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WHY WE SHOULD END REFORMS IN EDUCATION

W O R K I N G P A P E R

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WHY WE SHOULD END REFORMS IN EDUCATION

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Education reforms are a constant social and political activity. Most countries represented in this meeting have attempted at least two during the past 40 years, some more. Perhaps as a consequence important improvements have been made in our education systems. Overall, on every measure of quantity and quality of inputs, schools today are better today than 40 years ago. Teachers have received more training, classes are smaller, more students have textbooks and they are of better quality. Curricula have been revised in accord with developments in cognitive psychology and advances in science. Literacy rates have risen notably and the average level of education in the population has grown steadily.

Despite this growth, every sector of society in the Americas complains about public education. Schools and universities are criticized for inequity in distribution and inefficiency in use of resources, low levels of achievement of their students, poor preparation for employment, high dropout rates, and a generally inadequate intellectual, civic and moral formation . These criticisms are made in every country, from Canada to Chile (Carnegie Forum on Education and the Economy, 1986; National Commission on

Excellence in Education, 1983; Project-PRIE, 2001; Reimers, 2001; Schiefelbein & others, 1998). Education's gains have not been sufficient to resolve longstanding social and economic problems. Schools leave youth ill prepared to meet future challenges and exploit future opportunities. Schools once thought to be efficient in selecting leaders for a relatively stable society are today curious antiques living beyond their time of usefulness. Education is in a state of crisis (Osin, 2000, p. 129).

The crisis was noted as least 30 years ago (Coombs, 1968) and has been announced periodically ever since. Despite the many reforms carried out, and despite objective evidence of improved access and inputs, criticisms of public education have grown more intense and extensive. Why have reforms become more common even as they are unsatisfying?

Reforms do not match the increasing diversity of demands made on education and sow the seeds that grow into perceived failure. The reasons are as follows:

1. Pressures for change in education build up from three broad regional trends:
    a. communitarianism to individualism as a basic principle of social organization;
    b. industrial organization of work emphasizing standardization to self-regulating patterns emphasizing contextualization; and
    c. political centralization to localization of governance of public institutions (Laderriere, 1999).

    These trends, part of the long processes of modernization and globalization, increase the number and range of demands on the education

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system. Flows of people, information and images have increased not only desires but also options for satisfying them. More and more stakeholders want education to satisfy their particular interests. Education once conceived as providing a "common education" to forge national identity is now being asked to enable competition among individuals and economic, ethnic and cultural groups.

2. In the late 1980s reforms seeking to increase diversity pursued decentralization and privatization. When the result was, as in Brazil and Chile (Draibe, 1999; Parry, 1995), greater inequity with no improvement in quality, policy swung back toward standards and increased uniformity. This reduced diversity but had no effect on inequities. Both efforts diminished the education system's already reduced ability to integrate (as distinct from standardize) social groups.
3. Reforms failed to resolve issues of inequity and social disintegration not because of their content, but because the overall change strategy they used. Reform is an effort to shape society to match objectives set by the ministry of education and other government policy makers. The instruments of reform, and their handmaidens planning and policy analysis, remain fixed in the age of industrialism and centralism in which they were forged. Although some countries in Latin America and the Caribbean encourage local participation in implementation of reforms, reforms still are designed by the center.
4. Social complexity and development of the civil society make it more difficult for central governments to mobilize support for change and to control the

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cases.

implementation process. As a consequence, governments must double their efforts to promote reform strategies. They find it necessary to spend more on supervision and control to insure compliance. Increased costs and increased pressures provoke resistance from those groups who do not benefit from the reform, which results in declining effectiveness of reform efforts.

The limited effectiveness of reforms is especially acute in electoral democracies. When politics is contentious, candidates mobilize support by attacks on opposition incumbents, and make promises for change that cannot be fulfilled, especially during their relatively short terms of office. In an atmosphere of negative politics, even reforms that meet their objectives are bad-mouthed and demands for change continue. In effect, the strategy of reforms sows the seeds of their "failure".

THE ORGANIZATION OF THIS PAPER

Section I of this paper describes six strategies under the general paradigm of reform, defined as system-wide efforts at change designed and engineered from above. In the language of biology, the education system is treated as if it has a single brain but many arms. Although the center designs the reforms, failure is blamed on the arms that carry them out. Progress is measured in terms of whether the reform per se is implemented, and impact in terms of whether system performance changes in the way the reform specified.

The Reform Strategies

These strategies are:

1. Package and Diffuse the Proposed Change as an Innovation
2. Pay Attention to Initial Conditions and Context

3. Train Agents of Change
4. Focus on the Adopters or Implementers
5. Overcome Resistance
6. Use Incentives Instead of Commands

The sequence of presentation of the strategies corresponds roughly to when they became popular and more or less to the sequential logic of linear planning. In fact many reforms employ more than one strategy, in some cases because of incoherent design but more often because over time new circumstances prompt different approaches. We lack, however, a theory that takes all the strategies into account simultaneously.

The review of reform strategies has three objectives:

- Demonstrate the wide range of action options available to those who use reform as an instrument for change.
- Raise awareness of the complexity of change in organizations, both in terms of what is meant by change and in how to bring it about.
- Sow seeds of doubt about reform as an instrument for change.

An Alternative to Reform

Section II proposes an alternative strategy to reform. Reforms as large-scale efforts promoted by the center are abandoned in favor of multiple innovations designed and engineered by local educational institutions. Instead of radical surgery to cure a patient allowed to become seriously ill, the alternative strategy maintains a healthy system by continuous monitoring and small corrections.

There is an important role for ministries of education in this alternative strategy. The ministry takes responsibility for supporting local changes and promoting system-

wide integration (as distinct from standardization). Success is measured in terms of two criteria: improvements in average level of realization of local objectives; and reductions in differences in level of realization across institutions. The ministry and the constituent schools in the system are forged into a learning organization.

