et al 1987). For most schools it proved easier to identify priorities for future development than to implement selected targets within a specific time frame. Because of this, and a failure to implement the total process e.g. training for feedback and follow up, school self evaluation had, despite its popularity, limited impact on the daily life of schools.

For these reasons, school improvement during this phase was often defined as implementing an innovation or engaging in action research projects. In several countries, especially the United States and Australia, it was also driven by federal funding to address
the needs of schools serving disadvantaged students, which mandated the establishment of school-based improvement councils. This ‘bottom-up’ approach to change in schools manifested itself in small-scale programmes or projects focused sometimes only on select groups of students, individual schools or groups of teachers.

In the United States toward the end of this phase, the emergence of the Effective Schools research began to inform the work of many local school improvement efforts (Chrispeels and Meaney, 1989; General Accounting Office Report, 1989). In addition to providing funding for individual school improvement efforts, state and national governments played an interesting role in this phase. They enhanced the power of individual schools by diminishing the power of intermediate or local educational authorities (LEAs) and agencies. For example, the national government in New Zealand pursued this path and dissolved its Local Education Authorities. Israel, having already moved towards school decentralisation in the 1970s and 1980s moved towards a full-scale model of school-based management (SBM) in the 1990s, while countries like Austria began their decentralisation efforts more recently. Various state governments in Australia, with Victoria leading the way, redefined the role of Regional Office (middle tier) in that country. The province of New Brunswick in Canada experimented with eliminating its local school districts but later reinstated them (Anderson, 2003). In the United States, where local boards of education were the primary educational decision makers, many school boards implemented site-based management as an engine for teacher empowerment and school improvement (Brazer, 2004; Lieberman, 1986; Mohrman, Wohlstetter, and Associates, 1994).

Hopkins and Reynolds (2001) suggest that this phase of school improvement was encapsulated by the holistic approaches of the ‘80s and was epitomised by the OECD’s International School Improvement Project (ISIP) (Hopkins, 1987). They (2001:12) note, however, that this phase of school improvement tended to be ‘loosely conceptualised and under-theorised. It did not represent a systematic, programmatic and coherent approach to school change’. There was also in this phase an emphasis upon organisational change, school self-evaluation and the ‘ownership of change’ by individual schools and teachers, but once again these initiatives were not strongly connected to student learning outcomes. They tended to be variable and fragmented in both conception and application. As a consequence, these improvement practices struggled to impact significantly upon classroom practice (Hopkins, 2001). It was this concern that led to the increasing emphasis on managing change, comprehensive school designs and the emphasis on leadership in the next phase.

Phase Three – Managing change and the emphasis on leadership

The third phase of development began in the early 1990’s. In these years, the school improvement tradition was beginning to provide schools with guidelines and strategies for the management and implementation of change at the school level.

By the mid-eighties the amount of change expected of schools was increasing dramatically, mainly in response to national policy initiatives. This increase in expectations was also accompanied by fundamental changes in the way schools were managed and governed. Although this went by different names in different countries - self-managing schools, site
based management, development planning, local management of schools, restructuring - the key idea of giving schools more responsibility for their own management remained similar. The common aspiration of these initiatives was the ‘renewed’ or ‘self managing’ school.

The concept of the ‘Self Managing School’ was developed in Tasmania and Victoria, Australia, in the mid eighties. Since then, it has been adapted and emulated in many other school systems, most notably in Edmonton, Alberta. The approach, described by its originators Caldwell and Spinks (1988) as ‘Collaborative School Management’, aspired to integrate goal setting, policy making, budgeting, implementation and evaluation within a context of decision making that involved the school’s staff, students, community and governing body.

The DES project on ‘School Development Plans’ in England and Wales, was also an attempt to develop a strategy that would, among other things, help governors, heads and staff change the culture of their school. Development planning provides an illustration of an authentic school improvement strategy, combining as it does curriculum innovation with modifications to the school’s management arrangements (Hargreaves and Hopkins 1991). And in Canada, efforts at the local level in Ontario were based on a blend of school development planning with findings from school effectiveness research (Stoll and Fink, 1996).

This approach was also facilitated by the more systematic interaction between the school improvement and the school effectiveness research communities (Desimone, 2002; Vinovskis, 1996). There was a greater focus upon organisational and classroom change reflected in approaches to staff development premised upon models of teaching (Joyce and Showers, 1995). In addition, there were two trends that emerged during this phase. The first trend was the expansion of site-based management within schools, which resulted in the reduction in power of local authorities and local boards of education. In England, New Zealand, Australia, and the United States, national and state governments started to play a more active and central role in school improvement.

