From School Effectiveness to System Improvement:
An Inevitable Conceptual Evolution

Michael Fullan
OISE/University of Toronto

This article represents a conceptual history of the concept of school development and its relationship to related concepts of school effectiveness, school improvement, implementation, organizational development, learning theories, system reform and so on.

It is not an empirical review or a detailed chronological account. Rather, it is a 'thought piece' on the philosophy and practice of education reform in terms of where we have come from and where we are today. I have drawn heavily on my own work in which I have chronicled and contributed to this broad education improvement field since 1975.

The origin of the improvement research derides from the question of whether schools, as distinct from family and background factors, make a difference in the lives of students. Over forty years ago James Coleman (1996) in his major study of *Equality of Education Opportunity* concluded that background factors of race, poverty and social class dominated all other factors in influencing student achievement. In other words, the school makes little difference in the life chances of students beyond what background factors contribute.

In somewhat oversimplified terms the history of school development since the 1960s has been one where 'researchers' and 'change agents' have set out to prove Coleman wrong. I pursue this history in the next three sections: researchers vs change agents; partnership between school effectiveness and school improvement; and system: the missing piece of the puzzle. My intent in the first two sections is to identify the various pieces in the evolution of the study of school development. The third and final section will focus on drawing theoretical and practical conclusions.

Researchers vs Change Agents (1970-1988)

Researchers primary interest is in the scientific study of a problem. Change agents are in a hurry to solve the problem. Of course, we expect researchers to be interested in improvement, and change agents to base their interventions on evidence, but the central tendency to specialize in one over the other exists to this day and was prominent during the 1970s and 1980s. Again, in a somewhat over-generalized way, Europe employed research and the U.S. pursued practical improvements. I use particular milestone studies and publications to make this point. My principal goal here is to highlight the differences and pave the way to take up subsequent implications. I use the major studies to illustrate the issues.

Our task is made easier because two of the seminal studies were published in the same year — 1979. Michael Rutter and his colleagues (1979) published *Fifteen Thousand Hours* in which they concluded that schools do make a difference depending on their climate, leadership, quality of instruction, and so on. In some ways the purpose of this study was to prove in 'research terms' that Coleman was wrong.

In the same period, along came Ron Edmonds, a Harvard Professor equally interested in demonstrating that Coleman's conclusions were flawed. His interest was not research per se, it was 'change'.

Edmonds' (1979) findings were similar to Rutter et al's. Edmonds identified five correlates of school effectiveness : purposeful and focused leadership from the principal, a focus on instruction, a safe and orderly climate, high expectations on the part of teachers, and frequent monitoring and assessment of student achievement. Edmonds' 'applied' interests came out loud and clear in his famous challenge:

> We can, whenever and wherever we choose, successfully teach all children whose schooling is of interest to us. We already know more than we need to do that. Whether or not we do it must finally depend on how we feel about the fact that we haven't so far. (Edmonds, 1982, p. 1)

During the 1980s, two leaders (Mortimore and Lezotte) both junior colleagues on the original Rutter and Edmonds teams respectively, proceeded to map out the two terrains more definitively. Peter Mortimore of the London Institute and his colleagues (1988) produced the carefully researched longitudinal study called *School Matters* in which they identified 11 factors associated with effective schools: professional leadership, shared vision and goals, a learning environment, concentration on teaching and learning, purposeful teaching, positive reinforcement, monitoring progress, pupil rights and responsibilities, home-school partnerships, and a learning organization.

For his part, Larry Lezotte (n.d.) a disciple of Edmonds added two effective correlates to Edmond's original five: positive home-school relations, and opportunity to learn and student time on task.

As one can see there is a good deal of congruence between the 11 factors and the seven correlates. Still the point is that the former set stressed the scientific study of school effectiveness while the latter group was much more interested in bringing about improvement.

I have only highlighted the milestone studies in this period. Certainly there were other effective schools researchers (again ,mostly in Europe) who critiqued the very research on effective schools, and there were other change agents (mostly in the U.S.) who

pushed for applied change.

It can also be seen that neither the list of 11 factors nor the seven correlates has a strong theoretical base. They are just lists. Overall, I draw three conclusions from this period: the effective schools researchers were weak on deriving strategies for improvement; the effective schools change agents were less careful about the research basis of their conclusions; and third, neither group had a strong conceptual or theoretical base.

By 1990 there were two needs to be addressed. One was to bring the two fields — which I am going to call 'effective schools research', and 'effective schools improvement' — into a more dynamic interplay. The two fields obviously overlapped in content. The second was to bring more theoretical discipline to the field of school development. These two points bring us to the 1990s.

