

# Teachers: Powerful Innovators

Generating Classroom-Based Education Reform

FÉLIX ALVARADO
with DIANE LA VOY

AED GLOBAL EDUCATION CENTER
ACADEMY FOR EDUCATIONAL DEVELOPMENT

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Academy for Educational Development Global Education Center

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### **Introduction and Acknowledgements**

The countries of Central America<sup>1</sup> have made great educational strides in recent years. More children are now attending school and more finish primary school; however, there is still a long way to go. We still need to ensure that the children who go to school learn effectively and can use their education to develop useful life and work skills.

Better education is everyone's business: supportive parents who help their children learn; communities that actively support their schools; managers who run the education system well; politicians who prioritize education in national plans and budgets; and, above all, educators themselves - the schoolteachers and principals who teach our children.

The teacher, with the necessary competencies to serve the different students and situations that come before him or her, is the linchpin that makes effective classroom learning happen. The capacity to adapt his or her practice to the needs of each group of students and to each student's particular circumstances is an important facet of this teacher competency. In short, teacher innovation, understood as the capacity to do new things or to do known things in a different way in the classroom, school and community, is fundamental in building a solid foundation for education reform.

This document sets out to recognize and commend the many ways in which teachers innovate inside and outside the classroom, as well as to identify the ways in which institutions, programs and projects can more effectively foster innovation. While this paper focuses on experiences in Central America, the findings have worldwide applicability and it is our hope that the information will be shared across regions, countries, and communities to support and improve teacher innovation. The case studies used in this publication are based on Academy for Educational Development (AED) projects in El Salvador, Honduras, Guatemala, Nicaragua, Peru and the Dominican Republic. In particular, we have relied on the help of many colleagues and leaders in these countries who are committed to improving educational quality, who have referred us to

<sup>&</sup>lt;sup>1</sup> The experiences and examples used in this document were identified through the following projects: BASE and BASE II in Nicaragua; EDUCATODOS and "Salvemos el Primer Ciclo" in Honduras; EXCELL in El Salvador; CERCA in El Salvador, Guatemala, Honduras, Nicaragua and the Dominican Republic. They are also based on other experiences in these same countries that were documented by the CERCA Project, though not implemented by it. The projects are described in the Annex.

examples of teacher innovation and in many cases have written down the stories. To facilitate reading, we have omitted references to these people in the body of the text. However, we would especially like to express our gratitude to those who have given us examples and referred us to cases of innovation: Julio Samuel Aguilar, Linda Asturias, Vanessa Castro, Ana Flórez, Carlos Fuentes, Dina Maribel Hernández, Marcelina Lora, Josefina Mejía, Cecilia Quezada, César Mejía, Celia Morán, Mario Nóchez, Maria Lourdes Ortiz, Eric Roland, Enriqueta Salanic, Jacqueline Sánchez and Maritza Zelaya. We are also grateful to the members of the Civic Engagement for Education Reform in Central America (CERCA) Project's "Comisión de Trabajo Regional: Docentes Creadores de Calidad Educativa" and to the national groups that grew out of CERCA: Calidad de la Educación con Participación Comunitaria in Nicaragua, Red Nacional Ciudadana por una Educación de Calidad in the Dominican Republic and the CERCA Country Group in El Salvador. Through their observations, questions and critiques, the following individuals have helped us greatly in developing some of the fundamental ideas expressed in this document: Elizabeth Leu, Ana Flórez, Carmen Siri, Egil Galindo, Oscar Mogollón, César Mejía, Bridget Drury, Verónica Vélez-Paschke, Paula Gubbins and Sergio Ramírez. We also wish to thank Mariela Sala and Verónica Vélez-Paschke for their assistance with the editing and publishing of this document and Susan C. Greenblatt for the translation into English. We apologize if we have inadvertently left anyone out. Any errors in the portrayal of the case studies or in the rest of the document remain our exclusive responsibility.

This paper is divided into four sections. The first section explores the importance of teachers as the linchpin to effective learning in the classroom, the significance of innovation in that role and some of the assumptions that get in the way of seeing the teacher as an innovator. The second section illustrates, by using examples from teaching practice in the different countries, the wealth of innovative practices that teachers have discovered. The third section proposes a model for nurturing innovation based on teacher empowerment, teacher formation and institutional development. Examples of interventions that have been effective in strengthening teacher innovation are used to illustrate this model.

Finally, we present a working framework of principles and components for a strategy to foster teacher innovation, taking into account the capacities and responsibilities of different actors in the education sector. The annexes contain brief descriptions of the projects through which we have identified experiences of innovation, along with a bibliography of other information resources that may be helpful to those who are interested in delving further into the issue of teacher professional development and innovation.

## Classroom-Based Innovation Generates Education Reform

#### Teachers are the Linchpin in Effective Classroom Learning

The education sector and civil society recognize the need for *quality education* that can provide students with relevant knowledge, both to prepare them for entering the work force as adults and for their personal fulfillment and growth. At the same time, "What goes on in the classroom, and the impact of the teacher and teaching, has been identified in numerous studies as the crucial variable for improving learning outcomes. The way teachers teach is of critical concern in any reform designed to improve quality." (UNESCO 2005) Many educators favor implementing active educational processes, in which the student is involved as subject and participant, and where teachers are not simply providers of information and instructions, but rather facilitators of the construction of knowledge by the students themselves.

Paradoxically, the concept of active education used in teaching students is rarely applied to teachers. Too often it is assumed that teachers, seen as a passive resource for implementing education policy, can then bring about transformation in the classroom. At times, they are treated as though giving them instructions is all they need in order to comply with what they are told. When they do not, it is assumed that teachers either do not understand, are resistant to new things, or are not committed to teaching. In addition, the media and other public opinion shapers, at times, present a negative image of teachers as being resistant to innovation and uninterested in learning. However, teachers are the axis around which effective learning is constructed—they are the ones who need to find solutions to the challenges that are encountered in the classroom and with the students.

"If you keep doing things the same way, then why do you expect different results?"

— Albert Einstein (1879-1955)

Teachers are the linchpin in learning—the ones who need to find solutions to the challenges that crop up daily in the classroom.

A teacher's working environment continually presents challenges that call for adaptability and innovation:

- Each year, teachers face a new, diverse group of students with common as well as individual educational needs and, in some cases, special needs, which demand great flexibility, creativity and pedagogical expertise.
- Many schools and education ministries are so under-resourced that teachers and principals need to mobilize resources, both locally and beyond.
- The introduction of standards-based curriculum models and standardized testing demands competencies for which their initial teacher education may not have prepared them.
- Curriculum adaptation initiatives depend on the understanding principals and teachers have of the local community's characteristics and needs. They also require that they have the technical skills to adapt the curriculum, which is especially challenging in multicultural and bilingual settings.
- When computers are introduced in the school, often limited to one or a few terminals, teachers need both the skills for using them as well as creativity for integrating technology into the classroom and dealing with equipment shortages.
- Teaching challenges in rural settings where there is scarcity include the need to inform illiterate parents about academic processes and progress and engage them in their children's learning.

#### **Fruit-Growing for Profit**

In the morning shift at the "Lic. Julio César Méndez Montenegro" Experimental Middle School, in the town of Mazatenango, Suchitepéquez, Guatemala, the teacher, Deldda Hidalgo Ramírez, became concerned when she noticed that the fruit-farming occupational track, aimed at providing young people with job skills, was languishing because it was run by teachers, who, although they were educators and psychologists, knew very little about agriculture. So, in 2003, she requested permission to take charge of the course, with the belief that it was important for the students to learn some kind of work so they could earn money, especially if they ended up having to drop out for economic reasons.

Convinced that "in a globalized society, if one learns to be productive, one learns to survive" she encourages the students to become directly involved in farm work. As part

of the classes, the teacher organizes field trips with groups of students to fruit nurseries and plantations in the department and other locations; shows the boys and girls how to plant pineapple, papaya and banana; and teaches them how to care for crops, work the land and manage their earnings.

Students harvest the crops themselves, which they sell to the rest of the student body on campus. This exercise has been quite successful: the variety of fruits has grown and now includes figs, papaya, pineapple and banana; they are being marketed more widely and earnings have increased. Their success has spread beyond the school, since parents and members of the surrounding community buy their produce. Moreover, students from nearby campuses come to see the project with the intention of replicating it in their own schools.

■ New community school-management arrangements, such as EDUCO in El Salvador, PRONADE in Guatemala, PROHECO in Honduras and the Autonomous Schools in Nicaragua, have redefined the relationship between parents on school committees and teachers and principals, adding new challenges for teaching styles.