There are few examples of the application of this approach to educational systems so parallels are drawn from research on productivity improvement in the corporate sector. The two approaches to change are compared in Section III. The paper ends with a set of questions that may be helpful in deciding which is most appropriate in a given situation.

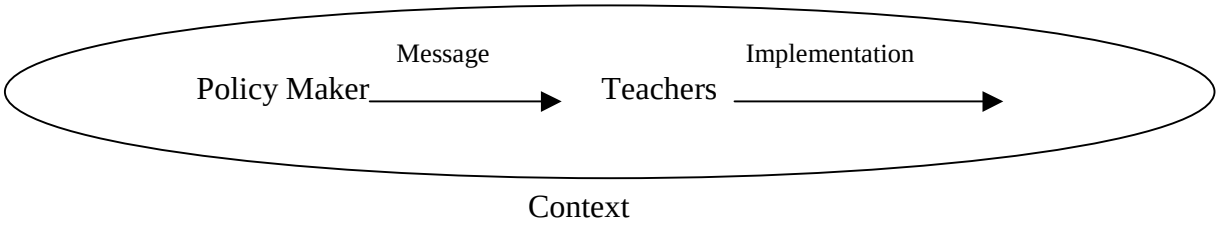
I. STRATEGIES OF REFORM: MAKING CHANGE HAPPEN

The national management of education is organized according to what is called the "industrial model." In industry the large-scale production of relatively high quality goods at low cost was made possible through standardization of inputs and process. Work was designed to be carried out by supervised workers following specifications of "experts" or management. Work was divided into small units, workers were trained in routine procedures, management insured their compliance. Time-motion studies and quality control have contributed to high quality products at low cost.

Most education systems are organized according to this model. "Education" is defined in terms of specific organization, contents and learning outcomes. Teachers and administrators are trained to "deliver" content; external assessment is used as a quality control measure. Emphasis is on efficiency to achieve universal coverage, and on effectiveness defined as matching output targets.

Within the industrial model, "successful" reform is believed to depend on the effective communication of policies and plans designed by management, and compliance

by workers. Educational change is brought about when a policy maker tells schools, administrators, and teachers the changes to be made in structures, contents and practices. The critical elements are the message, the channel or vehicle by which the message is conveyed, the receiver of the message, and the environment or atmosphere in which the message is sent and received.



Reform strategies vary in terms of which of these elements receives most emphasis. As noted above, some reforms use more than one strategy either because of changing circumstances or because of a lack of logical coherence.

The reform paradigm sees education systems as inertial, that is, not likely to change unless a force is applied from the outside. Change requires first Unfreezing or de-stabilizing existing structures (practices, values, beliefs); then Moving to new structures (practices, values, beliefs); and finally Refreezing or re-stabilizing in order to avoid falling back into old structures and practices.

The following reform-type strategies are similar to those described for the United States (Ellsworth, 2000). The descriptions are of strategies and not actual reforms. That is, they describe the major principles and objectives that have been used in designing reforms; they do not characterize any particular reform. Furthermore the intention is not

to define “successful” strategies or reforms, only to indicate different ways to try to get changes to occur.

1. Package and Diffuse the Proposed Change as an Innovation

The earliest efforts at reform of education saw the problem of change as one of disseminating packages of ideas and practices to teachers and administrators. The ideas and practices were assumed to be “new” for those asked to adopt them, and were called “innovations.” Teachers and administrators were not being asked to innovate, but to adopt innovations (most often) developed outside the system (for example, in research centers or experimental schools). Communication about the innovations was by means of print and other media and sometimes “agents”.

DIFFUSING THE *ESCUELA NUEVA* INNOVATION

Escuela Nueva today is a curriculum package used in approximately 25,000 rural primary schools in Colombia. Schools are designated as *Escuela Nueva* when teachers receive training and adopt the whole package. The first year of instruction is dedicated to teaching reading. In later years students work in small groups with minimal direct instruction from teachers, using programmed textbooks which present blocks of the overall curriculum content. Students pass from one text to another as they complete exercises contained in the books. Students are not formally graded, nor are they grouped by grade levels. Teachers organize ‘learning corners” (small libraries) that provide reference materials useful in the exercises. The school year begins with construction of a map identifying homes of all the students, who also conduct surveys among adult members of the community. Teachers visit all families and solicit parental participation in special presentations in classrooms. Each month the community is invited to the school to evaluate progress of students. Discipline is managed by a student government.

The program is considered to be more effective than the traditional rural school, and in some subjects better than the average urban school (Psacharopoulos & et al., 1993; Rivero, 2000). In practice schools vary in the extent to which they implement the entire package (Parra, Castañeda, Panesso, Parra, & Vera, 1996). Schools that use more practices do better than those than use fewer (Loera & McGinn, 1992). Success of the reform originally was defined in terms of the number of schools included, later in terms of enrollment and retention rates, and more recently in terms of student achievement (Psacharopoulos & et al., 1993; Rivero, 2000; Sarmiento, 2000).

All reform-type strategies are concerned with changing structures, content and practices. The adoption or diffusion strategy is unique in that "progress" is evaluated primarily in terms of whether, for example, teachers use the new practices, rather than in terms of the impact of those practices. This makes sense if the particular innovations have been extensively tested (for example, in demonstration schools) and shown to improve performance. The critical indicator for those concerned with Diffusion is the rate at which the innovation is adopted by units within the system.