School Effectiveness and School Improvement (the 1990s)

The movement to cross-critique and otherwise interrelate school effectiveness and school improvement is exemplified by the founding in 1989 of the journal, *School Effectiveness and School Improvement* (SESI). This journal remains the international forum for continuing the debate and linkage between effectiveness and improvement. Furthermore, the International Congress for School Effectiveness and School Improvement (ICSEI), which meets annually each January, is a related dynamic forum for scholars and practitioners around the world to address key issues and evolve the field. Knowledge of school effectiveness pushes for sounder improvement strategies. The latter pushes back for developing a greater knowledge base. In the 18 years of SESI's history you will find numerous useful analyses of all the issues deriving from the 11 factors and seven correlates, and more.

What is particularly revealing for us in this period is the growing introduction and elaboration of a wider theoretical base for considering the relatively narrow topics of school effectiveness and school improvement. In particular, what has been creeping into the debate is the essential conceptual and practical issues surrounding development including: implementation research, organizational learning, classroom instruction and system context. I refer to these briefly in order to establish the background for drawing conclusions of where we are today.

First, in some ways 'implementation research' is the glue that links effectiveness and improvement. I have been researching and chronicling implementation since 1977 when Alan Pomfret and I conducted the first thorough review of implementation by focusing on 'research on curriculum and instruction implementation'. This research has formed the basis of my four editions of *The Meaning of Educational Change* (1982, 1991, 2001 and 2007). Implementation is the study of factors and processes related to 'putting new ideas into practice'.

As we studied implementation we were led to consider the role of organizations, and in particular, collaborative cultures. Organizational learning thus became part of the focus, stimulated theoretically by Peter Senge's (1994) *Fifth Discipline* in which he examined the conditions under which organizations learn. A practical counterpart to collaborative cultures is the rapidly expanding field of professional learning communities — collaborative cultures for school effectiveness and school improvement.

A third key piece of the puzzle is the growing and intense work on quality instruction in the classroom. Effective schools research and school improvement has failed to get inside the classroom. It turns out again, thanks to the evolution of better research on school effectiveness, that classroom instruction is by far the most determinant school based factor associated with impact on study learning. My colleagues and I have written a book called *Breakthrough* in which we claim that getting inside the classroom is the last frontier of school improvement (Fullan, Hill & Crévola, 2006). We show how focused instruction, quality and frequent feedback to students, personalization, and continuous refinement of instruction is critical to success. And that all this quality classroom work depends on whether teachers are engaged individually and collectively in ongoing professional learning which in turn depends on organizational climate, leadership and other factors within and surrounding the school.

The fourth piece in these building blocks toward a more thorough theory of school development is the role of context and system. The neglect of 'context' has been the subject of a growing critique of school effectiveness and has been recently well addressed by Tony Townsend (2007) in his review of 'school effectiveness and improvement in the twenty-first century'. His summary of future issues for research, policy and practice is to the point. The main considerations Townsend suggests are:

- Redefining the concept of effectiveness to consider contextual issues that occur at various levels of education;

- Redefining the measurement of effectiveness to consider broad, rather than narrow, outcomes;

- Redefining the structure and implementation of schooling in ways that take into account the complexity of the experience;

- Redefining the experience of schooling based on what to know about learning, and the impact of technology;

- Redefining teacher education to consider the issues of effectiveness for the professional education and development of teachers and school leaders. (p. 951)

Related to the concept of context is 'system' which takes into account the system as a whole operation. A major trend since 1997 has been to focus on 'system improvement' which is how I would characterize my own work these days. I now turn to the final section to use 'system improvement' as the theoretical framework for integrating many of the main ideas that have been evolving in the post-Coleman period from approximately 1970 to the present.

System Improvement: The Missing Piece

System improvement is a practical theory of change that encompasses all key factors at every level of the system that affect improvement or impact. In my own work I strive for two characteristics, namely: 'comprehensiveness' and 'precision'.

First, let's do some sorting of the main terms. School effectiveness, school improvement and school development should be merged into one conceptual cluster. The cluster concerns the understanding and development of schools. Let us call this cluster 'school development'. Some people approach school development from a research perspective. Their goal is to deepen our understanding of the processes and impact of schools. Equally important, others approach school development from an improvement perspective. They want to develop strategies and interventions that change the situation for the better. I have implied in this article that both groups are valuable, and that the need is for their proponents to cross-critique each other. Effectiveness researchers need to push to identify the policy and practice implications of their analysis. Improvement advocates, on the other hand, need to account for the knowledge or evidence base backing up their recommended actions.