When faced with these kinds of challenges and pressures, many teachers and principals rise to the occasion with commitment, creativity and determination. However, many of these actions are part of a well-kept "secret" in the education sector—that teachers are excellent agents of change and innovation in education.

#### **Some Constraining Assumptions about Teachers**

Frequently, administrators, academics and policy-makers take a limited view of the role that schoolteachers can play in education reform. They assume that teachers:

- Work in a school where activities are routine and simple;
- Are just administrators of study plans;
- Teach lessons by rote, without developing their own lesson plans;
- Can be considered just one more "factor" or "resource" in educational development or reform plans;
- Do not introduce novel subjects and methods into the classroom of their own accord;



#### **Keys to Bringing the School Closer to the Community**

Mario Rojas, the principal of the Gran Ducado de Luxemburgo Model School, on the outskirts of Managua, Nicaragua, must constantly balance his many responsibilities, which include monitoring classroom progress, running teacher-training workshops, visiting representatives of local government, supervising the school's three shifts every day, and seeking government funding for a vocational education program. However, he never neglects "his boys and girls," who are the central focus of his leadership.

Parents in communities such as this one will be the first to say that their participation stems in great part from the role of the teachers—who let them get involved in the school—and from these active principals. As a central figure, both in the school and in the community, a principal's influence extends beyond the classroom, making him or her a key agent in the neighborhood. As a skilled administrator, Mr. Rojas and his teaching colleagues have created an environment such that, when the school needs something, they know they can count on the parents.

We must remember that teachers are partners in education reform. The time has come for us to see them as creators and as innovators, and not just as instruments for policy implementation.

- Are passive subjects, who simply need to be issued instructions on how and what they should teach, without greater discussion or questioning on their part;
- Are subject to the course set by the policies made and theories developed in education ministries, universities and think tanks.

This kind of perspective, shared by many school managers, administrators and even principals, devalues teacher input beyond the classroom, and does not consider their capacity to contribute as *education professionals* to formulating education policy. As a result, innovations tested by teachers often "die with them," since no one learns from their experiences. In addition, such a perspective forgets that in order for education to be active, it must begin with active educators. We must remember that teachers, together with the community, principals, administrators and decision-makers, are partners in education reform. Educators are innovators, and not just as instruments for policy implementation.

Furthermore, teachers are not a homogeneous group with only one way of thinking. In addition to being a service sector, the education sector is also a political sector, in which there are differences of opinion. Teachers are political actors, who, based in the school, introduce changes that affect policy across the sector.

Finally, teachers and principals are the first to be held accountable to the Ministry of Education, but above all, to the community, for what happens in the school. In order to be able to assume this responsibility, they also need to have the capacity, means, and attitude necessary for successfully tackling it.

## **There are Many Ways to Innovate**

Policies and plans tell us *what to do* and *how to do it*, but *they do not do things*. For any kind of policy change to have an effect on the quality of classroom education, steadfast, enthusiastic teacher participation is indispensable. They are the only ones who are in daily contact with the students and can recognize the diversity among them and adapt the curriculum to the locality's specific needs.

To innovate means doing new things that work better or adapting existing things to new problems. But, what does innovation mean for teachers? Opportunities for innovating are endless and can appear in numerous dimensions of a teacher's work. Here, based on experiences identified or sponsored by different projects, we review some of the areas in which teacher innovation is evident.

## Pedagogical Innovations in the Classroom and the School

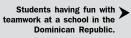
- Usually, the first method a teacher uses to teach a subject does not work for all the children. Then, he or she must use other methods to ensure that the rest of the class understands the lesson at hand. This includes, for example, introducing locally-made manipulatives for teaching math.
- A teacher can change the children's seating arrangement in a multi-grade school classroom, improving group work and encouraging them to help each other.

#### Innovations in How the School is Organized

A principal can invite his or her teaching colleagues to form a study group to address new issues—for example, the impact of HIV and AIDS—improving the quality and relevance of the school's education. ■ Teachers in a school decide to reorganize the class schedule in order to have longer periods in which to go into greater depth on specific subjects: In the Pedro F. Cantor School in the municipality of Izalco, Sonsonate, El Salvador, the teachers and principal faced problems with getting students interested in certain subjects and in learning enough about them. So, they decided that each day would be devoted exclusively to one subject, and would follow a daily "script" that could include preparation, information, discussion, practice and monitoring activities. Teachers and students alike see that this strategy is helping them get a lot more out of each subject.

## Innovations in Relations Between Schools or Tiers in the System

- Teachers and principals from a group of neighboring rural schools share expenses and resources: In San Esteban Catarina municipality, Department of San Vicente, El Salvador, several rural schools—one-teacher schools as well as multi-grade and regular ones—jointly rented a bus to carry staff over roads that are mostly unpaved and quite rough. This helps ensure attendance for the whole school day.
- The principals and teachers participating in a professional training program replicate the training they receive with their neighboring colleagues, spreading the initiative's effects: In Nicaragua, the BASE II project proposed expanding the results obtained in the model schools to other schools. However, some schools began adopting the methodology all on their own, getting voluntary support from schools in the project. In the Department of Chalatenango in El Salvador, principals and teachers learned about the Innovative Pedagogical Practices manuals that EXCELL





distributed to the project's participants. They reproduced the manuals on their own and some of the principals who were involved in EXCELL organized training sessions to show their colleagues who were not in the project how to use them.

## Innovative Ways to Get Parents and the Community Involved

- A school involves parents in aiding their children's education at home: In El Quiché, Guatemala, a teacher has gotten illiterate parents involved in their children's education simply by asking the children to show their homework to their parents and explain it. She also got them to agree to provide the children with a space at home and sufficient time out of their household chores to do their homework.
- A school organizes activities that involve adults or young people in the education of the small children: In El Capulín School in the Department of La Libertad, El Salvador, the death of a boy from youthgang violence near the school prompted parents to seek ways to increase solidarity between youth and children in the community. They ended up organizing a story-telling program in which the big kids help the little ones read stories, strengthening the bonds between them.

## Innovations in Procurement of Resources and Support for the Schools

■ A school or a group of schools help raise funds, while also getting everyone excited about learning: The teaching staff of the natural sciences department in the "Lic. Julio César Méndez Montenegro" Experimental Middle School in Mazatenango, Suchitepéquez, Guatemala,

#### **Down with Junk Food: Teachers Uniting for Good Nutrition**

At the Santana Parochial Polytechnic Institute in the Gualey section of Santo Domingo, Dominican Republic, the natural sciences and social sciences teachers suggested that teachers from several subjects should work together on a joint unit focusing on diet. With support from the school principal, the pedagogy coordinator, and the Parents' Association, they began the project known as "Let's Learn About How We Are Eating So We Can Improve Our Dietary Habits," which is currently underway. All the students in the first year of high school participate—five classes of around 45 students each.

Six teachers chose to participate, each one around their own subject. In the language arts class, the teacher urges the youngsters to critique TV and newspaper ads that encourage people to eat junk food. Students interview their parents and, using observation guides, learn about what people in the community are eating. In math class, they graph the results and do statistical analyses based on their observations.

In natural sciences, the students analyze the nutritional content of street food and the customary diet in the Dominican home. They learn how nutrients contribute to physical growth and quality of life. In social sciences, they study different types of families, the changes taking place in the composition of the Dominican family, and how these changes are reflected in peoples' eating habits. In physical education, nutrition is addressed in relation to psychomotor development, hygiene, health and physical fitness. The values teacher works on raising young people's awareness about respect for life, sharing in the family, love and solidarity.

The youngsters designed a campaign around "eating what's cooking at home," which they depicted in murals. Parents and other community members are putting on an event where children and their parents prepare low-cost dishes.

Yes, conditions can be created to facilitate successful, sustainable innovation.

organizes yearly field trips that offer students and their parents the chance to visit different regions of the country, including places of great biological and archeological interest. Each time, almost 180 participants—students, parents and teachers - travel in two buses. The cost per person is Q100 or Q125 (between US\$13 and \$16), depending on the length of the trip. In this way, they get to visit as many as six tourist sites in Guatemala for a very economical price, since they stay overnight at public schools. After the trip, a pedagogical report and a financial report on the activity are submitted to the school's Finance Committee, together with the profits. This money is used to repair or purchase laboratory equipment and to purchase educational films, consumables and other supplies. The project has drawn notice from around the country and has spread to an additional 400 schools.