In many reforms no data are collected on adoption of the innovation. Most ministries do not regularly collect information about teaching practices, distribution and use of instructional materials, actual coverage of the curriculum, or community participation in school governance. It is not possible, therefore, to assess the rate at which innovations are diffused. Most evaluations of reforms today look only at impacts on access and student achievement. These fall into the tautology expressed in this assertion:

> "a true educational reform can be measured by its positive impact on…equity, relevance, quality and efficiency…" (Arrien, 1998, my translation).

If "true reforms" cannot fail, the assessment of a reform does not have to take into account whether changes actually occurred in structures, content and practices.

We know, however, that changes in educational systems are seldom if ever uniform and consistent across schools. Early research in the United States calculated that innovations on average take about 20 years to be adopted by half of the schools. Innovations often are not "adopted" as designed, and the result may be more or less improvement than associated with the original innovation (Miles, 1964).

Reform evaluations in Latin America that include data on changes in structures, content or practices show that a few of the "adopters" take on all the specified changes, many take on a varying selection of some, and some take on none (McGinn, 1998; Reimers & McGinn, 1997).

Determinants of Adoption.

Extensive research has shown that the rate of adoption is a function of five attributes of the innovation. These are:

Figure 1.
Determinants of Adoption of Innovations

1. Relative advantage compared to current practices. This can be in terms of cost, ease of use, time to payoff, reduction of risks, social prestige.
2. Compatibility with the context of the adopter. This includes current technologies, knowledge and cultural values.
3. Familiarity. Innovations that require extensive learning are less likely to be adopted.
4. Initial investment. Innovations that can be tried out at low cost pose less risk to potential adopters.
5. Social imitation. Adopters are more likely to take on an innovation if they see others doing so.

(Ellsworth, 2000 #249; Rogers, 1995, originally published in 1962)

These criteria may be employed by planners and policy analysts to select among possible innovations in a system. They may be used, for example, in deciding whether to change curriculum, instructional materials, teaching practices, or some other element in the system. A common criticism of reform planning has been that too little attention is paid to determining in advance which innovations have the highest probability of being implemented in the system. More often than not innovations are proposed without attention to how the "message" will be "received."

On the other hand, the reform process can include efforts to change these attributes of the "message." Reformers may, for example, publicize the advantages of the proposed changes relative to current practices. Advertising can insist on how well the reform matches values, or how easy it will be to carry out. Reports on the progress of the reform can attempt to create a belief that "everyone is doing it."

The Diffusion of Innovations approach to reform was a logical component of the centralized planning model in vogue in the late 1950s and early 1960s. Just as planning has undergone radical changes, the Diffusion model has been re-designed to take into account repeated failures (in the sense of rates of adoption being much lower than expected). The current version now includes as prior questions:

1. Are conditions "ripe" for change?
2. Have agents been trained in how to introduce innovations?
3. Have stakeholders participated in the design of diffusion tactics (but not in designing the reform)?

2. Pay Attention to Initial Conditions and Context

In this variation of the reform strategy , success is seen as depending on the existence of the proper "conditions for change." The reform planners look for situations or moments (in Spanish, 'coyunturas') that favor reform. There are eight conditions that signal a good time to begin a reform.

Figure 2.
Conditions Favoring Change

1. Evidence that the existing system or program is not meeting objectives;
2. At least latent dissatisfaction of important social actors with the existing program or system;
3. Availability of and access to resources and technologies required for change;

4. Support for change from high level authorities and absence of significant opposition to change;
5. Ability to specify new tasks and operations;
6. Ability to supply evidence that changes actually improve the system or program;
7. Time to carry the process to fruition; and
8. Availability of leadership, i.e., direction by person or persons with capacity to mobilize others and sustain enthusiasm.

(Ellsworth, 2000; Ely, 1990; Warwick, Reimers, & McGinn, 1992)

These conditions serve as indicators of the likely success of a reform in terms of implementation. Indicators of impact vary according to the particular issue that motivates change. Decisions with respect to timing of reform are made by small groups of policy makers; participation is limited.

The main difference between the two approaches is that the Initial Conditions strategy first seeks targets of opportunity for introducing any kind of change that may improve outcomes, rather than first deciding on the diffusion of a specific innovation. It corresponds to the step in classical planning of insuring adequate "resources" to carry out change. The required resources are not just money and trained personnel but also political capital. Sometimes this requires that the reform strategy include a prior stage of "resource mobilization" to insure that conditions are acceptable for some change.

AN OPPORTUNITY FOR RADICAL REFORM

The Chilean government elected in 1990 faced an incredible opportunity for change in education. After years of repressive dictatorship the people were eager for the democrats to enact bold new programs, especially those that would reduce inequities in society. Not only did the government have a clear ideology, it also had plans and policies prepared in opposition research centers during the long years of the dictatorship. Previous reforms had little impact on overall quality and increased inequities by raising quality only in better schools. The new voices in the Ministry of Education wanted to raise quality by pulling up the bottom. The reform could begin without delays by conservatives in Congress, as funding was available through a large grant from another democratic country sympathetic with the equity objective.

P-900, as it came to be called, identified the 10 percent "worst" schools in the country, defined as those with lowest scores on the national achievement examination (SIMCE). School communities (teachers and parents) schools were invited to prepare and submit proposals for improving their schools. Grants of up

to $5000 were given for school repairs, furniture, textbooks and library books. The impact of the reforms was immediately obvious. Morale of teachers (measured by their attendance) improved notably. Student attendance also improved as parents took much more interest in school. Within two years SIMCE test scores had improved 7 points average for Spanish and Mathematics in 4th grade, and 4 points in 8th grade (Garcia Huidobro, 1994; Garcia Huidobro, 1998).

Public recognition of the P-900 program's success enabled the ministry to use regular funds to expand the program to more "failing" schools and to provide additional inputs including teacher workshops and after-school programs led by community monitors for students not performing satisfactorily. More recently it is being expanded to secondary schools and adult education (Rivero, 2000).

