A Model for Improving Rural Schools:  
Escuela Nueva in Colombia and Guatemala

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Introduction
The extreme inequity between rural and urban areas is a central problem throughout Latin America. Living in a rural area generally means lower wages, fewer job opportunities and inferior education. According to the Inter-American Development Bank (IDB) (1998), poverty relates to the kind of education available to students; "educational quality is much lower for students from low-income families, most of whom attend public schools" (p. 55). The Escuela Nueva (EN), or New School, an innovative rural school reform in Colombia, addresses these disparities in educational opportunities, and therefore, indirectly, economic inequalities.

The Escuela Nueva (EN) model is instructive because of its successes in improving education for marginalized Colombian rural students. From a policy perspective, it is notable because of the significant effect the national government has had on teacher practices in some of the country's most remote classrooms. The EN school reform model answers one of the greatest challenges in the governance of educational systems--how to coordinate the instruction occurring in individual classrooms within the larger system. It provides a distinctive prototype for how to impact teacher practices in the most isolated schools from the most central level of the government. Though the Colombian governance model of EN essentially addresses educational issues through centralization, it weaves in elements of decentralization related to its own evolutionary history. Unlike many governance structures, the EN model addresses technical problems of access, efficiency, effectiveness, relevance, and equity through specific changes in the classroom and directly with teachers as opposed to changes in system or individual school management.

This article will begin by describing the context in which the Escuela Nueva model was developed and then traces the process of its development. The second section will define the components of the EN model. Following is an analysis of the characteristics of the model that are central to its success in impacting teachers' practices and students' achievement. The fourth section reviews some of the evaluations of Escuela Nueva, exploring various effects of the mass expansion to the national level. Lastly, the article describes a Guatemalan reform based on the Escuela Nueva model as a demonstration of the possibilities of transferring the EN model to different contexts.

The Development of Escuela Nueva
The success of EN is directly related to its history. EN started in the 1970s as a grassroots initiative and has progressed to a national reform coordinated by the Colombian Ministry of Education. A critical aspect of its development is the organic nature of its formation (McGinn, 1996), a process that drew on the input of many educators and allowed for numerous revisions to be made throughout its nearly two decades (1971-1989) of evolution. The context in which EN developed was also critical. From 1960 to
In the 1960s, when the Unitary Schools (the roots of EN) were started, a mere 18.3 percent of rural students completed primary education. The urban children were in relatively better condition, with 42 percent of them completing the primary school cycle. Colombian primary education was supposed to consist of five grade levels. However, because most rural schools tended to have only one or two teachers, some teachers taught more than one grade level in the same classroom. A resulting problem of these multi-grade classes was that students only spent 50 to 60 percent of instruction hours engaged in schoolwork (Rojas & Martinez, 1993). In 1983, before EN expanded, only 20 percent of rural students completed primary school in five years and 35 percent of rural students were dropping out in the first grade (Psacharopoulos, Rojas & Velez, 1993). In 1985, in addition to problems within the school system, 23.8 percent of Colombian children did not even attend school (Reimers, 1993). Internal efficiency of rural schools was also affected by frequent use of a curriculum geared toward urban students, a lack of instructional materials, school buildings in disrepair, and teachers who usually employed passive frontal methods of pedagogy. Parents and communities were rarely involved in these schools (Colbert & Arboleda, 1990).

The "organic" process of the development of EN was a key factor in its successful implementation during the pilot stage, and later, to the extent that organic development continued, through EN's growth. In essence, EN was a refinement and expansion of the ideas from the UNESCO sponsored "Unitary Schools" project, designed in the 1960s to address the above-mentioned problems confronting rural primary schools. The multi-grade Unitary Schools involved cooperative learning facilitated by teacher guides, self-instructional cards for students, and automatic promotion so that students would not be discouraged by failure. Following an initial implementation in 150 schools, the Colombian Ministry of Education declared the expansion of the program to all one-teacher schools in 1967. However, it eventually became clear that the Unitary Schools had flaws--teachers and supervisors did not fully understand the reform and many teachers felt that creating their own educational materials required too much work.