The types of innovation described and the examples illustrating them demonstrate the variety of solutions that teachers have devised in schools without additional school resources. However, these could continue to be the exception, unless the stage is set for allowing innovation in education systems and for building innovative capacity in all types of schools around the region. These examples indicate that conditions can be created for teachers to be able to innovate successfully and sustainably. The following section presents a model for understanding how the innovative aspect of teaching can be strengthened, followed by examples and stories gathered through various international cooperation projects.

## **Teacher Innovation in Action:**

## Lessons Learned and Policy and Program Implications

Innovation in contemporary education must start with the teachers. By using words and examples teachers can teach their students that each one can actually construct his or her own knowledge and take charge of his or her life. To achieve this, teachers must be given the space to identify pedagogical needs, create new practices, measure results and make their own decisions.

#### **Components of an Innovation-Nurturing Model**

Why are some principals and teachers able to introduce changes that enhance conditions for learning and for engaging the community in the school? What conditions lead to innovation in the classroom and in the school? In addition to selecting highly creative individuals as teachers, other aspects also influence the opportunities for classroom- and school-based innovation:

- How **empowered** they are: teacher autonomy, authority and responsibility;
- How qualified they are: the resources, capacity and support they have; and
- **Institutional characteristics** of the education system that enable or foster creativity and innovation.

#### **Factors Influencing Teacher Empowerment**

■ **Self-confidence:** A personal factor that is fundamental to innovation is teachers having confidence in themselves. Principals and teachers who make changes believe in themselves and in the legitimacy of what they are doing; they are motivated and have the capacity to make positive changes in their environment.

We must begin by giving teachers the space to identify pedagogical needs, create new practices, measure results and make their own decisions.

Some of the innovations that have the most significant impact on learning maximize the time available for pedagogocial processes and class time.

- A "safe space" for experimenting: Doing new things or doing things differently involves a risk of making mistakes. For people to be willing to innovate, the schools and the education sector must provide a rewarding environment for experimentation that encourages this type of risk-taking, free from fear of punishment. However, this does not excuse negligence or the persistence of surmountable deficiencies.
- An environment conducive to good communication with principals, other teachers and parents: In general, innovation is not a process of isolated creativity, but an outcome of the interaction between people. For teachers and principals to be able to form innovative communities, they must have the ability to communicate within an environment that facilitates positive, free-flowing communication. Likewise, good communication with parents makes it easier for teachers and principals to introduce innovations that involve them in their children's learning.
- **Discretionary use of time:** Some of the innovations that have the most significant impact on learning maximize the time available for pedagogical processes and class time. Teachers and principals who actually manage the time they have available to them can schedule it in a way that is more efficient given the needs and conditions of their school, their community and the children in their charge.
- **Control over resources:** Having control and decision-making power over the allocation of other resources—facilities, educational materials, financing for pedagogical activities and other things that directly affect teaching in the classroom and the school—can also

#### The Room to Innovate: Testing the best in the classroom and school

At the Marcelino García Flamenco School in Santa Tecla, El Salvador, Marlene Suriano de Samayoa, one of the teachers, implemented a project called *Batería X* (The X Set) in response to teaching-staff concerns about poor academic performance in second-cycle (7th-9th grades) math.

"Teachers couldn't progress through the lessons in the curriculum because the students didn't know their multiplication tables and they were unable to readily solve basic multiplication and division problems. The students would get upset because they were not advancing. This problem and the impotence I saw in the students motivated me to work on this project."

Batería X is a series of games to get children to learn the multiplication tables. "X" because they are games where a number has to be discovered and "Set" because it is a series that has to be done within a certain time limit. This project recognizes that children learn more easily if several of their senses are engaged: sight, hearing and touch. It has four parts: An **assessment** is done giving the children a quiz to see how well they know their times tables. **Auditory motivation** consists of teaching the children songs that involve the multiplication tables. Playing **X Roulette**, the children solve multiplication problems by matching numbers and colors on a wheel. The colors and numbers were chosen through a process of trial and error, both in the placement of the colors and the



contribute to expanding the actual power of teachers and principals and, thereby, improve the probability that they will introduce innovations in the school and classroom, provided that these are accompanied by appropriate institutional accountability.

#### **Factors Influencing Teacher Qualifications**

- Pedagogical and thematic competencies: The first quality teachers must have is mastery of pedagogical competencies and the subject matter in order to foster and facilitate learning in their young charges. When teachers comprehend the theory and practice behind learning, they better understand the reasons for success and failure, and become able to accentuate the first and overcome the second through effective initiatives. Likewise, when they master the subject they teach, they will have greater confidence for exploring better ways to teach it.
- Information on pedagogical practices: However complete and current initial teacher education may be, theory and practice are constantly leading to new developments in the education field. Those teachers who have access to information about novel pedagogical practices and their classroom applications through reading, in-service training and contact with other teachers will have more innovative choices in the classroom.
- Feedback on teaching: Innovation means looking for original ways to address new or unresolved problems. To the extent that teachers are aware of the quality of the results they get from their teaching, they can look for ways to accentuate practices that work well and change those that do not. Receiving feedback from their students, other

use of specific materials so that similar operations are recognized by color. Finally, in the **memorization** phase, lotto cards, which are shuffled and distributed among the children, help them to practice their knowledge of the times tables through repetition. This activity consists of playing the games "Lotto Pairs" and "Math Dominoes," in which the team with the most correct answers wins.



Ms. Suriano de Samayoa is convinced that teacher innovation comes from being interested in having the children overcome the problems they face. When this does not occur, the school environment is probably not contributing to motivating the teacher. Of course,

personal factors, such as home life, can also intervene.

This teacher was the departmental winner in the individual category of the national Instructional Creativity competition, held annually by El Salvador's Ministry of Education. She feels that this kind of prize is important for teachers because it helps them to feel recognized and also enables teachers to learn how their colleagues are

solving the pedagogical problems they face. At the same time, she feels that the opportunity for further teacher training should be tied to better income and job opportunities, since innovation also costs time and money.

teachers, principals and parents strengthens this capacity. Similarly, an established culture of self-learning based on the awareness that teachers are true education professionals, not just curriculum implementers, will encourage making use of the feedback.

- Measurement methods and results: Feedback is more effective when reliable evaluation and testing methods that provide relevant results are available. Educational monitoring and evaluation is useful if it contributes to teachers obtaining data about the processes and results of their teaching in a way that helps them to improve it. However, testing that evaluates the retention of facts but not the development of relevant competencies frequently ends up being a roadblock to innovation.
- Analytical skills and creative thinking: In order for teachers to be able to creatively innovate and develop their knowledge and teaching, they need to develop critical and constructive thinking skills.

#### **Institutional Characteristics**

The institutional characteristics of the education sector-including educational strategy, the regulatory framework, finances, management and organizational culture-provide the framework in which teachers put their empowerment and qualifications to work. Certain institutional traits are especially important because of their bearing on teacher innovation:

#### **Reading and Writing with Parents**

At the "Dr. Ciro Brito" School in Nahuizalco, El Salvador, parents and grandmothers, guided by the first grade teacher, have been helping the children learn to read and write. Most of the students who were behind in reading and writing were able to catch up and do well. Several mothers and grandmothers learned to read and write alongside their children or grandchildren. The teacher, school and families are pleased with their work, for which they have received several pedagogical innovation awards.

The teacher provides guidance to the family members, so that together with their children they can make materials for reading and writing with recycled newsprint, and join the classes where the children are learning to read and write. Class time is fun and it works—the students get up and find the materials they need, they cut out the paper, paste cuttings in their notebooks, read, and then write about what they have made. High achievement in first grade reading and writing, obtained with the aid of this innovation, has contributed to improving retention and promotion rates and to reducing dropouts, in addition to encouraging families to continue supporting children's learning in class and at home.

- Putting teaching-learning at the center: There must be common agreement among the entire educational community—students, teachers, principals, parents, and all levels of the Ministry of Education (MOE)—that the purpose of the school is to produce graduates through effective learning based on quality pedagogical processes.
- The school as a learning community: Everyone, including teachers, principals and parents, learns from one another through continuing education, systematic practice and reflection on theory and practice based on monitoring and self-evaluation.
- Innovation-friendly education policies and systems: In the school, the necessary basis for innovation is set by an administration and a teaching staff, who create a learning community. At higher levels (municipal, district, departmental, national), education policies and the way systems are organized provide the foundations of a favorable environment for innovation and translate into the education and practices of supervisors or district delegates, pedagogical advisors and other frontline support staff.
- Human resources management in the Ministry of Education: The working conditions and advancement opportunities for human resources also affect teachers' willingness to take initiative and define incentives (linked to pedagogical or non-pedagogical results) that will motivate them. This includes transparency in teacher recruitment and selection processes, hiring procedures, remuneration, performance-based incentives and rewards, and the decentralization of decisions about human resources.