The second trend during this phase was the growth, especially in the United States, of comprehensive models of school reform that could be adopted by individual schools. These include approaches such as the Comer School Development Model (1992), Glickman’s Renewing America’s Schools (1993), Levin’s Accelerated School Model (Hopfenberg, Levin and Associates, 1993), Sizer’s Coalition of Essential Schools (1989), and Slavin’s Success for All (1996). These ‘whole school design’ approaches combined elements from the school effectiveness and school improvement research bases to focus upon curriculum and instruction as well as management and organizational variables. Some of these approaches were designed to meet particular curriculum needs in literacy such as New Zealand’s ‘Reading Recovery’, or ‘Success for All’, which has subsequently been adopted in many other countries. Others such as the ‘Coalition of Essential Schools’ tended to reflect a broad set of principles for organizational change and development and were not targeted at any specific curriculum or subject area. In many countries large amount of resources have been targeted at programmes and projects aimed at improving schools and raising standards of performance. The evidence to date, however, suggests that many of these external interventions, although very well intentioned, have had patchy and variable success.
This phase of school improvement arose also because of the relative failure of existing approaches to school to make a difference to schools on the larger scales. Pockets of success could be seen and were duly celebrated but scaling up from the one to the many proved to be elusive. In particular, success seemed to elude schools in large urban areas serving the most disadvantaged and the evidence from major programmes such as ‘New American Schools’ confirmed the limitations of ‘off the shelf’ improvement or ‘whole school designs’ to secure long term and widespread system and school improvement (Berends, Bodilly and Kirby, 2002). The third phase of school improvement attempted to draw upon its most robust evidence and to produce interventions that were solidly based on tried and tested practices. Programmes such as Improving Quality of Education for All (IQEA) and High Reliability Schools (HRS) in England, the Improving School Effectiveness Project in Scotland, the Manitoba School Improvement Project in Canada and the Dutch National School Improvement Project were all examples of projects in this third phase (see Reynolds et al., 1996; Teddlie and Reynolds, 2000; Hopkins, Ainscow and West, 1994 and Hopkins, 2001, Harris and Young 2000).

It was during this phase also that there was also an increasing focus on leadership. This is not to say that leadership hitherto had not been regarded as important, but it was the first time that a comprehensive approach to the study of leadership was linked to student learning. The history of educational leadership tells of a much more conventional evolution. Murphy (1991), for example, suggests that the thinking about leadership falls into a number of phases – the focus on trait theories of leadership, on what it is that leaders actually do, awareness that task-related and people-centered behaviours may be interpreted quite differently, situational approaches to leadership – all building towards the then current interest in the links between leader behaviour and organisational culture. This represented a movement towards the notion of leadership as transformational, having the potential to alter the cultural context in which people work.

At the turn of the century, it became clear that the transformational approach to leadership is a necessary but not sufficient condition for authentic school improvement. It lacks a specific orientation towards student learning that is a key feature to this specific approach to school improvement. For this reason the complementary notion of ‘instructional leadership’ is attractive. Leithwood and his colleagues (1999:8) define it as an approach to leadership that emphasises ‘the behaviours of teachers as they engage in activities directly affecting the growth of students.’

Since then there have been two clear trends in the research, practice and policy related to school leadership. The first has been a consolidation of the links between leadership practices and student outcomes. The work of the Wallace Foundation has been highly influential here. Under commission from Wallace, Ken Leithwood and his colleagues (2004) provided one of the clearest definitions of those leadership practices most closely associated with enhanced levels of student outcomes. These are:

- **Setting Direction**: to enable every learner to reach their potential, and to translate this vision into whole school curriculum, consistency and high expectations.
• **Managing Teaching and Learning**: to ensure that there is both a high degree of consistency and innovation in teaching practices to enable personalised learning for all students.

• **Developing People**: to enable students to become active learners and to create schools as professional learning communities for teachers.

• **Developing the Organisation**: to create evidence based schools and effective organisations, and to be involved in networks collaborating to build curriculum diversity, professional support, extended services.

More recently a series of international research studies have confirmed and to an extent deepened these conclusions. For example, new research sponsored by the Wallace Foundation takes understanding further in terms of the link between leadership and student outcomes, with distributed leadership and professional community playing important roles (Louis, Leithwood et al, 2010). Vivianne Robinson’s (2009) international Best Evidence synthesis also shows that leaders promoting and participating in teachers’ professional development has twice or more the effect size of any other aspect of leadership in terms of the link with student outcomes. Hallinger’s (2010) recent paper Leadership for Learning, reviews 30 years of empirical research on the impact of leadership on student learning confirms these trends. The ‘School leadership and student learning outcomes’ research study has provided empirical detail to support these perspectives that are summarised in the two ‘strong claims’ pamphlets that have been particularly influential (Leithwood et al 2006; Day et al 2010). With the greater emphasis on instructional leadership, described in a recent OECD initiative on improving school leadership as leadership of teaching and learning (Pont, Nusche and Moorman, 2008), a number of countries have developed national leadership initiatives with an emphasis on leadership that focuses in student learning, for example Lithuania’s Time for Leaders Project.