For example, the Ministry of Education decision to launch the Peruvian reform of 1997 was based in part on recognition of a growing consensus supporting change. This consensus involved the coalition of several different groups outside the government. One of them, the Instituto Peruano de Administración de Empresas, had sought only to improve the quality of education. Conscious of its lack of knowledge of pedagogy, it refrained from proposing any specific changes and instead formed a coalition with two groups representing educators (Vegas Torres, Andrade Pacora, & Maguiña Ugarte, 1999).

Those using this approach to design reforms rely on indicators of initial conditions and evidence that conditions continue to be favorable throughout the reform. As noted above, this generally requires an active rather than passive stance by the reformers. When enthusiasm flags or opposition develops or resources are exhausted, action must be taken to re-establish conditions favorable to change.

3. Train Agents of Change

When the results of the Diffusion of Innovations and Initial Conditions strategies failed to produce desired results, attention shifted to the role of Agents in bringing about change. Agents are persons located between the reform designers and those who carry out the reform tasks and operations. Their function is to mobilize support for the innovations,

to provide training and to monitor performance. The Diffusion of Innovation strategy emphasizes content of the message, and the Conditions strategy requirements for transmission. This strategy emphasizes the transmitter or carrier of the message. Attempts to use traditional inspectors or supervisors foundered, as these persons typically lack skills in training and mobilization, and often constitute a source of resistance. Required qualifications for Change Agents are listed in figure 3.

Figure 3.
Required Qualifications for Change Agents

1. Be convinced of the urgent necessity of carrying out the reform;
2. Have a clear understanding of what the reform involves and how to carry it out;
3. Demonstrate enthusiasm for the reform and assist others in understanding its value and the changes it requires; and
4. Have sufficient personal charisma to mobilize political, material and human resources to support change.

(Ellsworth, 2000)

Early versions of this strategy placed Agents directly in schools. Candidates for training were identified among outstanding teachers, trained and returned to schools as "Master Teachers" or "Learning Coordinators" responsible for training their colleagues. This approach proved to be costly and appeared to make little impact. In some countries (for example, Brazil) school administrators have been designated as agents of change (Filho, 1993). In most cases Change Agents working alone could not shift a group of colleagues away from the old practices of the school, the principal indicator of reform success.

TRAINING AGENTS OF CHANGE IN GUATEMALA

In 1985 41% of the population in Guatemala between 7 and 14 years of age and 76% of the population aged 15 to 19 were out of school. Teachers lacked training, and quality indicators were low (Arrien, 2000; Schiefelbein &

others, 1998). A return to democratic governments and signing of a peace accord made it possible to launch a reform to overcome these problems.

The reform (Programa Nacional de Autogestión para el Desarrollo Educativo, PRONADE) began in 1996 with objectives of increasing both coverage and quality in rural areas through improvements in school management and instructional practices. The Ministry of Education lack capacity staff to carry out essential activities. Instead it created as change agents a series of "institutions of educational service" (ISEs). The ISEs identified communities without schools, organized local COEDUCAs and provided training in how to hire and pay teachers, supervise their attendance and work, and manage the school calendar (PREAL, 1999). By 2000 more than 300,000 preprimary and primary children were in PRONADE schools *(La Hora*, 30 December 2000).

Another version sought to create a "critical mass" of agents that could overwhelm inertia. A small group of highly charismatic trainers is used to train others, who in turn train others until in "cascade" fashion everyone has received the message. Other versions refer to the training of cadres, or the preparation of a "vanguard". Those who are enlightened will lead others to the light. Success of the method is indicated when teachers apply what they have been taught. It may be, however these training-of-trainers methods lose effectiveness and definition as the message is passed down from one group to another.

Closely related to the Change Agent strategy is the creation of demonstration schools or "centers of excellence" where, it is expected, teachers can be brought and shown how to implement new contents and practices. Most early experiences with demonstration schools were abandoned because there was no evidence that they had an impact on contents and practices in other schools. A major difficulty in the multiplication of "centers of excellence" is that most often "excellence" is achieved by high levels of expenditures that cannot be duplicated in all schools.

Charismatic change agents are few in number and difficult to train. Even when charismatic, agents placed in large schools find it difficult to "inoculate" a sufficient

number of teachers to raise the level of performance of the whole school. Many agents lose enthusiasm and revert back to conventional practices.

4. Focus on the Adopters or Implementers

In the face of repeated failure, planners and policy makers began to pay more attention to increasing participation in actually doing the reform. Research showed that despite efforts to communicate timely reforms, teachers and administrators did not do what they were supposed to do. There were a number of explanations:

Figure 4.
Reasons Why Commands From Above
Are Not Implemented

1. Messages may have been sent but were not received;
2. Messages received were not understood;
3. Not all those who understood what was asked of them were capable of doing what was asked;
4. Some required new behaviors were contrary to cultural norms, of the local school or the profession or the community;
5. Some required new behaviors implied a high cost (in time for learning the new practice, in carrying out the new behavior) that teachers were unwilling or unable to pay.
6. A few change agents were insufficient yeast to raise the mass of an organization.

Emphasis shifted from external change agents, to internal change agents, that is, the persons responsible for carrying out the reform once in place (Fullan & Stiegelbauer, 1991). Teachers, some suggested, were not opposed to change. Many in fact were eager to try out new curriculum and teaching practices. A reform is most likely to be implemented when teachers:

Figure 5.
Reforms are More Likely to be Implemented When Implementers…

1. have been made aware of the new policy or innovation that has been introduced;

2. understand what is expected of them;
3. have been given training that makes them confident of their ability to carry out what is expected;
4. can count on management (e.g., school administrators) for the necessary resources and authority; and
5. are monitored and supervised to insure they are conforming to the policy .