#### **Applying Math to Real Life**

The "Lilia Portalatin Sosa" School in the Invivienda neighborhood of Santo Domingo has an enrollment of over 2,900 students in preschool, primary and middle school. When the 7th grade math teacher discovered that she wasn't teaching four courses, but rather more than twice that number—this on top of the fact that many of the children were afraid of the subject—she proposed using trial-and-error and a real-life learning approach.

The children learn to correct their own work carefully, assimilating the attitude that learning is a discovery one makes, not something needed from the outside. Applying their math skills to a real life case, the children gather information about family spending by collecting receipts

from their parents and interviewing them about family income. This data has led them to a clear understanding of the concept of positive and negative numbers. The students have been enthusiastic about the project and some of the mothers have said that it has also helped the families to better understand how to balance the family budget-and, how to get the children to appreciate the importance of doing so.

This new approach arose from the need to interest students in the subject, but it was possible thanks to the attitude of the school's principal, known among the teachers as someone who gives a green light to innovations and who stands behind the teachers in implementing them.



## Experiences with Building Innovative Capacity in Teachers

Innovations in and from the classroom come from, by definition, teachers. However, initiatives from government, international cooperation agencies and other sector actors can do a lot to foster, assist, document and disseminate specific experiences. The experience AED and other organizations have had with implementing educational projects in Latin America illustrates how the teacher's role as innovator has been systematically encouraged and the relevance of lessons learned.

#### **Teacher-Empowering Interventions**

#### **Coming to Common Ground**

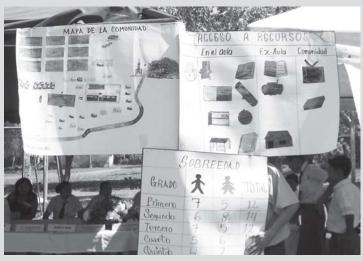
- Having a holistic image of the characteristics of a successful school helps principals, teachers, parents and the student body develop a common vision of what their school could become. The *model school* concept, which includes features such as student governments, the use of self-study guides and using teachers as facilitators of learning, based on prior experiences in Colombia and Guatemala, was disseminated extrensively in the Nicaraguan schools in the BASE and BASE II projects and contributed to creating a common strategic perspective at the school level.
- When using the "school report card," a study group made up of students, parents and community members assesses the school, focusing on educational quality issues. This approach, instituted by

Having a holistic image of the characteristics of a successful school helps the entire educational community develop a common vision of what their school could become.

#### **Gathering Information Sparks Dialogue**

The School Report Card Analysis Group in a rural Guatemalan school decided that it was important to learn about a sensitive issue: how many of the students got help at home with their studies. The Group did not have the resources for surveying the parents and, besides, one father said that the community would not accept a survey. The teachers, students, parents and other community members in the Analysis Group came to the decision that they would ask the children directly.

Over the next few days, the teachers asked their students who gets help at home with their homework. In every grade, fewer than half the children raised their hand. The Group decided that they would present this information to the parents on a simple table, which would have the number of students in each class in the top line, and underneath, the number of students whose parents did not help out. When the parents saw the chart, it caught their attention and brought up questions. "I don't know



School Report Card findings in Tehuacán, El Salvador, are posted for the whole community to see.

the regional CERCA project, helps the educational community to develop a shared, highly motivating view of the current situation and of the changes they want to see.

#### **Recognizing Teacher Responsibility**

- Many teachers are deeply committed to their students and to teaching.
  - ✓ Teresa Alemán, a teacher from the Calixto Moya School in Nicaragua, with 26 years of teaching experience, spoke up at an experience-sharing meeting organized by a group of Nicaraguan educators in June 2005: "Before, I used to think that the further we kept parents away from the school the better, but that was a big mistake! It's not that I have time to spare but what I do have to spare is love and the desire to get parents more involved."
- Escuela Nueva is a school model instituted in Colombia in the 1970s that introduces active education into all facets of school life. Following its success in Colombia, the model was adapted to create the "active school" model, promoted in other countries, including these:
  Guatemala with the New Multi-grade School (in Spanish, Nueva Escuela Unitaria-NEU) and the New Multi-grade Bilingual School (NEUBI), Nicaragua with the Model Schools supported by the BASE II project, and Peru with the Active Schools supported by the AprenDes Project. This model recognizes and cultivates the direct responsibility that teachers have for writing and designing materials for teachers and students, interviewing, training other teachers, adapting manipulable materials to local cultural and economic conditions, and supervising student teachers from the normal schools.

what it means to make sure my children do their homework," one man said. His neighbor, another father responded, "look, it means giving them the time to study." Another father spoke up, further clarifying, "It means asking them if they did their homework every day." The first man answered, "Sure, I can do that."

By deciding to participate in field-testing a School Report Card, the principal and teachers were able to close the gaps between their own knowledge and opinions and the knowledge and commitment of the other members of the educational community. In this way, the School Report Card expands innovative potential.

(Adapted from: CERCA (2004). Ensayo de Reporte Escolar: Aprendiendo de la Experiencia de Campo en América Central. Washington, D.C.)

A father belonging to the School Report Card
Analysis Group in Chinandega, Nicaragua,
presents results to the educational community.



- The recognition that teachers are capable professionals, eager to think about education theory and practice, and not simply implementers, expands the dialogue between teachers and political and administrative authorities and contributes to creating the conditions for the exercise of professional creativity. This has been demonstrated by the CERCA project in a variety of national and regional forums.
- To the extent that principals recognize their discretionary authority, they can make effective changes in the school. A frequent example of this is the use of time: principals in rural schools served by the EXCELL project often believed that they did not have the authority to change the school schedule. When it would be clarified that this was under their purview, they would encourage or make changes conducive to making the most of class time.

#### Sharing of Experiences as an Opportunity to Empower Teachers

■ When teachers and principals meet, they have an opportunity to get to know one another and share experiences. Besides the informative value of these activities, there is a palpable sense of motivation and a spirit of unity that is created when teachers feel empowered. Projects including AprenDes, BASE, CERCA and EXCELL have held or sponsored very productive national, regional and local experience-sharing sessions among teachers, principals and/or parents. The boost of energy and enthusiasm participants experience in these meetings is important to their

#### Following a Good Example: A Principal Who Learns From Others

Josefina Mejía, principal of Las Guanábanas School, near Azua, in the southern part of the Dominican Republic, wants to solve a problem facing all the region's schools: "The authorities require teachers to attend a 'pedagogical colloquium' the first Thursday of every month. Even though in our school we can leave the children working alone for a while without the teacher, in the urban schools or where there are more discipline problems that can't be done."

In response, she turned to an idea she heard a year ago at a Regional CERCA Workshop: "The experience with the 'parent pool' that was described there really appealed to me. At our school, working with the Friends of the School Society, the school board and the student council, we are going to organize a team of community members who can

take turns coming in to talk to the kids about interesting topics about which they have expertise. For example, they could talk about how the community or the school began; and leaders from the mothers' club, the farmers' association and the youth club could talk about their activities. I've already made a proposal to the authorities and the other principals in the district."

"Before the new school year begins, we will meet at our school with groups from civil society and with the mayor and other politicians, so that everyone can get involved. I would like to see this idea spread to other schools and to have it be formally sponsored by the district authorities. It would also be nice to have regional meetings."

ability to make changes in the school and classroom, and to sustain these changes.

- ✓ The 'Maria Teresa Argueta" School in Comayagua, Honduras organized an educational materials fair that got parents involved in the school through making educational materials with local resources. The fair has sparked a lot of interest among teachers and principals from nearby schools, giving them an opportunity to share what they know about handmade educational materials.
- ✓ Following a gathering of teachers and principals in the Dominican Republic, one of the school principals had this to say: "The presentations were so natural and so straightforward, they make me think about my school and that we can do it too! We are already doing some of it—we have a parent in each grade, and they take turns helping us out. I'll call them the 'parent pool!' Thank you so much! It's great to learn from others' experience."

#### **Cultivating Pedagogical Leadership in the School**

- Inviting principals to review their role with the teaching staff in the schools fosters interactions around pedagogical processes and rethinking of the principal-teacher relationship, shifting from a top-down relationship to a more cooperative one. This was a frequent experience in the EXCELL project:
  - ✓ "The Project ... got me to change by seeing things in a different light, to trust my teaching colleagues more, to learn to delegate, to see the students

#### Strengthening the Teacher's Leadership in the Community

Self-esteem building is one of the critical components of the training given to teachers and managers by the Salvemos el Primer Ciclo program in Honduras. With this goal in mind, teachers are supported in their role as shapers of society and to strengthen their self-image as individuals who grow and reach their goals.