The second trend in leadership during the last decade has been the emergence of ‘system leadership’ (Fullan 2004). Following research to map the emerging system leadership landscape, Higham, Hopkins and Matthews (2009) propose five key categories as innovative leadership practice.

• First, are the head teachers who are developing and leading successful educational improvement partnerships between several schools.

• Second, head teachers who are choosing to ‘change contexts’ by choosing to lead and improve low achieving schools in challenging circumstances.

• Third, are those head teachers who are partnering another school facing difficulties in order to improve it.

• Fourth, there are head teachers who act as a community leader to broker and shape partnerships or networks of wider relationships across local communities.

• And fifth, head teachers who are working as a change agent or expert leader.

These roles have been validated by more internationally based research, such as the two volume OECD (2008) Improving School Leadership study already cited – Volume 1: Policy and Practice and Volume 2: Case Studies on System Leadership and the more recent McKinsey (2010) study on Capturing the Leadership premium—how the world’s top school systems are building leadership for the future.
So in this third phase we are seeing the school improvement move towards maturity by adopting a more fundamental approach to educational reform by transforming the organisation of the school through managing change and the exercise of leadership in the quest for enhanced student achievement. These emphases have laid the basis for extending these approaches at scale.

**Phase Four – Building capacity for learning at the local level**

Harris and Chrispeels (2008) have argued that the fourth phase of school improvement is largely concerned with system level changes through collaboration and networking across schools and districts (Harris, 2010). Harris and Chrispeels (2008) further suggest that district reform and network building (including professional learning communities) need to occur side by side, and they need to be linked. Networks of schools can thrive in the short run on enthusiasm, hard work of a few, and the national policy and resource stimulus of an organization such as the National College of School Leadership (NCSL) in England. To substantially affect teacher and student learning in the long run, however, networks need ongoing facilitative structures, which local districts may be best positioned to provide. This new ‘brokerage role’ for school districts and local authorities will require new levels and types of conversations with schools and across boundaries, including conversations and partnerships with social service, employment, and health service agencies to meet the needs of students and families who are currently left behind.

The research base on the impact of the district role on student achievement has a relatively recent history. There are a number of examples from the research on school districts in North America during the nineties that illustrate that under the right conditions, significant and rapid progress can be made in enhancing the learning of students. Space precludes detailed discussion but the following three examples in their different ways are illustrative of the way the most successful Regions or Districts have balanced top down and bottom up change in order to make a real difference to student learning and achievement.

- The first example is of the New York school system (Fullan 2007). Here strong vision coupled to intensive staff development on instructional practices and capacity building within a constructive accountability framework led to significant increases in levels of student achievement.

- A second example is of successful school districts in California (Elmore 2004). These districts showed a much greater clarity of purpose, a much greater willingness to exercise tighter controls over decisions about what would be taught and what would be monitored as evidence of performance, and a greater looseness and delegation to the school level of specific decisions about how to carry out an instructional program.

- A third more recent example of successful district reform is found in Montgomery County Public Schools (MCPS) (Childress 2009). In the conventional educational jargon of the day, the district for the past ten years has engaged in a sustained effort to “raise the bar and close the gap” in terms of student performance. An illustration of their success is that the top quartile of performers in MCPS from 2003 to 2008 raised their scores significantly and the lower quartiles improved even faster.
It is also important to note that it’s not just about the role of districts and local authorities – there are other middle tier organisations that have spawned and supported networks. Daniel Muijs’ (2010) recent introduction to the SESI special issue on networking and collaboration for school improvement provides an authoritative overview. There is evidence that where NCSL’s Networked Learning Communities were focused on student learning with greater teacher commitment, there was a link with outcomes (Earl and Katz 2005). There is now significance evidence of impact of professional learning communities and their role in capacity building (see Vescio, Ross and Adams, 2008, Stoll 2009, 2010 and Stoll and Louis, 2007).

By way of summarising this evidence it is helpful to draw on Hopkins’ (2011) recent review of the key variables in any regional approach to school improvement that relates directly to increases in student achievement. They are:

- Clear and comprehensive model of reform
- Strong leadership at the regional level
- Substantive training related to the goals of the programme
- Implementation support at the school level
- An increasingly differentiated approach to school improvement.

In all of these instances a desire to link school improvement to student learning outcomes was the main goal during this phase, which was pursued with varying degrees of intensity. This has included a much richer and deeper appreciation of what the transition from a system based on teaching to one that embraces learning actually implies (Stoll et al, 2003). Such a system doesn’t neglect the achievement of learning outcomes, but provides evidence that learning about learning can make a difference to school improvement (Watkins, 2010) and backs this with a powerful evidence base about the science of learning (Brandsford et al, 1999; Lucas and Claxton, 2010). The OECD (2010) project ‘The Nature of Learning, Using research to inspire practice’ situates such perspectives within an international context.