Meanwhile, a group of rural primary school teachers in the Department (state) of Norte de Santander developed their own solution to the problem of multi-grade schooling. They created learning guides with self-instructional activities for all the basic subjects and all five grade levels. Unlike the Unitary Schools materials, these ready-made guides did not increase teacher preparation time. The schools that used the learning guides, as well as other components, were labeled "Escuelas Nuevas." By 1976, as a result of funding and support from UNICEF and USAID, and recognition from the Colombian Ministry of Education, the EN program was implemented in 500 primary schools throughout rural Colombia (McGinn, 1996; Rojas & Martinez, 1993; Rugh & Bossert, 1998).
One critical aspect of EN's expansion is that, in 1978, one of the key innovators of EN, Professor Oscar Mogollon, was transferred to the Ministry of Education's central office to coordinate teacher training and participate in creating regional EN support groups (Rojas, 1994). Having educators like Professor Mogollon in the Ministry of Education meant increased support from the Ministry to ensure EN's sustainability and expansion. By 1982, EN had been instituted in 2000 schools. At this stage, the training of teachers was delegated for the first time to trainers who had not been EN founders. Between 1982 and 1986, the EN program was officially institutionalized under the Ministry of Education, with its extensive expansion financed by a loan from the World Bank. By 1989, the Ministry reported the existence of 17,948 EN schools (Rojas, 1994).

The components of Escuela Nueva
The EN model addresses the technical problems of rural education through several inputs aimed directly toward the classroom. The developers of the materials, as educators themselves, understood that the materials needed to be adaptable to the local context and to the needs of the students and teachers. The program was not meant to be static, but rather an ongoing exchange between students, teachers, and the community.

The training of teachers is a vital component of the EN model that speaks to EN's broad approach to educational change. The developers recognized the importance of teachers' understanding to their ability to teach. Therefore, three one-week teacher trainings take place during their first year, paralleling the students' learning activities. The first training covers the goals and methodology of EN and the use of some of its components. The second covers how to use the student learning guides, flexible promotion, and the use of instructional materials. The third training focuses on the creation and use of the school library. Teacher learning is then supposed to continue in micro-centers, where teachers congregate once a month to exchange ideas and help each other solve teaching problems or involve their communities in reform efforts (Schiefelbein, 1991; McEwan & Benveniste, 1999).

Teacher support is perhaps the most crucial component of EN's success. In addition to providing teachers with educational materials, resources, and opportunities for capacity building, the Ministry trains local supervisors to serve as pedagogical advisors to teachers. This requirement by the central government acknowledges the necessity of leadership in carrying out a major change. While the reform is supposed to involve the local community, if the teacher is the only person in an isolated village trying to implement the reform, it may remain extremely difficult to do without governmental support (Rojas & Martinez, 1993; Rojas, 1994; Schiefelbein, 1992; Schiefelbein, 1991; McEwan & Benveniste, 1999).

Helping teachers feel invested in the reform is a difficult task to address, but vital nonetheless. In EN, teacher ownership is supposed to come not from giving teachers influence over the administrative functions of the school, but over what they actually teach. EN's significant flexibility within a centralized structure is fundamental to its successes, as it allows for the similarities and differences between rural communities to be taken into account. The micro-centers help reinforce this sense of ownership by giving teachers the opportunity to discuss problems and come up with creative solutions together. Access to a community of peer teachers through the micro-centers is
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another incentive for teachers to support the reform (Rojas & Martinez, 1993; Rojas, 1994; Schiefelbein, 1991; Schiefelbein, 1992; McEwan & Benveniste, 1999).

The EN model creates the opportunities for students and community members to also have a degree of ownership over what could have been viewed unfavorably as an imposed reform. For example, the student government requires students to take on leadership roles and make decisions that have tangible impacts in their school environment. Such involvement is aimed at teaching civic and democratic values. Students interact with their communities by making maps of the community, drawing on examples from local customs in their various activities, and inviting community members to the school to share knowledge about their communities. Through their active participation, both in and out of the classroom, the students are involved in changes in their school. In this way, the EN model also helps to break down divisions between schools and the larger community, facilitating implementation and increasing effectiveness of the education reform.

The self-instructional EN learning guides are a key component of program flexibility and adaptability to the local context and student learning needs. They were designed to encourage active engagement of students in the learning process. They present information in such a way as to enable already-literate students essentially to teach themselves the material, and to move at the speed and level that is appropriate for them. This allows the teacher to address the individual needs of students without detracting from the learning of other students at different levels. The learning guides also take pressure off teachers to constantly plan lessons for various grade levels, and they can help teachers make the material more interesting for the students by providing guidance for connecting the curriculum to the local community, hopefully making schooling more relevant for the students. The learning guides direct students through activities that often require them to work with their peers and explore their communities. They are complemented with "learning corners," where additional instructional materials are housed. Each classroom has a small library and a suggestion box for students to give input.

The above analysis of the most crucial aspects of the EN reform is based on the model that was defined explicitly before 1989, when there was a mass expansion of the program. In this process of expanding nearly to the national level, aspects of the reform described above were compromised due to issues of scale and management (McGinn, 1996, McEwan, 1998).