Second, I have said that both the effectiveness and improvement wings of the school development enterprise have weak theoretical bases for much of their work. To go beyond a list of factors or correlates, school development actors need to incorporate the key background theories that should inform what they do. These include organization learning, implementation and change theories, action research, learning and instruction theory, and lastly, system theory.

This leads to my conclusion which is the need for a systems theory that is both comprehensive and precise. We have been engaged since 1997 in systems improvement. The first example of this was Tony Blair's initial term of office, 1997-2001, in which he used the 'change knowledge' for systems improvement to increase literacy and numeracy achievement across England. A second thorough example concerns our work in Ontario, Canada, where we have been working with the Premier of Ontario, Dalton McGuinty in his first term (2003-2007) and now extending into a second term (2007-2011) where the focus in on overall system improvement across all 5,000 schools in Ontario including literacy, numeracy and high school graduation. I have written about these cases elsewhere (Fullan, 2007, 4th Edition of *The New Meaning of Educational Change*), and the work continues to evolve so I will only outline here the theoretical and practical basis of this work.

Before doing that let me reference the growing importance of systems research and practice. It is best illustrated in the ever more sophisticated analysis of the PISA results compiled by OECD and others (OECD, 2007). OECD has been conducting country assessments in literacy, mathematics and science across some 40 countries in order to determine top performing systems and the policy and contextual factors associated with high and low performance. A derivative of this work is the recent powerful study by Barber and Mourshed (2007) of McKinsey & Company. They examined "How the world's best performing school systems come out on top." They boiled it all down to three key factors: 1) getting the right people to become teachers and school leaders; 2) developing teachers and principals as effective instructors and institutional leaders; and 3) ensuring that the system is able to deliver the best possible instruction for every child including early and effective intervention when needed.

To return to our work in Ontario I believe that it is especially effective because it has a strong theoretical base positioned for policy and practice. It draws on and integrates the theories referred to in this article. It consists of the following features:

1. It is whole system focused — school and community, district and state levels;

2. It takes capacity building as its core basis — the identification, sharing and development of effective pedagogical and management of change practices. The focus is on knowledge and skills, resources and motivation;

3. It links capacity building to results — student achievement and teacher morale, etc.

4. It zeros in on quality instruction in the classroom;

5. It uses organizational theory to build collaborative cultures within schools;

6. It uses systems theory and knowledge use theory to spread effective practices across schools and across districts;

7. It takes a respectful but firm approach through partnerships across the levels to intervene in situations requiring improvement;

8. It is transparent about results incorporating data s a strategy for improvement and as a form of external accountability to the public. It avoids the extremes of punitive accountability and laissez-fair looseness;

9. It takes a reflective, inquiry approach to learning as you go in order to stimulate further improvement;

10. It engages in international dissemination, critique and learning from other systems around the world.

Of course, there are many subtleties and dilemmas in implementing the overall strategy, and we continue to write about these issues in our dissemination of what we are doing, why we are doing it a particular way, and with what results.

As we push deeper into systems reform, and keep abreast of international research I am finding that the most effective work must be well grounded in theory — theory that closely relates to practice. In this sense, techniques, tools, strategic plans and the like are not he answer. Rather the answer is in the underlying thinking and assumptions that inform policy and practice. I call this a practical theory of change. In my most recent book I pushed this practical theory to identify its underlying assumptions to test them against the broader literature including research on effective businesses. I call it 'have theory will travel', and the result is six underlying 'secrets' of change (Fullan, 2008).

A theory is a way of organizing ideas that seem to make sense of the world — with the added goal for me, in order to improve it. The six secrets in question are deeply based on a theory of action and practically powerful. The goal is to generate reflective practitioners (policy makers and educators at all levels) to develop their theories of action. The six secrets that I identified from the theories I use to make sense of and to improve practice are: love your employees as much as your customers, connect peers with purpose, capacity building trumps judgmentalism, learning is the work, transparency rules, and systems learn. These secrets are heavily nuanced (that's why we must develop reflective practitioners).

My overall conclusion about the field of school development is that ultimately the solution must be deeply informed by sound theories — theories that are close to practice, that make sense of practice, and that help us identify and continually assess

strategies for improvement. The goal is to enlarge our grasp of system complexity in a way that enables greater precision of understanding and action. It is, after all, about 'systems learning'. In other words the field has evolved from a relatively narrow focus on school effectiveness to a broader conception of system improvement that encompasses all levels of the system. Today it is a dynamic field of study and practice that is receiving ever increasing attention because of the world-wide interest in the role of education in societal and indeed, global development. Most important is that theory and practice must continue to inform each other. It is because of this press to critique both theory and practice that the evolution toward more comprehensive and precise formulations has been inevitable.

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