The focus on the core of professional practice in such initiatives has also led to an increased focus on the skills and models associated with effective teaching. A review of the pedagogic approaches associated with school improvement efforts have been provided by Good and Brophy (2008), Hopkins 2001 and Hopkins and Harris (2000) among others. The work of Bruce Joyce (2008) has been particularly influential in this respect. His Models of Teaching simultaneously define the nature of the content, the learning strategies, and the arrangements for social interaction that create the learning environments of students. The critical point being that the variety of models are not just models for teaching but are more importantly models of learning that increase the capability of students to become effective members of the knowledge society. The OECD (2010) report The Nature of Learning, Using research to inspire practice provides an international synthesis that supports the line of argument being taken here. They identify a set of principles that should be present in any learning environment for it to be judged truly effective. They are - learner-centered, structured and well designed, profoundly personalized, inclusive and social.

Harris and Chrispeels (2008) have claimed fourth phase of school improvement is now fully underway. The evidence adduced in this section supports that contention. This phase
reflects the growing recognition of the nested nature of schools in systems and the frustration, especially of policymakers, of scaling-up and transferring more quickly the touted success stories of individual school reform. To speed the school improvement process, system changes are occurring at two levels: (1) system changes at national or state level, and (2) renewal and redefinition of the role and work of local education authorities. This section has focused on regional approaches the following phase explores how systemic change is being pursued at a national and system wide level as a way to direct local improvement processes.

Phase Five – Towards systemic improvement

In his recent chapter in Change Wars Sir Michael Barber (2009) reminds us that it was the school effectiveness research in the 1980’s that gave us increasingly well defined portraits of the effective school that led in the 1990’s to increasing knowledge of school improvement i.e. how to achieve effectiveness. In the same way, we have in the last decade begun to learn far more about the features of an effective educational system, but are now only beginning to understand the dynamics of improvement at system level. It is this progression that we chart in this phase of the narrative and the one most recently entered. We examine first the global spread of the school improvement knowledge base and then the impact of international benchmarking studies such as PISA. The cutting edge of work during this contemporary phase is on differentiated strategies for both school and system reform. It is with this discussion that we conclude the narrative.

We noted in the introduction that this review has been limited by our own scholarship; we also claimed that we have tested the direction of this narrative against international reviews, both through our involvement in international symposia, such as the International Education Leaders’ Dialogues (Barber, Fullan Mackay and Zbar, 2009) the G100 Transformation and Innovation - System Leaders in the Global Age workshop (Hopkins, 2007) and research compendiums such as the International Handbook of Educational Change (Hargreaves, Lieberman, Fullan and Hopkins, 2010).

We are also conscious of the global range of school improvement work. For example, Brham Fleisch’s (2007) chapter on the History of the School Effectiveness and Improvement Movements in Africa in Tony Townsend’s edited volume (2007) International Handbook on School Effectiveness and Improvement, emphasises the importance of the work of the Aga Khan Foundation’s school development work in countries such as Tanzania, Uganda and Kenya. This has been well documented by Steve Anderson (2002) Improving Schools Through Teacher Development: Case Studies of the Aga Khan Foundation Projects in East Africa. Fleisch comments that this work not only illustrates school improvement strategies in these contexts, but also brings in perspectives on curriculum adaptation and the language of instruction, “two themes that have not typically been featured in school effectiveness and school improvement studies.”

Beatrice Avalos’ (2007) chapter on ‘School Improvement in Latin America: Innovations over 25 Years (1980-2006)’ explains how a there has been a steady stream of policies and reforms in Latin America and the Caribbean since 1979 directed towards improved coverage, better learning results, eradication of illiteracy, more efficiency in management of systems, better teachers and better schools. In her words, UNESCO’s analysis of what came
to be known as the Major Project of Education in Latin America and the Caribbean (UNESCO, 2001) – Overview of the 20 years of the major project of education in Latin America and the Caribbean – notes, “the greater concentration on improvement of access in the eighties, and from the nineties onward, an emphasis on the quality of education.” So, for example in the 1990s there were incentives for school improvement and innovation projects in Chile, Colombia, Paraguay and Uruguay. At the same time school quality for excluded populations – indigenous, rural, poor was happening in Argentina, Bolivia, Chile, Costa Rica, Ecuador, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay. Many of these countries also had initiatives around evaluation of learning systems. She adds that there has been a certain amount of change as result of the reforms of the 1990s, but that further professional development is necessary. With specific reforms, they generally have found evidence of change.