**Evaluation and implementation**

The EN model has been evaluated at various times throughout its implementation. Two different samples used as the basis for evaluations produced similar results, mostly favorable. In 1987, Psacharopoulos et al. (1993) evaluated data gathered by Instituto SER de Investigacion, concluding that students in EN schools scored significantly higher in third grade Spanish and math, and fifth grade Spanish than students in traditional rural schools. They also found that EN students did better on civic values and self-esteem tests in both third and fifth grades. Using a different sample in 1992, Patrick McEwan (1998) found that EN students scored significantly higher in third grade Spanish and Math. In fifth grade, although EN students scored higher, the differences were not
statistically significant. It seems from these results that some improvements in student achievement can be attributed to the EN program.

However, other examinations of the reform after the major expansion funded by the World Bank have highlighted great variations in the components of the Escuela Nueva model among EN-labeled schools (McEwan, 1999; McGinn, 1996). These inconsistencies have been attributed to a lack of communication and coordination at the national levels, teacher training days being cut, and learning guides not being delivered to schools that had already had training (Republic of Colombia, 1990). Another issue highlighted by McGinn (1996) is that the Escuela Nueva components, flexible and changeable by design, were essentially "frozen" during the expansion process (McGinn, 1996), causing the overall quality to deteriorate. McEwan's (1992) data (three years after the expansion) showed that merely 33-45 percent of EN classes were using the learning guides and only two-thirds of EN schools had a library. In addition, with expansion to new areas, there were often not demonstration schools for teachers-in-training to visit (McGinn, 1996). Despite this decrease in inputs, McEwan and Benveniste (1999) still provide evidence that there was more active learning and group work, with more focus on student creativity, and written and oral expression in the Escuelas Nuevas. They go on to explore the factors that may affect teacher motivation to implement EN reforms, observing that "as Escuela Nueva has shown, teacher capacity can be effectively addressed by policy and is important to the implementation of educational innovations" (McEwan & Benveniste, 1999, p. 11).

With the Escuela Nueva reform "packaged," the training days and material supports decreased, and the effects of the reform on teacher practices are likely to decrease also. The reform, now stemming from a more distant center, i.e. the Ministry, has lost some of its decentralized components and flexibility. This is not to say that Escuela Nueva schools can not still help solve the technical educational problems in rural Colombia, but it is less likely that it will effect changes in classrooms as significantly as before. The model still exists, in theory if not in practice, with its history well-documented. The question remains whether the centralized supports, structure, and opportunities for teacher participation can survive the spread to every rural school in Colombia.

Another Context: The Guatemalan Nueva Escuela Unitaria
Can other countries with similar problems adapt the Escuela Nueva model to attain similar improvements in student achievement, development of civic values, and self-esteem that resulted from the Escuela Nueva model before it was nationally expanded? Is the Escuela Nueva model one that can be transferred to other contexts to improve education for other marginalized populations? Though not the only attempt, the most successful reform effort based on the Escuela Nueva model occurred in Guatemala.

In the 1960s, the Guatemalan government also faced serious challenges in providing quality education to its large rural and indigenous population (comprising 60% of the total population in the 1960s). In 1967, 33 percent of the nation's primary schools were located in rural areas and 50 percent of first grade students were enrolled in these schools (Craig et al., 1998). Guatemala has the added factor of a diverse indigenous population (comprising 50 percent of the total population in the 1980s) which speaks 23 different languages.
In general, the education system was inefficient, with high drop-out and repetition rates. According to Rubio et al. (1997), it took an average of 11.6 years of instruction for one student to graduate sixth grade. As in Colombia, although the education system was lacking in general, students in rural areas of Guatemala were worse off. In 1996, 49.9 percent of girls and 51.2 percent of boys that enrolled in 1991 in urban areas completed sixth grade, while only 18 percent of girls and 21.8 percent of boys that enrolled in rural school in 1991 graduated sixth grade (Rubio et al., 1997). In 1989, there were over 3,200 rural primary schools that had only one teacher to teach six grade levels. For students in these schools, the prospects were even worse, as less than 10 percent of children in rural, multi-grade schools finished sixth grade (Kraft, 1998). Reasons for these poor results are similar to those cited in Colombia—irrelevant curriculum, learning through rote memorization, a lack of resources and training for teachers, and traditional rural lifestyles requiring students, especially girls, to work at home.