Among the facets of self-esteem that are addressed, one that clearly serves to empower teachers is reestablishing their role as community leaders. During the social motivation training, this is worked on intensively over two or three days. It is then treated as a crosscutting theme in the study of other subjects, including pedagogical methodology, performance evaluation, and participatory management in the school and the community. This focus seeks to get teachers to have a clear sense of why they should use one strategy or another and how to adapt it to the situation at hand.

For students, success means that what they learn in school helps expand their opportunities.

Students in a classroom in Comayagua, Honduras.

as the center of our work, to take parents into account and make them feel that they are important." (Principal, La Libertad, El Salvador)

#### Interventions that Make Better-Qualified Teachers

#### **Professional Education that Stimulates Creativity**

- In-service education gives teachers and principals a better grounding in the theory underlying their teaching techniques, it informs them about teaching approaches in other settings and it lets them practice skills that are critical to innovation.
  - ✓ Reviewing cases and reflecting on their implications, as is done with the "Aprendo, Practico, Aplico" ("Learn, Practice, Apply") method developed by BASE II in Nicaragua, helps teachers to devise their own solutions. This training focuses on putting active education into practice, rather than just talking about it and the theory behind it.
  - ✓ Monthly in-service education sessions for rural school principals in the EXCELL project offered participants specific information on how to use manuals for new pedagogical practices in language and math that they could use in the school with their teaching staff.
- Taking steps to ensure that teachers have mastery over the subject matter they have to teach (such as teacher selection and assignment based on their specialty or in-service training programs) leads to innovation. The capacity to teach and



A first-grade teacher at work in Honduras. In-service training helps teachers gain a better understanding of the theory underlying pedagogical interventions. especially to innovate in teaching is based on teachers being confident of their subject mastery. When this capacity is missing, it is not easy for innovation to take place and the children's education suffers.

#### **Mutual Learning through Reflection and Mutual Support**

- Periodic workshops with principals, teachers, parents and students help build a team culture centered on educational quality.
   In BASE II, this information sharing was an opportunity for them to compare their experiences with model school practices.
- In exchange visits by members of the educational community to different model schools during the BASE II project teachers saw first-hand how others were responding to pedagogical and organizational challenges that they, too, were facing.
- In the departments of Chalatenango and San Vicente in El Salvador, principals voluntarily reproduced the pedagogical materials received from EXCELL and demonstrated their use for their colleagues who were not part of the project.
- In "inter-learning circles," teachers organized in small groups, with or without orientation from project facilitators, share and examine their experiences using the methodology learned through the AprenDes project.

#### **On-site Monitoring that Recognizes and Supports Innovation**

 Closely monitoring the schools and high expectations from demanding facilitators contribute to the self-esteem and initiative

#### A Professional Association Supports Success in the Classroom

In Honduras, the "Honduran Association for the Advancement of Professional Teaching" (COLPROSUMAH) provides training to its membership on trade unionism and leadership and also on a range of topics for their professional development as educators. This role, quite unusual in teachers' professional associations, began in the 1980s with support from the Norwegian international cooperation agency. In 1998, the COLPROSUMAH Institute for Pedagogical Training and Education was created. It now covers all 146 union locals and is self-supporting, with teachers paying 0.5% of their monthly base pay to fund it.

With five regional centers able to house groups and paid regional coordinators, the Institute offers one or two week courses, taken by many of its members around the country. It also publishes a monthly newsletter and trains trainers, who in turn run small study circles. Professional development issues are addressed, including evaluation techniques, teaching administration, and self-esteem building. The study circles, which the Institute supports with print materials, supervision visits and operating funds, provide a venue where teachers can help each other overcome the challenges they face in teaching different subjects in a variety of settings.

In 2004, the Institute, together with the Universidad Pedagógica, conducted a study showing that this training had awakened teachers' interest in professional development, had a favorable impact on the country's education indicators and contributed to greater interaction with parents.

of those participating in educational processes and technical assistance.

- ✓ Specialists delegated by the Nicaraguan Ministry of Education monitored education during the BASE II project: "We were constantly assessing together the weaknesses and strengths of the school. The specialist visits the school to monitor it, make observations and give advice about pedagogical needs. With the specialist's support, we have improved scientific training, class preparation, academic achievement and the school's reputation." (A school principal)
- ✓ In the AprenDes Project, the project's facilitators also monitor the teachers both in the inter-learning circles and in the schools.
- ✓ The demonstration of language and math pedagogical practices in-class and with principal and teacher circles, done by the EXCELL project facilitators, contributed to methodological mastery that was then used in preparing the proposal for Pedagogical Innovation Projects in the schools.

#### **Developing Educational Materials that Aid Teacher Creativity**

- One powerful resource is the development of teacher guides and student self-learning guides. In AprenDes and BASE II, these materials have been developed by the teachers themselves, who can put their creativity into practice and ensure that the materials are relevant to their students.
- Class guides prepared by EXCELL, with detailed instructions about how to approach specific math and language subject matter, were very well received by the teachers. Their standard



The teacher as facilitator, guiding active learning in a school supported by the BASE II project in Nicaragua.

format helps the teacher feel secure, but at the same time it permits the flexibility for deciding at what time and in what way to use the suggested practice.

#### **Opportunities to Validate the Theory in Practice**

- When teachers and principals use the concepts and practices developed in the course of the projects, it gives them the opportunity to validate their usefulness and to also make changes in them to fit the circumstances. In the case of BASE II, the Aprendo, Practico, Aplico (APA) methodology and the 10 building blocks of a model school leave room for the participating school to determine which aspects to introduce and in what order.
- Pedagogical Innovation Projects (PIP) invite the school's team to define the outcome they want to see in response to a pedagogical challenge, by posing three key questions: What do we want? How will we get it? How will we measure it? Tackling these projects let the EXCELL participants put their creativity to use for dealing with situations particular to their schools.

## Interventions that Develop the Institutional Framework

#### **Activities that Foster Collective Innovation**

■ New opportunities can be created for innovation when together, teachers, parents and students assess the conditions in their school and take steps to improve them. Using the School Report Card,

#### **Monitoring Progress Together**

In the course of the "Salvemos el Primer Ciclo" project in the schools of the Department of Comayagua, Honduras, training was given to MOE administrators (district and municipal directors, technical assistants and supervisors), who in turn, have trained principals and teachers in a range of strategies for active, participatory pedagogy. A key element in this approach is the frequent evaluation of the progress each student is making in learning the subjects.

Teachers are using a progress monitoring chart, based on a curriculum calendar that they prepare themselves, which shows the Spanish or math subject-matter that each student has learned so far. The chart helps the teacher recognize early on when some of the students are having trouble, and he or she can then adjust his or her teaching techniques to improve results. The chart is

generally on poster board, making it easy to show to parents, who are invited to visit the classroom frequently. This way, the teacher can get the mother or father involved in coming up with solutions that help their children learn.

Not only are the students monitored, but also the teachers, who like the students are monitored through frequent visits from the administrator. These visits have the purpose of supporting teachers in their efforts to look for ways to overcome the obstacles that have arisen in the classroom; they are not for the purpose of controlling and judging their performance.

This effort has resulted in improved Spanish and math scores in the schools in the Department of Comayagua, which in the past had had the lowest achievement levels. developed by CERCA, a group of teachers, parents, students and community members gather and analyze information about current conditions in the school. Teachers share information about their practices in the classroom, along with their problems and solutions. The innovations that arise from a collective effort will already have the community's approval or support for implementation. The creativity of the teacher or principal also manifests itself in the ways they encourage others to become involved.

- ✓ A mother who participates in the Analysis Group of a Guatemalan school said, "I felt inspired to be here because I want to support my children and all the others. The principal says that the fact that I don't know how to read and write isn't an impediment, because here, what is important is to speak up and analyze why things are the way they are and how we can improve them."
- Even though innovation often comes from the efforts of individual teachers in the classroom, the success and sustainable dissemination of the change is greater if other agents in and around the school are fully involved (teachers, students, principals, parents, community leaders, and Ministry of Education pedagogical advisors and administrators).
  - ✓ "What made this school unique (El Simiente Kindergarten in Nicaragua) were the myriad 'extra' activities that were done under the creative stewardship of its principal, with the steadfast support of parents and the community, and with MOE municipal and departmental specialists." (Richard Kraft, researcher)

#### **The Parent Pool**

At the "Calixto Moya" School in the municipality of Masatepe, Masaya, Nicaragua, the parents came up with this initiative to ensure that classes would not be cancelled when the teachers had to be absent. It has enabled planning so the students have classes when the teachers attend trainings, it has empowered parents by giving them the opportunity to act as teachers reinforcing learning in the classroom and it has contributed to families recognizing how valuable the teacher's work is.