(Ellsworth, 2000; Fullan & Stiegelbauer, 1991; Warwick et al., 1992)

Very few reforms have included empirical assessment of teacher awareness, understanding and ability. In the Dominican Republic the limited implementation of a Ten Year Education Plan was attributed in part to teachers' ignorance of its contents (Brisita Torres, 1996). In the best reforms, on-site monitoring makes it possible to adjust policies in response to teachers' difficulties in implementation.

IMPLEMENTATION OF MUNICIPALIZATION IN COLOMBIA

Politics affects every stage of a reform, and can severely deform the intentions of groups dominant in earlier stages. Implementation during the 1980s of a Colombian decentralization reform for primary education included several major changes in the what communities were included, how the project would be administered, and how resources would be distributed. Resistance from local communities and regional governments and teacher unions forced national designers to make changes in objectives as well as in practices. Many of the original objectives—for example, to increase parent control over schools—were abandoned. Resources were distributed to municipalities primarily on the basis of political party strength rather than economic and educational needs of the community (Duarte, 1997).

5. Overcome Resistance

Perhaps those designing change always have been aware of opposition, but only recently have strategists been explicit about how to overcome resistance. Unfortunately, lessons learned by one government are not always passed on to the government that follows. Lessons are not written down and there is constant rotation of officials and policy makers. Without memory, there is no learning. Earlier reform movements acted as if there was no history, and committed many of the mistakes made before. A major

mistake was to ignore the fact that not everyone benefits from change. Today, however, mistakes of the past are identified, and attributed to specific actors who have prevented improvement.

Several reasons can be given for this shift in emphasis. Some observers believe that education has moved to top priority in many countries thanks to the encouragement of external agencies (Corrales, 1999; Corrales, 2001). At least one of these agencies explains past failures in terms of opposition from teacher unions, university students, and even governments (Burnett, 1996). Second, over time accumulated and improved information has made it possible to observe the actions of distinct interest groups within and outside government. Third, the distribution of power across interest groups has changed. In the formation of new political coalitions and alliances, power has been mobilized by publicly attacking those groups seen to be in power. Finally, explanations of resistance have been developed that provide feasible strategies to reduce its negative consequences for implementation (Corrales, 1999; Corrales, 2001).

Reforms have costs and promise benefits. Costs generally are felt keenly while benefits may be hard to detect. For example, introduction of new teaching practices requires teachers to learn new contents and methods generally with no compensation for their extra effort. Students may learn more but the impact on their lives is felt years later. Costs and benefits can be concentrated or distributed more equally. Resistance is greatest when costs are concentrated; if benefits are diffused it may be difficult to mobilize groups to support the reform.

Figure 6.
Reasons Why Change Is More Difficult
in Education Than in Other Sectors

1. The education sector does not attract leaders who are eager and know how to "wage difficult political battles" (Corrales, 2001, p. 6). The new breed of "technocrats" has shown a capacity to triumph against more traditional opponents (Dominguez, 1997), but they are rare in education.
2. In education leadership for change is not sustained over time. Ministers or other political appointees in education might start reforms but seldom stay in office long enough to lead them to implementation.
3. Stakeholders such as teacher unions can inflict serious political costs on government without losing much political support from parents and other consumers.

Despite these obstacles, however, some reforms are implemented as planned. In some cases it has been possible to offset the impact of opposing groups by mobilizing other stakeholders to support the reform. This was a dominant tactic in El Salvador where the ministry engaged a wide range of political and economic stakeholders in a diagnosis of education problems (Lardé de Palomo, Arguello de Morera, Jacir de Lovo, & Córdova, 1999; Reimers & McGinn, 1997). Another tactic has been to offer material concessions to opposing groups. For example, the Salinas government in Mexico raised teacher salaries and benefits and advanced a decentralization plan blocked under earlier administrations (Corrales, 1999; Corrales, 2001). Both of these tactics aim at perceptions of benefits. In a more sophisticated version of this approach, material and on-material awards are given only to those whose performance conforms to expectations. In Jamaica cooperation of schools in curriculum reform was insured by providing computers that would be used in new teaching practices. Successful implementation was attributed to active leadership by the Jamaican Computing Society (Miller, 1996).

OVERCOMING RESISTANCE TO DECENTRALIZATION

About one-third of the communities in El Salvador lost their schools during the civil war. Many of these communities taxed themselves to organize some kind of education for their children. When hostilities ended and a Peace Accord was signed, the government built on this community involvement by providing public funds to local education associations who were given authority to hire and fire teachers.

In other countries use of public funds to support "private" education has provoked high levels of resistance blocking reforms. This did not occur with the EDUCO program in El Salvador for the following reasons.

a. Management of the new program was outside the traditional structure of the Ministry and affected no one's budget.
b. Unemployed teachers, generally young and not integrated into teacher groups, were the prime candidates for EDUCO positions.
c. Positive results of the program were widely disseminated mobilizing positive public opinion.
d. Negotiations were carried out with high level officials in the teachers' union. In exchange for improvements for all teachers in pay levels and promotion opportunities, EDUCO teachers gave up job security.
e. Simultaneously the government engaged all sectors of society, including former rebels, in a diagnosis of education's problems. This resulted in further reforms supported by a broad consensus.

Over time adjustments have been made to offset counter-reform efforts. These include creating a parallel program of local school boards controlled by the Ministry (Lardé de Palomo, et al., 1999).

Some governments have attempted to raise costs to groups that oppose reforms. In Latin America the most common tactics have been delegalization of union activity under military governments, and encouragement of competing unions under elected regimes.