It is also important to note that school improvement strategies of the type outline in this review have also focused with some success on the educational challenges facing minority populations. For example Russell Bishop (2010) and colleagues in New Zealand have recently published a book Scaling Up Educational Reform: Addressing the Politics of Disparity, describing the work they have been doing in the Te Kotahitamnga Project that blends school improvement approaches with those specifically targeted at Maori populations. They argue for system-wide support for sustainability, one of the elements being communities of practice as reflected in the previous discussion.

This brief review of the broader international school improvement experience is intended both to confirm the trends identified in the previous phases of the review and also to highlight the importance of international comparisons and learning from international experience that is at the heart of the fifth phase of the narrative. Two points are critical here; the first is the move from individual to local and now to systemic approaches to school improvement; and second the evident proposition that we can only learn about system change by studying systems and working on how to improve them. Hence the following discussion on international benchmarking studies and systemic reform.

The equivalent of the school effectiveness research at the system level has been provided during the last decade or so by the advent of international benchmarking studies. Most probably the best known and most influential is the OECD’s Programme for International Student Assessment (PISA). Since 2000 when the OECD launched PISA they have been monitoring learning outcomes in the principal industrialized countries on a regular basis. As a result of this work we have learned a great deal about high performing educational systems over the past ten years. This is not only from PISA, but also from secondary analyses such as Fenton Whelan’s (2009) Lessons Learned: how good policies produce better schools and the McKinsey studies How the World’s Best Performing School Systems Come Out on Top (2007) and How the World’s Most Improved School Systems Keep Getting Better (2010).

Below and based on the best of global experience is a cut of the features of high performing educational systems, at national and regional levels. Each principle has a high degree of operational practicality and is reflected in the specification of the school improvement model described later. Highly effective educational systems:
1. Ensure that the achievement and learning of students is at the centre of all that teachers do.

2. As a consequence, the enhancement of the quality of teaching is the central theme in any improvement strategy.

3. This will be partially achieved by selection policies that ensure that only the very best people become teachers and educational leaders; and then by,

4. Putting in place ongoing and sustained professional learning opportunities that develop a common ‘practice’ out of the integration of curriculum, teaching and learning.

5. This takes place in schools where leadership has high expectations, an unrelenting focus on the quality of learning and teaching and has created structures that ensure that their students consistently undertake challenging learning tasks.

6. This further occurs within a system context where there is increasing clarity on standards of professional practice.

7. To enable this, procedures need to be in place that provides ongoing and transparent data to facilitate improvements in learning and teaching.

8. School performance is therefore amenable to early intervention; and

9. Inequities in student performance are addressed through good early education and direct classroom support for those falling behind.

10. Finally, system level structures are established that link together the various levels of the system and promote disciplined innovation as a consequence of networking.

Michael Fullan (2009) in his paper ‘Large scale reform comes of age’ has also recently reviewed the evidence on the success of large-scale improvement efforts over the past dozen years or so. He identifies three phases that such reform efforts have passed through with increasing effectiveness.

The first is the pre 1997 period where the pressure for reform was mounting. Throughout the sixties and seventies there were examples of exemplary curriculum innovation but none produced success at scale. Similarly in the eighties and nineties although the impact of the international research on school improvement sponsored by the OECD (2007) and national strategies for reform such as the introduction of national curricula and inspection regimes spoke of scalable ambition, impact still remained serendipitous.

In the second period—1997 to 2002— we began for the first time to witness some cases of whole system reform in which progress in student achievement was evident. Let us look briefly at the three examples referred to in the opening paragraph and their limitations.

- As regards States in the USA, Leithwood (1999) and his colleagues reviewed the impact of a number of ‘performance based’ approaches to large-scale reform. Although there was some initial impact on test scores, this was not sustained over time. The fact that these reform strategies neglected to focus on instruction and
capacity building must have contributed to their inability to impact positively on student achievement.

- The second example is that of England when in 1997 it was the first government in the world to use an explicit theory of large-scale change as a basis for bringing about system reform (Hopkins 2007). The National Literacy and Numeracy Strategy was designed to improve the achievement of 11 year-olds in all 24,000 English primary schools. The percentage of 11 year-olds achieving nationally expected standards increased from 63% in 1997 to 75% in 2002 in literacy and in numeracy the increase was 62–73%. The achievements in literacy and numeracy were however not sustained post 2002, and the subsequent success was the consequence of a different strategic approach.

- Finland, now recognized as one of the top performing school systems in the world is the third example. Hargreaves and colleagues (2007) argue in their OECD review that Finland demonstrated between 1997 – 2002 that a medium-sized country (5 million people) could turn itself around through a combination of vision and society-wide commitment. However it could also be argued that in Finland much of their success was due to factors outside the control of the educational sector, such as the degree of homogeneity in social structures and the considerable intellectual capital already existing in the country.