Each classroom made a list of parents willing to help out with reinforcement activities. The teachers organized training sessions for the parent volunteers. The training

included the use of a learning review sheet. When a teacher needs to be absent for work-related reasons, he or she turns to the parent pool. The teacher communicates with the person who will be the substitute and gives him or her a reinforcement sheet. The parent reviews the sheet ahead of time and can then prepare for providing reinforcement. The day the teacher is absent, the students are taught by the parent.

The Parent Pool contributes to keeping up the number of productive class days and to linking up parents, teachers and students through learning activities in the classroom or in other educational settings.

## School Settings that Make the Most of Collective Community Efforts

- Schools can systematically organize parent involvement in pedagogical processes. The experience at the "Maestro Calixto Moya" School in Nicaragua is one clear example. One hundred seventy-one parents from different grades have signed up for a *Parent Pool* to act as substitute teachers and tutor children, assisted by a *learning reinforcement sheet* explained to them by the respective teacher.
  - ✓ "I would meet with the parents and explain to them what they would be doing in the afternoon. The idea was to spark their interest in helping their children to learn and also in seeing how they work in school."

    (Teresa Alemán, teacher)
  - ✓ "It was exciting, marvelous; my son was proud of me, asking me when I would teach his class again." (Francisco Casco, father)

## Intervening Simultaneously at Several Tiers in the Education System

- By involving not only principals, but also pedagogical advisors and the head of the school district, the EXCELL project encouraged more systematic planning for introducing innovative pedagogical practices in the department of San Vicente, El Salvador, making them more sustainable.
- The early involvement of the Nicaraguan MOE's municipal and departmental delegates has ensured that the BASE II project's



✓ Francisco Casco, a father, sharing his experiences in the "Parent Pool," at a meeting organized in Masatepe by the Nicaraguan CERCA group.

- perspective and practices will be assimilated into the MOE's philosophy, meaning that any change in a school will have a ripple effect on other Ministry levels. This perspective has spread to the point where it is expected that the model will be expanded to over 2,000 schools in 2005.
- In each of the countries where the CERCA project works, groups of stakeholders committed to local participation for improving education have convened meetings to disseminate the project's results. At these events, teachers, principals and managers have learned about research findings and the results of the "school report card" field tests. This has generated a lot of excitement over community participation in monitoring and in supporting educational quality.

#### **Innovative Processes that Indirectly Affect Pedagogy**

- Sometimes, indirect interventions turn out to be as important as substantive innovations in pedagogy and educational quality. In Nicaragua, between 1994 and 1998, the BASE project successfully lessened the administrative demands on teachers' time by distributing texts and books to schools and decentralizing educational administration, among other activities. All of this contributed to having the methodological innovations in the model school, implemented with support from BASE II, successfully take hold in the education system.
- The CERCA project found that the most effective innovations where community participation can contribute to educational quality in the school are those that provide the conditions for teachers and students to be able to spend more time on their essential task: teaching-learning.

## **Elements for a Strategy to Foster Teacher Innovation**

#### **Some Principles**

In the previous section, the teacher's role as innovator was presented together with several ways to reinforce it, in three dimensions:

- Teacher empowerment
- Teacher qualifications
- Strengthening the institutional framework in which they work

The section below provides additional detail on possible interventions, which can serve to strengthen the creative and constructive roles of teachers and principals through policy decisions and professional development for teachers.

#### **Acting on Systems**

A variety of programs and projects show that the interventions that most sustainably support innovation include actions that are mutually reinforcing, with diverse actors at different levels. Promoting the innovative role of teachers should include working with teachers and with the individuals and institutions with which they interact.

- One of BASE II's strengths was working with teachers, principals, students, parents and Nicaraguan MOE municipal and departmental specialists so that everyone would understand the "new school" philosophy and how it works. The training, manuals and experience sharing helped to organize all the activity in the school around the new school model.
- A priority of the multi-sector groups convened by the CERCA project has been the construction of a common perspective on

The interventions that most sustainably support innovation include actions that are mutually reinforcing, with diverse actors at different levels.



The fundamental reason for classrooms, schools and ministries of education is to ensure children's effective learning through quality pedagogical processes.

- community participation that political actors, civil society representatives, Ministry of Education specialists, teachers and principals can advance.
- The education, reflection, and actions of principals and managers around pedagogical leadership and the central role of pedagogical processes during the EXCELL project in which personnel from schools and MOE offices began to speak the same language.

#### **Effective Learning is at the Heart of Education**

The fundamental reason for classrooms, schools and ministries of education is to ensure children's effective learning through quality pedagogical processes. Effective learning prepares children for continuing their education, living a productive life and finding self-fulfillment as individuals. Quality pedagogical processes engage students in their own learning through critical and constructive thinking, using the means that are the most relevant to the subject, the learner and the circumstances. Both policies and pedagogical processes in the classroom should include educational quality as a criterion for success.

- For teachers and principals, success is achieved when children attain **specific, measurable competencies** as a result of effective pedagogical practices being applied in the classroom.
- For officials and decision-makers in the education system, success is reached when the curriculum, the administration and the sector's resources are **contributing to empowerment, improving**

#### A Clear Goal: Get all Children Reading

In section A of first grade, in the Luis Alberto García López School in the Fátima neighborhood of the town of San Marcos, department of Carazo, Nicaragua, 10 children were having trouble differentiating between the letters and their corresponding sounds. In dealing with this problem, the teacher and the school's principal decided to get the parents of the class involved, organizing them into work groups to directly support class work and get all the students reading by the end of the term.

The parent groups aided the teacher, systematically monitoring the children's attendance and punctuality, acting as classroom monitors so the teacher could have more time to give students individual attention, preparing support materials so that each child could reinforce their individual work—letter, syllable and word games, etc.—

and helping to lead games in the classroom, making learning fun and interesting for all.

Of the 10 students, four caught up and the others made progress at their own pace and to the best of their abilities. Another important outcome was that by contributing their own efforts in the classroom, the parents got interested in their children's learning. In addition, communication improved with parents who had rarely come to the school before.

This experience in section A of first grade combines innovations made by the Luis Alberto García López School with methods contributed by the BASE II Project, which chose the school as a new outreach center for successful pedagogical experiences.

## teacher qualifications and strengthening the institutional framework for quality education.

■ For students and their parents, success means that what is learned in school **is relevant:** it expands their opportunities for a decent, productive, meaningful life.

#### **Education is a Right**

Education is a right that citizens have, not a gift bestowed upon them by the State.

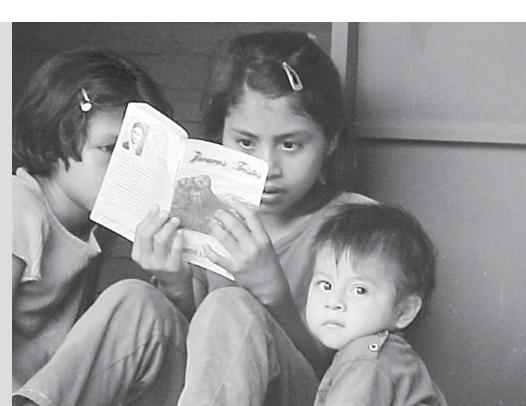
- By demanding quality education, parents and students are supporting the teacher's mission and fulfilling their role as citizens in relation to the government that provides the service, using resources obtained from taxes or foreign lenders.
- In addition, education is an "empowering right" that gives people opportunities, not just knowledge.
- By seeing education as a citizen right and as an obligation of the State, it becomes clear that all local government institutions also have the responsibility to ensure that right.

#### The School Community Must be Engaged

To ensure that effective learning and pedagogical processes are at the heart of the education system, all stakeholders must be engaged.

■ At the local level, the education system is the school community, composed of parents, teachers, principals and students. Any

By reading, this Salvadoran girl has access to her country's cultural wealth and inspires her younger siblings.





Teachers and principals are agents of change.

Successful teacher education and training programs ensure that the theory is put to the test in practice.