In summary, this strategy seeks to change who participates in reforms, to mobilize groups that will support the proposed changes and de-mobilize others who oppose the changes. Participation seldom if ever includes decisions about what changes to make, but rather focuses on how to carry out the changes. Progress can be measured in terms of support for the reform among key groups in the coalition. Impact is measured in terms of the objectives of the reform objectives, for example improving retention or increasing achievement.

6. Use Incentives Instead of Commands

Planning for reform over the past 40 years has shifted from:

1. deciding what is wrong with the system, toward trying to make change happen.
2. analysis by small groups of technical experts, toward broader participation by stakeholders.
3. defining implementation as delivery of inputs, toward monitoring changes in structures and practices.
4. concern about material resources, toward lining up political support.
5. defining a successful reform as new structures or new practices, toward defining success as improved student achievement outcomes.

The most recent strategy for change promoted by international agencies is the product of two developments--decentralization of governance and improvement of measurement of student achievement. The new strategy transfers responsibility for reform from central to regional governments or from regional governments to districts and schools and teachers. What is transferred is not so much authority as it is responsibility for changing. The key words now are “accountability,” “assessment” and “standards.”

The innovation has two key elements: incentives to encourage local schools or regions to change; and methods for determining who should be rewarded for compliance with centrally-defined standards.

Figure 7.
To Make Schools Comply With New Standards…

1. base rewards on student scores on external examinations rather than on teacher compliance with regulations;
2. focus on school or classroom level achievement rather than individual student scores;
3. encourage schools to set their own targets for improving student achievement;
4. measure school's success in meeting targets using a scale with several scores rather than simple success/failure;
5. publicize results broadly, especially to parents; and
6. provide material and non-material rewards to high-performing schools and personnel.

(Fuhrman, 1999)

This strategy for inducing changes in outcomes, rather than in practices, appears to give schools autonomy but is intended to insure conformance with central objectives. The success of the strategy depends on a well-developed capacity to carry out student assessment at the regional or national level. Most countries in the region do not yet have this capacity although most are now working to develop it. The strategy depends also on national consensus about what standards should be. Few countries have been able to generate this consensus, as any set of standards favors some groups over others. In most cases, therefore, standards have been imposed by central authorities, and resistance so far has taken the same form as with other changes introduced from above.

TEACHER INCENTIVES IN MEXICO

In an effort to raise the quality of teachers in service in Mexico, the Secretariat of Public Education (SEP) in 1992 instituted a system for awarding salary increments based on an examination of teachers' knowledge. The C*arrera Magisterial* offers those teachers who care to do so the opportunity to take a multiple-choice examination based on pedagogical theory and practice. Scores on the examination determine the teacher's category in the pay scale (Arnaut, 1999; Cortina, 1999).

At the same time the Secretariat transferred responsibility for training of teachers to the states. More than 500 teacher training centers were established, and both states and SEP expanded distribution of policy documents and pedagogical literature.

II. MAKING CHANGE CONTINUOUS

Reforms are big occasions which consume a lot of energy to get started. In between reforms schools either adjust to the changes made or fall back into old practices, but in either case the system freezes up once again. Because re-freezing is such an important part of current reform strategies, every successive reform must turn up the heat again before any change can occur. Schools end up described as traditional, change-resistant organizations because of earlier efforts to get them to perform according to fixed standards and regulations. These efforts may have failed to produce a satisfactory system, but educators have learned to keep things as they are until asked to do otherwise.

At each moment or stage in the process "change" takes on different forms and is carried out by different sets of people. In most education systems these groups and sets of activities are not well-integrated. The result is a "loosely coupled," system in which changes in one unit may have little effect on or run contrary to activities in another unit (Weick, 1976). The consequence is a system with low internal logic, like a patchwork quilt (Nuñez, 1989). Figure 8 lists four requirements for coherent change that maintains the integration of the education system.

Figure 8.
Requirements for
Coherent Systemic Change

1. The actors or stakeholders involved at the different stages of the process must share a common understanding of the broad objectives of the reform and see themselves as working together toward those objectives.
2. Proposals for change should aim toward what is desired, rather than only what is possible.
3. Each element of the proposed new system must be designed with regard to how it fits into and supports all other elements.
4. The system must have a built-in capacity for continuous evaluation and correction or change of the design.

(Ellsworth, 2000; Reigeluth & Garfinkle, 1994)

PARALLELS BETWEEN EDUCATION AND THE CORPORATE SECTOR

The problem faced in education--levels of achievement lower than desired and not improving--is parallel to the problem faced by industry and commerce. Corporations no longer have guaranteed markets for their products and services; globalization means increased competition. Businesses have two ways to survive: reduce costs and generate new products and services that attract consumers. Both survival tactics produce gains in productivity and require changes in business operations and structure. In other words, businesses must pursue continuous change just to survive let alone to progress.

To do this, businesses and nations today are told, the most important resource is not land, labor or capital but knowledge (Drucker, 1993). Knowledge comes through learning, so corporations are urged to re-design themselves as learning organizations (Senge, 1990). A corporation's primary rationale "is to create, transfer and apply knowledge" (Hitt, Ireland, & Lee, 2000, p. 232).

Education systems are the metaphorical equivalent of corporations, and schools and universities are the equivalent of firms. Schools operate with varying degrees of autonomy and their effectiveness requires matching structure and operation to local context. In so doing teachers and administrators generate knowledge that can increase quantity and quality of learning. As currently organized, however, most schools and ministries of education lack the means to capture and share what their members know. Ironically, schools and ministries seldom are learning organizations. Instead they repeat year after year the same routines which over time decline in effect and increase in cost. What is required to make schools and ministries into learning organizations?

LEARNING IN ORGANIZATIONS

As we know, learning occurs in two ways: imitation and direct experience. In the former a learner models or copies the symbols and behaviors associated with someone else's knowledge: the "best practices" discovered elsewhere are used as an instruction book. Experiential learning, on the other hand, occurs inside an organization or in its interactions with other organizations. The knowledge obtained through direct experience is superior to knowledge transferred from others because it matches context and facilitates further innovation (March, 1999).