Fullan’s third phase is ‘Large-scale reform comes of age: 2003 – to present. In reflecting on this era of more successful reform efforts, Fullan comments:

‘Coming of age does not mean that one has matured, but that people are definitely and seriously in the game. As this happens the work becomes more analytical as well as action-oriented. There is more convergence, but not consensus; debates are more about how to realize system reform, not so much what it is’.

In reflecting on how to “realize system reform” Hopkins (2007) suggests in Every School a Great School that the key to managing system reform is by strategically re-balancing ‘top down and bottom up’ change over time. This view is gaining some support. Barber (2009) for example currently stresses the need for system leadership along with capacity building. Hargreaves and Shirley (2009) argue for a ‘Fourth Way of Change’ that consists of combining top-down ‘national vision, government steering and support with ‘professional involvement’ and ‘public engagement’ all for the purpose of promoting ‘learning and results’.

The key question though is ‘how do we get there?’ We cannot simply move from one phase to the other without self consciously building professional capacity throughout the system. It is this progression that is illustrated in Figure 1. It needs to be re-iterated that the transition from ‘prescription’ to ‘professionalism’ is not easy to achieve. In order to move from one to the other strategies are required that not only continue to raise standards but also develop social, intellectual and organizational capital. The guiding image of both successful schools and systems is their ability to balance ‘top-down’ / ‘bottom- up’ change over time in the pursuit of sustained excellence in student achievement.
Figure 1 – Towards large-scale sustainable reform

It is not just ‘rebalancing’ however; it is also the utilisation of different strategies for school and system improvement at different phases of the performance cycle. It is clear that schools at different stages of development require different strategies not only to enhance their capacity for development, but also to provide a more effective education for their students. As a corollary to this, strategies for school development need to fit with the “growth state”, or culture of the particular school. It is also clear that strategies that are effective for improving performance at one “growth state” are not necessarily effective at another.

The initial work on differential improvement strategies was done with schools where different strategies were identified for different levels of school performance (Hopkins, Harris and Jackson 1997). Put simply schools at the lower end of the performance spectrum require more top down intervention and as confidence and competence increases then so does autonomy. In the ‘Improving Schools’ study Gray and his colleagues (1999) explored how schools became effective over time, and identified three different ‘routes to improvement’ – tactics, strategies and capacities for further improvement. In line with the previous discussion, these can be regarded as different narratives or school improvement journeys. This approach has been confirmed in the research of Day and his colleagues (2011) where twenty schools who had made sustained improvement over time were seen to have followed similar patterns of improvement, again increasing autonomy after the basic regularities of schooling had been established. The clear implication of this research is that there is a developmental sequence in school improvement narratives that needs certain building blocks to be in place before further progress can be made.
Obviously this progression applies to systems as well as schools as is clear from the progression noted in Figure One and the subsequent discussion. Building on this proposition Hopkins (2007) introduced the concept of ‘segmentation.’ In Every School a Great School he not only argued that in any system there are a range of schools at varying stages of the performance cycle between low and high performing, but for system transformation there is a need to move to a new trajectory through using this diversity to drive higher levels of performance throughout the system. System transformation depends on excellent practice being developed, shared, demonstrated and adopted across and between schools.

Hopkins (2007) further maintained that this process can continue to evolve in an ad hoc way as happens in most systems or it can be orchestrated by a national/regional organizations with strong local roots or by networks of schools themselves. He developed this approach as a means of achieving a step change in performance of the 25,000 schools in the English school system between 2001 and 2005, but the strategy has a wider applicability. As it happens the most successful of these interventions was when a leading school partnered or federated with a school that was either facing challenging circumstances or was deemed ‘failing’ as a consequence of an external inspection. When the intervention design is strategic, incorporating quick wins within a medium term approach; practical, in so far as successful practices are transferred rapidly from one school to the other; and lubricated by extensive professional development and mentoring, the evidence suggests that the partner school can achieve national levels of performance within an eighteen month to two year period (Hopkins 2007; Higham, Hopkins and Matthews 2009).

It is this line of thinking that has been given a greater degree of prominence and precision by the recent publication of the McKinsey (2010) report on How the World’s Most Improved School Systems Keep Getting Better. This study is the most ambitious attempt so far to examine the improvement trajectories of educational systems. Based on their performance across a range of international benchmarking studies twenty systems were identified as either ‘sustained improvers’ or ‘promising starts.’ From an examination of this sample four stages of improvement were identified - ‘poor to fair,’ ‘fair to good,’ ‘good to great’ and ‘great to excellent.’ In line with the research already discussed, this study identified ‘stage-dependent’ intervention clusters, that respectively were, focused on first ensuring basic standards, then consolidating system foundations, followed by professionalizing teaching and leadership and finally system led innovation.

In addition, and in line with this narrative, there were six actions that apply equally across each of the phases. These are related to curriculum and standards, appropriate reward structures, building technical skill, assessing students, establishing data systems and ensuring a coherent policy framework.