- intervention that is tried in the school must recognize that **all** its members are agents of change and development.
- Education policy and its institutional framework should encourage parents' interacting with the school, especially through non-instrumental participation, by encouraging and respecting parents' civic engagement and involvement in pedagogical processes.

#### **Teachers Need Space and Support**

Teachers and principals are agents as well as **active subjects** of change. In each school's setting it is necessary to ensure the opportunity for creativity, as well as creating a "safe space" for testing innovation, which will ensure teacher empowerment. Ultimately, each teacher must take charge of his or her work. However, decentralized, local MOE authorities (the authority figures closest to the school), school principals, and parent leaders are the ones who can send signals and create the conditions for this empowerment to develop.

#### **Reflection is Essential to Teacher Education**

Successful teacher education and training programs ensure that the theory is put to the test in practice through monitoring and reflection. In this way, student teachers develop the capacity to continually learn from their own practice and from the experiences of others. This is a vitally important skill for any professional—especially in the classroom setting, where new challenges emerge



Students in Guatemala learn geography by putting together a jigsaw puzzle their teacher made. daily. Too often the processes for teacher education and professional development neglect the need for reflection and active participation by the teacher-subjects, even in countries with an education reform agenda that is supportive of active education in the classroom.

# Sticking to Objectives

Change is slow and uncertain. The shift from a culture of authoritarian instruction to a culture of innovation is going to take more than one short intervention. However, the fruits of a sustained institutional commitment can be well worth the wait.

■ The awareness of all agents and levels in society must be raised so that the results of teacher innovation are recognized and encouraged, even when small, and a long-range view of education is sustained.

# With Empowerment and Qualifications Comes Responsibility

When there is trust in individuals and in their capacity to solve problems creatively, it harnesses an enormous store of energy. However, this also entails responsibilities.

■ Empowered, qualified principals and teachers in schools should be aware of and assume the responsibility of being accountable for making good use of the resources and opportunities they are given. More directly, they are accountable to institutions-the school, the Ministry of Education-and above all, the community that entrusts their children to them.

Empowered, qualified principals and teachers in schools are accountable to the community that entrusts their children to them.

A student anxious to participate in a rural school in El Salvador.



# **Toward a Strategy to Foster Teacher Innovation**

The experience of AED and other organizations in implementing educational projects in Latin America illustrates how the teacher's role as innovator can be systematically encouraged. This experience supports the need for three sets of factors to support teacher innovation: 1) factors that support teacher empowerment, 2) factors influencing teacher qualification, and 3) factors relating to institutional characteristics.

In the preceding pages, we have identified principles for any innovation this field. Below, we present components for a strategy to foster teacher innovation that are based on these principles and the experiences discussed above. For each possible component, key actors are identified who would be the ones to carry out the actions. As with any development or other social change proces—which by its nature is not controlled by any one actor—effective action requires consultative and collaborative processes to ensure that the key actors and stakeholders have shared understandings of the action and its purpose.

What	Who	How	Why
Raise visibility and awareness about the creativity that principals and teachers already have.	<ul> <li>Teachers' professionals associations.</li> <li>Ministries of education: higher authorities.</li> <li>NGOs.</li> </ul>	<ul> <li>Events: workshops and lectures.</li> <li>Event announcements and case reports disseminated in the mass media and professional publications.</li> <li>Prizes awarded to teachers, teams of teachers and schools that have developed successful innovative approaches.</li> </ul>	<ul> <li>Teacher empowerment begins by recognizing its importance for the educational process and for effective learning.</li> <li>Professional associations, with their mandate to defend and promote the profession, have a vital role in defending teachers' creativity and in ensuring the continuity of ministerial support in the midst of change.</li> <li>Innovation does not happen by decree. An institutional environment conducive to teacher creativity depends on creating awareness of the importance of this force among managers and administrators, principals, teachers, parents and in the mass media.</li> </ul>
Innovation- oriented human resources management.	<ul> <li>MOE departments of planning, human resources and budgeting.</li> </ul>	■ Foster policy dialogue and education that link managers and teachers together around concrete improvements in pedagogy.	■ For the teaching profession to "run the risk" of innovating, it is necessary to create "safe" institutional conditions and organizational climates and to reward creative behavior that improves pedagogical processes and educational achievement. Those who administer human resources for the sector and those who set the criteria for allocating funds should learn and practice this lesson.

What	Who	How	Why
Engage the education community in innovation.	<ul><li>Central and local authorities.</li><li>School principals.</li><li>Community leaders.</li></ul>	<ul> <li>Promote policy dialogue around decentralization, autonomy and school accountability.</li> </ul>	Ministry authorities, principals and community leaders are the ones who can send out signals and set the stage for teacher empowerment to develop in a safe, creative environment.
Create opportunities for reflection, critical thinking and creative action.	<ul> <li>MOE teacher professional development departments, universities, normal schools and other teacher education centers.</li> <li>Teachers' professional associations.</li> </ul>	<ul> <li>Design pre-service education and in-service training to include theory, peer discussion and supervised student teaching processes that link theory and practice.</li> <li>Foster peer reflection circles.</li> </ul>	<ul> <li>The entities devoted to pre-service and in-service professional development, as well as teacher education centers, need to ensure that their efforts to educate and mentor teachers and to foster reflection and communication among them, also recognize and foster teacher innovation.</li> <li>Professional associations have the responsibility to strengthen critical and constructive thinking among their members.</li> </ul>
Measurement and monitoring.	<ul> <li>Ministries of Education: monitoring and evaluation departments.</li> <li>Educational communities: education boards and others.</li> <li>Local and mass media.</li> </ul>	<ul> <li>Develop and validate indicators for pedagogical innovation and community participation.</li> <li>Awareness raising and training for community members, journalists and other public-opinion-makers.</li> </ul>	<ul> <li>When innovating, teachers choose to do things in ways that can work when given new challenges. Monitoring and evaluation units should gather and disseminate information that will be useful to teachers and communities for interpreting the outcome of their innovations and in making decisions.</li> <li>Educational communities, in particular those parents who are most involved in the schools, can do monitoring and provide feedback to principals and teachers about the results of their decisions and innovative actions.</li> </ul>





↑ Top, Playing Batería X math games, created by a teacher in Santa Tecla, El Salvador.

Top, right A principal sharing ideas with teachers in El Progreso, Guatemala.

Students and teachers from Aldea Xequixtun, Quiché, Guatemala.

✔ Below,<br/>leftA wheel combining number<br/>and colors is one of the<br/>Batería X games.

Below, Student in Azua, Dominican Republic, shows her schoolwork.





# **Annexes**

# **Description of Projects and Initiatives**

Following are descriptions of the principal projects through which experiences with innovation and support for innovation were identified in the countries mentioned. It should be noted that in some cases the innovative experiences predate the projects or occurred outside the projects. However, it was through the staff or documentation of these projects that it was possible to gain access to the information gathered.

## **AprenDes**

The "Innovations in Decentralization and Active Schools" Project is designed to link decentralization processes to learning processes, fostering school and community activities that aid in developing children's capacity for active participation in the democratic, social and economic development of their communities. It also encourages turning successful practices in the schools into regional and national policies.

Funded by the United States Agency for International Development (USAID), the project intends to contribute to Peru's participatory democratic transition and economic development, by reinforcing the local administration of quality primary school programs in areas classified by USAID/Peru as being strategic.

In collaboration with the Ministry of Education, regional education officials, school personnel, the National Education Council (CNE), regional and municipal government authorities, public and private sector entities, and members of civil society, the project aims to transform "passive community schools" into "active community schools," exemplifying the use of active learning methods in class and the active participation of parents and communities in

classroom learning activities, student life, information dissemination and administration.

The project is planned to run from July 2003 to September 2007 and AED is responsible for its technical implementation.

## **BASE and BASE II**

The Basic Education Projects in Nicaragua had the objective of improving educational quality in Nicaragua by advancing modern teaching methods and community support for schools, as part of a long-term U.S. cooperation and technical assistance effort with the Nicaraguan Ministry of Education. Funding came from the United States Agency for International Development (USAID).

These projects emphasized rural education, bilingual education, parent and community involvement in improving educational quality, and the development of educational statistics and applied research. Additionally,

the Model School program was conceived of as a strategy for strengthening 170 urban, rural and bilingual schools in 101 of the country's municipalities, with the goal of making them into training and demonstration centers for neighboring schools.

The BASE Projects changed the way teachers teach, children learn, and primary schools are run in Nicaragua. The experience confirmed that even in an impoverished setting, schools can be well managed locally and children can learn quickly and well. These projects were implemented between 1993 and 2005 with technical support from AED and Juárez and Associates, Inc.