In 1989, in an effort to remedy some of these problems, the government worked with the USAID/Guatemalan Mission to implement the Guatemala Basic Education Strengthening Project (BEST). Initially funded for six years by USAID, with matching funds from the Guatemalan government, the project targeted the Mayan-speaking indigenous people, isolated rural populations, and girls. Its major objective was "to improve the efficiency, coverage, and quality of basic education services to rural populations that have traditionally had the least access to education services" (Rubio et al., 1997). To achieve these goals, BEST included four major initiatives: (1) the New One Room/One Teacher Schools (Nueva Escuela Unitaria or NEU), based on the Colombian Escuela Nueva, and aimed at improving rural education at a relatively low cost; (2) the Girls' Education component aimed at keeping girls in school and improving their achievement; (3) the Bilingual Education program (DIGEBI or Direccion General de Educacion Bilingue Intercultural) aimed at improving the education and achievement of Mayan children; and (4) Educational Management Information System (EMIS) aimed at strengthening the government's ability to manage the educational system (Rubio et al., 1997).

While other BEST initiatives are interesting in a variety of ways, this analysis will focus on the Nueva Escuela Unitaria (NEU) component of the BEST project that was based on the Colombian Escuela Nueva.

The development of Nueva Escuela Unitaria (NEU)
The development of NEU was an incremental process over many years, involving the government, teachers, communities, foreign aid agencies, and non-profit and private organizations. Though BEST started in 1989, the Ministry of Education did not implement the first NEU schools until 1992. The program was piloted in 100 one-teacher rural schools in two regions. The pilot schools were selected largely based on the degree of interest demonstrated by teachers. As a result of successes in these 100 schools, another 100 schools were added to the project. Teachers and administrators in these first pilot schools were very involved in creating and implementing the components of the NEU schools. They met to identify problems and needs, and then designed a plan for solutions and general administration of the schools. The teachers from the pilot schools helped to create the curriculum, student self-instructional workbooks (similar to the EN
learning guides), and teacher guides. They also instituted teachers' circles (similar to EN's micro-centers) in which teachers gathered to review new teaching materials, share information and experiences, and partake in in-service training. The multifaceted NEU schools also integrated active pedagogy, flexible promotion, student government, and community involvement. "While the NEU project went beyond these basic characteristics of the Escuela Nueva and developed its own basic model, the influence of the Colombian schools is still visible in the overall approach to rural education" (Craig et al., 1998, p.78).

In 1995 and 1996, more NEU schools were started by private non-profit and religious organizations outside the government, such as the Social Investment Fund, which started 74 schools, the Catholic Salesian Order of Don Bosco which started 549 schools, Plan Internacional, an international charity, which started 21 schools and had plans for 80 more, and the Guatemalan Coffee Growers, which had plans to start 100 schools (Craig et al., 1998). By 1998, there were 283 government schools and over 1,000 privately-funded NEU schools throughout Guatemala.

**Evaluation of Nueva Escuela Unitaria (NEU)**

Evaluation was part of the original plan for the BEST project. Chesterfield and Rubio (1996a, 1996b, 1997a, 1997b) have done a series of in-depth studies of the NEUs. As in Colombia, they generally show positive outcomes in a number of different areas. In terms of enrollment and efficiency, Guatemalan NEU schools were better than one-teacher schools without the reform (Escuela Unitaria or EU). In 1992, 58 percent of first grade girls and 66.3 percent of first grade boys in NEU schools continued on to second grade compared to 53.2 percent of EU girls and 51.9 percent of EU boys. A greater percentage of NEU students completed sixth grade in the normal cycle of six years than those in EU schools (18.3% of NEU girls and 24.5 percent of NEU boys compared with 10.4% of EU girls and 10.9% of EU boys). These percentages are still very low for the education system in general but they are a significant improvement.

One argument against the NEU reform may be that, with the extra instructional material and teacher training, it was more expensive than traditional one-teacher schools. However, due to the fact that NEU schools were more efficient, with fewer students repeating grades, it actually became more cost-effective per student. The savings were greater with boys than girls because overall NEU was more successful in helping boys to finish in the normal cycle than girls (Chesterfield & Rubio, 1997a). In addition, during each year of the program's implementation, more girls and boys were being promoted than in EU schools.

Another study analyzed indicators of the democratic practices of 220 students in first and second grade (half in NEU and half in EU schools), defined as egalitarian beliefs, interpersonal effectiveness, and leadership/involvement. Egalitarian beliefs were measured by comparing incidents of working by taking turns, as well as by measuring the degree to which students helped one another. According to the study, in one region, 83 percent of the working by taking turns incidents were by NEU students compared to only 17 percent by the EU students in the same region. There was not as great a difference in the amount that students helped each other, but NEU students still were more likely to do so than EU students. For leadership, researchers measured the
frequency of students giving directions to their classmates. Once again, NEU students (85%) gave directions much more frequently than EU students (15%) (Chesterfield & Rubio, 1996b).