The McKinsey researchers also commented in some detail on three other features of system reform. Contextualising - that refers to the way in which these intervention clusters and common policies were of necessity adapted to the specific context and cultural demands of the system. Sustaining - by which is meant a commitment to internalizing and consistently applying a dynamic pedagogy framework as well as the positive existence of a ‘mediating
layer’ between the centre and schools that provides support and challenge for schools. And finally the word Ignition captures the various ways in which change is initiated.

This is very helpful, and in two ways in particular. First it confirms the contours of the emerging narrative of this review; second it provides a stronger and more precise evidential base for designing system interventions. It is another step along the road of learning how to develop improvement strategies or recipes for reform from the factors or ingredients that make for successful school systems.

The McKinsey (2010) report on How the World’s Most Improved School Systems Keep Getting Better provides a fitting conclusion to the phase related narrative that has provided the substance of this review. It is not however, as the authors readily admit, the final word on the subject. Nor of course is this review. At best it is a reflection on what has been achieved so far. The future and what it holds provides the focus for the final section of the paper.

Reflecting on the Future

As has been seen in this review, school improvement as a field can be seen to have evolved through a number of distinctive phases in the recent past. These phases are not mutually exclusive; they overlap and flow into one another, but they do represent a natural progression. But the more that we learn about them the quicker we can progress through them.

- **Phase 1** provided a foundation with its emphasis on how organisations can improve through specific intervention and the highlighting of the importance of culture in any change process.
- **Phase 2** with its focus on teacher action research, school self-review, and concern for meeting the needs of disadvantaged students began to lay the distinctive educational values and strategies that began to define the movement.
- **Phase 3** by building on the emerging school effectiveness knowledge base brought to the surface the idea of the school as the unit of change, which was reinforced by the greater attention to replicable comprehensive school reform approaches that addressed both organizational and classroom improvement and the increasing emphasis on the importance of school leadership.
- The dominant themes of **Phase 4** are the concern for being able to scale up reforms and the recognition that districts and local education authorities have a vital role to play in school improvement. There is also evidence to suggest that large-scale professional learning communities offer one way forward to reinvigorate and recommit individual schools and educators to the process of improvement. In addition there has been at the same time an increasing focus on the importance on teaching not as an end itself but as a means of enhancing the learning and achievement of all students.
- As the work in **Phase 5** continues to mature, we are seeing the spread of the knowledge base globally and at the same learning more about achieving school improvement at scale – systemic reform. We are realising that the key here is not simply to identify the factors that characterise high performing educational systems but to understand how these factors combine in different ways – in different
innovation clusters – to drive reform in systems that are at different stages of their progression along the performance cycle.

All phases of school improvement indicate a constant striving to achieve the delicate balance between individual initiative and system change, between internal and external resources and ideas, between pressure for accountability and support for change, and between independence and collaboration. They also reveal a deep commitment to securing improved learning outcomes for all students in all settings.

The narrative portrayed here is of journey and it is in the nature of the journey is that it progresses. As we attempt to consolidate the gains of previous phases and understand more about the one we are currently in, we need also to think to the future and consider the challenges that will confront us as we continue to make progress. At this point we glimpse six challenges already presaged on these pages that will help contour the work in a potential Phase Six.

The first challenge is to embrace globalisation. The globalised economy demands a diversity of talents. Citizens must be able to competently negotiate cultural differences, manage multiple identities, comfortably interact with people from different cultures, and confidently move across cultures as well as the virtual and physical worlds. To do so, they need a deep understanding of the interconnectedness and interdependence of all human beings, cultural knowledge and linguistic abilities that enable them to appreciate and respect other cultures and peoples, and emotional and psychological capacities to manage the anxiety and complexity of living in a globalised world - however, this does not mean that we should ignore the importance of context and local and national identity. The danger is not cultivating them. By suppressing them it is likely that we are making them dangerously stronger. We also need to remember that there are intolerable gaps in the quality of education between the rich and the poor, between inner-city students and those in the suburbs, and in different racial groups.

The second is the need to focus unrelentingly on learning. Up until recently, the link between teaching and learning and how they contribute to the core of professional practice has been at an early stage of conceptualisation and practice. This is why in the first edition of Models of Learning, Tools for Teaching Joyce, Calhoun and Hopkins (2008) claimed that:

Learning experiences are composed of content, process and social climate. As teachers we create for and with our children opportunities to explore and build important areas of knowledge, develop powerful tools for learning, and live in humanizing social conditions.