As the result of the success of these projects, the Ministry of Education and USAID entered into an agreement for a new cooperation project, which will expand the BASE and BASE II experience to 2,000 schools around the country.

**▼** The BASE projects changed the way teachers



## **CERCA**

The objective of the Civic Engagement for Education Reform in Central America Project is to create conditions for the active engagement of parents and local communities in improving primary education, by strengthening the actions of local actors advocating for better education and participating in school-support activities.

This is a project funded by the United States Agency for International Development (USAID), implemented through a cooperation agreement with the Academy for Educational Development (AED), with support from Management Systems International (MSI). It is being implemented between October 2002 and March 2006 in five countries:

El Salvador, Guatemala, Honduras, Nicaragua and the Dominican Republic.

CERCA facilitates collective action in each of the countries to promote local engagement in schools. It receives strategic guidance from a Consultative Committee comprised of two individuals from each country who are well known for their community and educational experience and leadership. It is also guided by the results of a regional qualitative study on citizen participation done in 13 schools. A group of diverse stakeholders including civil society organizations and members of the local, municipal and national public sectors including representatives from the Ministry of Education and USAID has been formed in each country. Each group carries out activities according to its own Action Plan, in partnership with CERCA.

Regionally, the project developed and field-tested a model School Report card for the purpose of strengthening participation by educational communities in analysis and proposals for improving the schools' educational quality; it involved teachers, school principals and teachers professional associations in proposing strategies for creating conditions that foster innovations in the schools; and it stimulated country efforts for identifying and developing Citizen Participation Indicators, useful for national groups in promoting changes in attitudes, policies and practices in their respective countries. Through publications and the www.CERCANET.org website, the project has disseminated the research results and has facilitated experience sharing between countries.

## **EDUCATODOS**

EDUCATODOS is an initiative of the Honduran Secretariat of Education that is designed to increase the coverage of the third cycle of primary education—7th, 8th and 9th grades—to improve low-income children's quality of learning and increase enrollment. It offers an alternative model for secondary education. EDUCATODOS centers are located in a variety of settings, such as maquilas and microenterprises, NGOs, government and municipal facilities, and vocational and academic schools. The components of the EDUCATODOS system include print learning materials, audio programs and volunteer facilitators who catalyze the learning process, plus an evaluation that strengthens and certifies learning, while at the same time validating the materials and the program's impact.

The Improving Educational Quality II Project (IEQ II-Honduras), a cooperation and technical assistance initiative with the Honduran Ministry of Education, through the United States Agency for International Development (USAID), was implemented to support the EDUCATODOS program with curriculum development and curriculum materials for the third cycle of primary education.



Napoleón Morazán, Director of the Institute for Pedagogícal Research, Education and Development, of the COLPROSUMAH teachers' association, talks about participation at a workshop of CERCA's partner group in Honduras.

The activities of the IEQ II-Honduras project included strengthening the EDUCATODOS support network, institution building for the program's implementation and sustainability, and support for Honduran educators and youth in their efforts to recover from the effects that Hurricane Mitch had on the Honduran education system. The project was implemented between November 1999 and April 2002 by a consortium lead by the American Institutes for Research (AIR), with the Academy for Educational Development (AED), the Educational Development Center (EDC), Juárez and Associates, Inc. and the University of Pittsburgh.

## **EXCELL**

The Excellence in Classroom Education at the Local Level project was designed to address El Salvador's educational priorities and improve student performance in 250 rural schools, from preschool to sixth grade. This was a U.S. technical and financial cooperation project with the Salvadoran Ministry of Education (MINED), as part of Strategic Objective 1 of the USAID/El Salvador Mission ("Expanded access and economic opportunity for El Salvador's rural poor families").

EXCELL focused on developing the abilities of principals to lead efforts to improve education in schools; on strengthening Ministry of Education mid-level management capacity in support of school principals; on strengthening MINED's capacity to process and use information about education quality; and on increasing the quantity, availability and use of educational research for policy-making in this sector.

The Project included three components: a) strengthening MINED capacity to improve decentralized school administration and modify and implement education reforms; b) improve learning conditions and student achievement in at least 250 rural schools from preschool through sixth grade, through education and technical assistance for school principals and the introduction of innovative pedagogical practices; and c) expand education policy research through policy

studies and fostering dialogue around their results.

EXCELL was implemented between July 2003 and June 2005 by the EQUIP1 consortium, led by the American Institutes for Research (AIR) and including the Academy for Educational Development (AED) and the Joseph P. Kennedy Foundation.

→ Principals in the EXCELL Project in El Salvador working in groups.



## Salvemos el Primer Ciclo

The Salvemos el Primer Ciclo (Let's Save First Cycle) Project, which ran in Honduras between 2001 and 2003, had the objective of decreasing rates of dropouts, repetition, absenteeism and over-age in first grade students, focusing on the subjects of Spanish and math. This was a U.S. cooperation and technical assistance effort with the Honduran Ministry of Education, through the United States Agency for International Development (USAID).

The approach of Salvemos el Primer Ciclo, which was used in 5,880 selected schools, centered on developing the attitudes and knowledge teachers need to actively involve students and their parents in learning. The teaching methods that were developed included frequent, collaborative progress evaluations of each child, so that the children and their parents would see the evaluation as an exercise in continual assessment, and not as a judgment.

The project used training at all levels (district supervisors, principals, teachers, upper-class normal-school students, and student tutors in their last year of high school) and open letters and materials published in newspapers to communicate with parents.

The Ministry of Education's approach, with support from the Salvemos el Primer Ciclo project, transformed the traditional relationship between teachers and their students and their parents.

# **Additional Resources**

- PREAL (Programa Promoción de la Reforma Educativa en América Latina y el Caribe), Comisión Centroamericana para la Reforma Educativa (2003). Es Hora de Actuar: Informe de Progreso Educativo en Centroamérica y la República Dominicana. Washington, D.C., Santiago de Chile.
- PREAL (2005). Cantidad sin Calidad: Informe de Progreso Educativo en América Latina. Washington, D.C., Santiago de Chile. www.preal.org/infprogeduREG.php.
- Vegas, Emiliana and Ilana Umansky (2005). Improving Teaching and Learning through Effective Incentives: What Can We Learn from Education Reforms in Latin America? The World Bank, Washington, D.C.
- Kraft, Richard J. (1998). Rural Education Reform in the Nueva Escuela Unitaria of Guatemala (New Multi-grade School). Academy for Educational Development, Washington, D.C.
- CERCA Civic Engagement for Education Reform in Central America (www.cercanet.org): CERCANET is an interactive community where advocates for better education in El Salvador,

- Guatemala, Honduras, Nicaragua and the Dominican Republic can share and coordinate efforts. It provides a virtual forum that complements CERCA's goals for improving education quality and strengthening community participation for education.
- PREAL Grupo de Trabajo sobre Profesionalización Docente en América Latina (http://www.preal.org/GTD): The Program for the Advancement of Education Reform in Latin America and the Caribbean, PREAL, through an agreement with the School for Administration and Social Sciences of ORT University of Uruguay, began a Working Group on Teacher Professional Development (GTD). The Group analyzes policies aimed at teachers in different Latin American countries, promoting regional dialogue and disseminating successful experiences from the field.
- EXCELL Excellence in Classroom Education at the Local Level (in Spanish: www.equip123.net/equip1/excell/esp; in English: http://www.equip123.net/equip1/excell/default.htm): This page posts information and the products developed by EXCELL in El Salvador.
- EQUIP Education Quality Improvement Program (http://www.equip123.net): The EQUIP website includes information and products from the three global EQUIP projects of USAID, both from their core components and the projects in different countries. Most of the material is available only in English.
- GLP Global Learning Portal (www.glp.net): GLPNet is the result of a public-private partnership among AED, Sun Microsystems and USAID. The Portal expands the availability of educational resources for primary and secondary school teachers in developing countries. The Portal has set up six websites, in Brazil, Ethiopia, Mozambique, Nicaragua, Uganda and South Africa. During its first year of operation, over 1,000 teachers were involved in on-line discussions, the creation of educational materials and research on teacher education. The materials are translated into Spanish, French, Portuguese and English. The Portal documents how teachers use collaborative technology to learn and share around education for reading and writing, math, and specific topics such as HIV-AIDS.

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For additional information, please contact:

AED Global Education Center Academy for Educational Development 1825 Connecticut Avenue, NW Washington, DC 20009-5721 United States

(+1-202) 884-8030 Fax: (+1-202) 884-8408 contactinfo@aed.org

AED web site: www.aed.org