The most "intelligent" schools and ministries, however, are those that pursue continuous learning of both kinds. As organizations (and not just a site where bureaucrats and teachers work) they experiment internally and systematically with procedures and structure to improve their performance. The experiments test understandings of and expectation about how schools produce learning. The evaluation these learning organizations carry out is formative, in contrast to the summative evaluations that initiate reforms.

Because each member or unit of the organization is encouraged to experiment to improve quality, new knowledge is generated at all levels. The organization per se learns when this new knowledge is shared across its membership vertically and horizontally. The new knowledge is not just technical knowledge about performance, but also new understandings of the purpose and mission of the system and its member schools. In addition, intelligent schools and ministries seek and use knowledge from the "outside," that is, produced by other schools and ministries, and by other sources of knowledge.

SCHOOLS IN COLOMBIA
AS LEARNING ORGANIZATIONS

Escuela Nueva began in the early 1960s as an effort to assist teachers to develop content and practices appropriate for the context of multigrade rural schools in Colombia (Colbert de Arboleda & Mogollon Jaimes, 1977). Not all teachers were interested; those who stayed demonstrated interest in learning new practices and improving performance.

The heart of the program was the concept of "experiment" as an intentional innovation that is evaluated in a variety of practice settings. Teachers began by preparing small cards describing a lesson the teacher thought was effective. Other teachers tried the lessons with their students and reported on ease of use and learning outcomes. Lessons that worked in most or all circumstances were kept. With time the collection was organized by teachers into sequences matching rural life and meeting official learning objectives. Teachers taught each other how to work with the community, how to use reference materials, how to handle student discipline, how to develop new practices. The result, over time, was a significant improvement in student performance.

Experimental learning stopped, however, when a government-sponsored reform formalized and codified teachers' knowledge into an official curriculum. New teachers were not taught how to develop their own effective methods, but instead were trained in using the packaged program. The resulting product is still better than the old, but innovation and learning has stopped (McGinn, 1998; Villar, 1996). The *Escuela Nueva* program (as teacher-based experimentation) was started up again in 1992 in rural Guatemala. An important innovation has been the formalization of teacher working groups (Baessa, 1996; López, 1999).

Some highly effective national school systems have already moved to make schools producers and not just consumers of knowledge about how to educate. This shift is backed up by research that shows that local business firms that do their own research are more innovative than those that use only a centrally-located research and development unit (Hoskisson & Hitt, 1988).These education systems give priority is to school-generated knowledge, but have developed routines to exploit knowledge transferred from national and international sources (Center for Educational Research and Innovation, 1995). In effect, each school develops its own curriculum with local objectives and local practices but fits that curriculum into national objectives. These effective systems were not pre-conceived but instead developed experientially. Over time they have evolved as learning organizations and communities of practice. Their success

has depended in part on training and material resources and encouragement from above but mostly on relationships among practitioners.

Networking (for example, of the kind used in the original *Escuela Nueva)* allows small and/or isolated firms (and schools) to increase their technological knowledge not only through their own limited research and development expenditures, but also by absorbing knowledge produced elsewhere. How much knowledge will be absorbed depends not only on the capability of the individual firm, but also the degree of connectivity of the network, that is, how much all firms are linked together (Hakansson, Havila, & Pedersen, 1999). The best education systems, then, are those in which practitioners regularly share their learning with others.

Networks require some measure of formal structure to operate effectively. Participants (e.g., teachers) are not in a position to provide that support; this is the role of ministries of education and other agencies. Traditionally this was attempted using ministry-published magazines that invited correspondence and articles from readers. The spread of electronic media has facilitated exchange of information vertically and horizontally. One example is the website called ENLACES managed by the Ministry of Education of Chile (www.redenlaces.cl).

Alliances and joint ventures depend on mutual satisfaction and development of trust. Joint ventures with learning objectives are therefore inherently dynamic, that is, they are unstable and require management from the outside in order to maintain the dialogue. This external management facilitates but does not control what schools do (Makhija, 1997).

Universities, research centers and even education systems in other countries also can contribute, if the right conditions prevail. Their participation can change the dynamic relationships among firms (schools), and can increase the rate of innovations or new knowledge development. This approach is being used in Mexico, where public research centers in material sciences, biotechnology and telecommunications collaborate with firms in the construction of "knowledge spaces" (Casas & Santos, 2000).

The success of networking depends on construction of "webs of meaning" that make sense out of the learning that is occurring. The objective of this "sense-making" is to link new knowledge with structures and operations consistent with the firm's (school's) or network's (educational system's) identity or mission, itself subject to changes through learning. A school's web of meaning can be understood as a shared theory of itself as an organization operating in time and space, governing the knowledge that is made sense of, and the sense the school itself makes. Obviously this cannot be imposed externally: it is developed through dialogue among the members of the school (Dougherty, Borrelli, Munir, & Sullivan, 2000). On the other hand, ministries and other external organizations have a critical role in stimulating dialogues within schools.

Success in the construction of webs of meaning results in a new organizational form sometimes called a "community of practice" (Grisham et al., 1999; Wenger, 2000). Firms (schools) organized around communities of practice are characterized by loose command structures and flat hierarchies. Case studies demonstrate greater use of strategy, new product lines, wider spread of effective practices and competency levels across employees and lower turnover, in both public and private corporations. Management's (the Ministry's) primary task shifts from control to coordination, from command to

stimulation of knowledge production and sharing. The lesson from the corporate sector is that schools require both knowledge acquired and knowledge learned by doing, but that the integration of that knowledge should occur within the school, and not externally. In practice that means that:

1. knowledge "needs" should be determined locally and not externally;
2. local knowledge management capacity takes priority over external capacity;
3. training in sense-making within communities of practice must accompany training in knowledge assimilation.