The argument was that unless we make definitions such as this the focus of our school and system efforts, then we can have no confidence that learning will be enhanced and consequently, the outcomes of educational reform will remain capricious. More recent work already cited, such as the OECD (2010) report on the Nature of Learning gives us a more secure foundation here. This research confirms the need to focus the core of professional practice on the acquisition of those learning skills that allow students to solve problems individually and in groups, to evaluate conflicting evidence and to think critically. It also provides schools with protocols to enhance their student’s ability to take control over
their own learning processes, and to equip them to take a meaningful role in twenty-first century society. Although the recent work is helpful there continues to be more to do.

The third challenge is to deep our understanding of ‘segmentation’ and ‘innovation clusters.’ The fifth phase of the narrative emphasised the necessity of utilising the diversity within the system to inform systemic improvement efforts. The key idea is that there are as we have seen a range of factors that contribute to improvement at all levels of the system. This realisation is necessary but not sufficient. There are also sets of unique innovation clusters that are necessary to propel both a school and system from one stage of development to another. We have begun to understand the dynamics of such interactions as seen in the previous discussion – but there is still much more to know.

Fourth is the continuing need to develop capacity. Since early in its history the school improvement field has recognized and embraced the importance and potential of capacity building. Building capacity essentially involves building relationships, building trust and building community. But development of individuals is not enough. Capacity building is about ensuring that the school is a ‘self-developing force’ through investing in those school and classroom level conditions that promote development and change (Harris and Lambert, 2003). There is evidence to suggest that large-scale professional learning communities offer one way forward to reinvigorate and recommit individual schools and educators to the process of improvement. To sustain these networks and their potential to contribute to school improvement, however, requires system support as Michael Fullan (2010) has illustrated in his recent book, All Systems Go, from both national and local educational authorities/districts.

The fifth challenge is related to ‘will’ and to leadership. Way back in 1979 Ron Edmonds the black Superintendent who became known as the leader of the effective schools movement posed this challenge in his now famous article Educational Leadership:

“It seems to me, therefore, that what is left of this discussion are three declarative statements:

(a) We can, whenever and wherever we choose, successfully teach all children whose schooling is of interest to us;

(b) We already know more than we need to do that; and

(c) Whether or not we do it must finally depend on how we feel about the fact that we haven’t so far."

Although Edmonds wrote this over thirty years ago the challenge remains the same. We now have unequivocal evidence to suggest that it is the power of leadership that can break the cycle of prediction that poverty is inevitably related to educational achievement. We now have reliable research to demonstrate that it is the power of leadership that can make the difference. The leaders of these schools are not by and large iconic – they have taken on challenging schools out of a deep commitment to improving the lot of their students and communities. Moral purpose may be at the heart of it but successful principals need a
range of attributes and skills if they are to succeed in dealing with the challenges presented by turbulent and complex communities. What is also becoming clear is that it is not just school leadership that is necessary it is leadership at three levels, and we need to know more at how they interact:

- **System leadership at the school level** – with school principals almost as concerned about the success of other schools as they are about their own.
- **System leadership at the local level** – with practical principles widely shared and used as a basis for local alignment so that school diversity, collaboration and segmentation – that all schools are at different stages in the performance cycle on a continuum from “leading” to “failing” – are deliberately exploited and specific programmes are developed for the groups most at risk.
- **System leadership at the system level** – with social justice, moral purpose and a commitment to the success of every learner providing the focus for transformation.

The final challenge is to **beware innovation!** In a recent article, ‘**Do we need more Innovation in education?**’ Ben Levin (2010) wrote this:

> I have argued in this paper that improving educational outcomes across all schools, for large numbers of students, on a broad range of outcomes should remain the primary goal of education policy for the foreseeable future. While continuing innovation is essential to learning and further improvement, it should not be the main focus of attention. The real benefits are to be gained from deeper and wider use of existing knowledge about good teaching and learning, and the supports needed for them – such as leadership and professional development. I believe that we already know a considerable amount about these questions – know but do not use. Transformation of schooling may be an attractive idea in some respects, but it has the potential to exact very high costs for very uncertain returns, in that there is no agreement about what needs to be transformed, how that would happen, or how much benefit it would yield relative to the clearly enormous effort it would require. The more rigorous use of existing knowledge seems a surer basis for continued progress in education and for increased benefits to students.

This is the final and ultimate challenge and will involve fundamental debate and action on how we successfully tackle 21st century learning.

So this is the culmination of our narrative. On reflection we would suggest that overall it represents a qualified success story. We cannot, however, afford to be complacent; school improvement continues to face many issues. ICSEI represents diverse contextual and cultural situations and interests. Whilst the challenges of basic literacy and numeracy apply in some countries, others face major equity gaps within schools, between schools or both. And, forces of change have created new demands of children and young people necessitating adequate preparation with a more varied set of skills and attitudes than in earlier phases of school improvement. As we move into a new phase presaged by these challenge, ICSEI has the potential to address these issues in ways as yet unachieved but will need the kind of collaboration between research, policy and practice that ICSEI has promoted since its inception.
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