In terms of academic achievement, students in NEU schools consistently scored higher on Spanish language achievement tests and girls scored higher on math achievement tests, compared to other multi-grade school students. A study by the Institute for International Research (IIR) showed that NEU students had a higher level of achievement in math and reading and parental satisfaction was higher with NEU (Craig, 1998).

Related to the other goals of BEST, however, in general, NEU has not been as effective in helping girls to match the progress of boys, even though their progress has been better than female students not in NEU schools. Two other problems with NEU are (i) higher retention rates that mean more children in school, especially in the higher grades; and (ii) public teacher education is traditional and urban-based in Guatemala and does not therefore train teachers for work in NEU schools, which may have a significant impact on NEU's sustainability. While these specific problems have not been formally documented in the research on Escuela Nueva in Colombia, one author did make reference to the objections of some Colombian teacher training institutions to the less formal hands-on training received by EN teachers (McGinn, 1996).

**Analysis of NEU's success**

It is clear from these studies that the NEU reform improved the education of rural children in multi-grade schools in Guatemala. The main reason for its success is that it includes many of the components of the successful Colombian Escuela Nueva model. While the incorporation of specific elements, such as learning guides and flexible promotion, is certainly partly responsible for its achievements, it is equally important that the Guatemalans did not merely import a set ‘package’ of components. The Guatemalans may have learned about the potential to compromise the quality of the reform by packaging the components and ‘freezing’ its further development and adaptability from Colombian experience of expanding Escuela Nueva to the national level.

A major reason for the NEU’s success was that the reformers adapted the ideas to their local context. They respected the fundamental principles on which EN was built—basing changes on teachers’ knowledge, providing opportunities for teachers and communities to take ownership of the reforms, and maintaining flexibility in the model so it could be adapted to fit the local area. Maintaining this flexibility was particularly important in Guatemala with its diverse indigenous population, where traditions and culture may be vastly different from town to town. Guatemalan educators devised a curriculum, learning guides, and teacher guides based on their own experiences and knowledge. In addition, Guatemalan educators later created bilingual materials to use in multi-grade schools in indigenous areas, something that was not necessary in Colombia. One reason it did not take over 15 years, as in Colombia, to develop a model that seemed to work was because of the various lessons learned from the Colombian experience. Still, adapting it to their own context took time.
The act of educators creating these teaching materials and then having other teachers review and critique them in the teachers' circles empowers teachers, and can help them be invested in the implementation of the reform. Though the Ministry of Education and foreign development agencies originally funded and initiated NEU, teachers' involvement in the fundamental planning and creation of the reform was a vital aspect of both EN's and NEU's success. Teacher input transformed both programs into grassroots initiatives rather than imposed reforms.

One other important factor in the successful transfer and adaptation of the EN reform is the strong leadership that united the two projects. One of the key innovators of the Colombian EN model, Professor Oscar Mogollon, became the Director of the NEU project in Guatemala. He and his family moved to a rural area and worked with teachers on developing educational materials. His influence and involvement in NEU has undoubtedly impacted the level of success that the reform ultimately had. It is important to consider the effect of Mogollon's involvement when thinking about transferring this reform to other contexts where he may not be involved.

Conclusions
The Guatemalan Nueva Escuela Unitaria (NEU) project provides hope that the Escuela Nueva reform can be successfully used as a model for improving public education in other settings. The fundamental characteristics of Escuela Nueva—development over time, a structured yet flexible and multifaceted nature, extensive and varied support for teachers, and opportunities for meaningful involvement of students, teachers, and community members—can, and should be, adapted to the local context. Building the Nueva Escuela Unitaria reform on these fundamental principles, rather than on specific components, was vital to its success in Guatemala. While much was learned from the experiences in Colombia, reformers in Guatemala did not deny their own experiences and knowledge about what would work in their own context. Though questions remain about how to maintain high levels of success as expansion increases and leadership changes, the Escuela Nueva model and its adaptation in Guatemala has demonstrated one way a central government can effectively impact teacher practices and learning processes in remote classrooms.

The rural educational problems confronted by Colombia are issues for both less and more developed countries. Similar to Latin America, many regions around the world are struggling with how to improve education for poor, marginalized populations. There is a need for additional research to understand better these processes and address this issue. Nevertheless, the Escuela Nueva and Nueva Escuela Unitaria reforms can serve as an inspiration and model for how policy makers and teachers can better educate their marginalized communities through innovation, cooperation, and a deep understanding of the context.

References