CHANGE AS LEARNING AND LEARNING AS CHANGE

In its desire to improve performance, the learning organization deviates deliberately from current practices and contents, and observes the effects. This can be a continuous process in education.

Figure 10.
Reasons Why Change in Education
Should Be Continuous

1. Demands on schools and education systems change as society changes, requiring new objectives and methods.
2. Knowledge gained from one change is applied in other contexts which generates instabilities stimulating further changes.
3. Knowledge is never equally distributed; individuals and organizations become "expert" in some domains but not others. The result is many imbalances or slopes that permit "flow" from one unit to another.
4. Change through local experimentation does not threaten the system. Its effects are incremental and easily assimilated, thus reducing resistance and friction.
5. Marginal costs are low and the central ministry is freed of thankless and low yield supervision. Instead ministries can focus on supporting schools as learning organizations and on promoting integration across schools.

The requirement of <u>learning</u> as an organization distinguishes this approach from the anarchy of allowing individual teachers to do what they want, or permitting anarchic schools unrelated to the national community. It requires that ministries of education work

much harder to understand what happens in schools, and to develop the capacity to help schools reach their objectives. Ministries require much more information than they currently collect, and much more capacity to interpret that information so they can respond to school's requirements. Time now spent on writing regulations and seeking conformity to them could be used more effectively in learning, through experimentation, how to help schools (as organizations of teachers and principals) to develop more effective practices.

The current reform-based approach to change attempts to insure system coherence by imposing centrally-defined contents and practices on schools in widely different contexts. In fact ministries have little idea about compliance in practice as it is extremely expensive to monitor schools' behavior closely. Efforts to insure accountability to standards measured with achievement tests encourages teachers and schools to alter the official curriculum in favor of what the test covers. Unfortunately, the test does not cover nor stimulate teaching to achieve objectives stated in laws and the Constitution.

Evaluation is essential to improvement, and standards can provide guidelines as to what is expected. Evaluation contributes most to learning, however, when it is frequent and results can be linked with specific expectations and actions. High-stakes examinations (such as those determining admission to the next level) contribute little to learning how to improve day-to-day practice in classrooms and homes. Encouraging and supporting systematic experimentation at the school level, on the other hand, can generate a wealth of alternative practices. It is among these alternatives that ministries can find those (probably few) practices that will work well in most settings, have lowest

costs, and generate the most learning. As the system learns it changes, as does the context in which it operates, requiring a constant process of experimentation.

Perhaps the first reform raised hope that things would indeed get better. Successive reforms, justified by blaming this or that group or the previous government, do little to mobilize widespread public support and harder work by teachers. Knowing that there will be another reform some time in the (perhaps not distant) future encourages those asked to change to limit their personal costs.

Not all teachers, principals and communities will welcome a shift to a learning organization. Some benefit from the current system which despite so many reforms continues to favor the already-privileged and to justify their privileges. Some want to avoid any responsibility at all. Others are afraid to shift from a reform model in which failure can always be attributed to the reform. Others tire along the way—learning often is hard work. The first lesson to be learned, the grand experiment for our societies, is how to shift from following rules, to learning how to do better, and better, and better.

III. CONCLUSIONS AND QUESTIONS

The argument of this paper is that we should abandon reforms as the strategy of choice for improving education. Reforms have been weak instruments for change; they generate high economic and political costs; and they provoke resistance that reduces the effectiveness of future efforts.

Instead, governments should treat education systems and constituent schools as learning organizations. The conditions that favor learning in organizations are:

1. shared construction of understandings about objectives and methods;

2. elaboration and recording of explicit hypotheses about the likely effects of changes in contents, structures and practices;
3. systematic observation of the effects of change;
4. support from governing bodies for systematic experimentation.

This approach involves multiple centers of decision-making in contrast with the centralized approach that characterizes policy analysis and reform at present. The distinctions between the two are summarized in Figure 11:

Figure 11.
Differences Between Reform and
Continuous Improvement
As Strategies for Change in Education

DIMENSION	CHANGE THROUGH AND REFORM	CONTINUOUS IMPROVEMENT
Metaphor for Organization	System---every element has an assigned task	Network---actors struggle to influence others
Principal Tactic	Communication	Interaction and Dialogue
Definition of Goals	Central policy makers decide on goals and means	Goals and means are worked out collectively
Structure of Governance	Functional divisions with vertical organization	Complex mix of actors at various levels in a network
Policy Process	Civil society expresses discontent, government takes over decision process	Actors at various levels in network experiment and encounter support or resistance
Performance Indicators	Goals stated in policy	Satisfaction of actors
Main Reason for Low Implementation	Weak control by Ministry, resistance from below	Inadequate opportunities for dialogue
Main Reason for Low Effectiveness	Designs poor because of lack of information about system and conditions	Incomplete networks and failure to negotiate mutually satisfactory compromises
How to Improve Organization	Improve control mechanisms	Increase adaptations to fit local circumstances
How to Improve Content of Plans and Policies	More data and more sophisticated techniques for policy analysis	Improved methods for developing consensus around issues and alternative solutions

Based on Klijn and Teisman (1991)

The following questions would seem relevant for a consideration of the feasibility of moving toward "continuous improvement" in any given country.

1. To what extent are teachers, administrators, parents and others able and willing to participate in extensive dialogue about education?
2. Does the political context make it possible to detect opportunities for dialogue, and for government to support and participate in them?
3. What legal obstacles exist to allowing broad social participation in decision-making for education?
4. Can the ministry of education detect and respond to opportunities to support positive changes in schools?

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