



Literacy and Health...

A Prescription for Economic Development?

Pan American Health Organization
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Opening Remarks

Linda Gambrell

President, International Reading Association

ON BEHALF OF THE BOARD OF DIRECTORS OF THE INTERNATIONAL READING ASSOCIATION (IRA) and more than 350,000 affiliated education professionals in reading associations from around the world, I welcome you to this fifth annual meeting of Global Perspectives on Literacy.

For more than 50 years the International Reading Association has worked to promote global literacy. IRA serves as an information network to create and disseminate valuable information about literacy education, focusing on current research, effective policies, and promising practices in both formal and nonformal educational settings. We accomplish this work through conferences, peer-reviewed journals and online publications, and international outreach programs. Through meetings such as this, IRA strives to reflect a broad-based view of literacy education, research, and policy.

Each year, the Global Perspectives on Literacy forum is convened to highlight a critical social issue. We believe that literacy, especially the ability to read and write with high levels of competency, cuts across all aspects of life and is the foundation for equitable and sustainable communities. Every day, through the skillful use of reading and writing activities, teachers help learners connect their school experiences to the world around them. For example, in recent years participants in Global Perspectives on Literacy forums have explored the ways in which reading and writing activities can be used to create and build more-inclusive classrooms and communities.

Last year, the Global Perspectives on Literacy forum examined the potential of reading and writing as pathways out of extremism. This year we've invited you—distinguished and experienced experts in the development professions, to explore the connections across education, health, and economic development.

We all know that health care is a critical global concern. It touches all countries—those in developing economies, as well as those in more affluent countries such as the United States. Infant mortality, childhood disease, alcohol, tobacco and drug abuse, and chronic illnesses such as asthma, diabetes, and HIV/AIDS are reported as abstract figures in government tables. But as teachers and as parents, we are on the front lines assisting those who suffer from hunger, disease, and the loss of loved ones.

You have come to this meeting because you also believe these are important issues. Many of you have been addressing and working on these issues throughout your careers. We hope to be able to tap that experience today. This forum is a time to share perspectives and it is also a time to raise questions. Today, we will explore the dynamics of educated, healthy individuals, and healthy communities with the ultimate aim of informing future policies and interventions that sustain economic growth.

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The forum planned for today will focus on one critical question: To what extent and under what conditions might health and education initiatives promote economic development and sustain economic growth? To begin to address this critical question about relationships across health, education, and economic development, we will need to explore the following questions: What criteria should be used to measure the outcomes of health and education initiatives that are designed to promote economic development and growth? And what intellectual and financial resources are necessary to achieve success with these health and education initiatives?

These are complex questions, and there are no easy answers. Perhaps, at the end of the day, we won't even agree that these are the critical questions. In any event, it would be unwise to think that we can definitively address this topic here today. We believe we have set a lofty goal for our forum, but one on which we can work together to make a difference in the health, education, and economic lives of individuals in our global community. We hope that this gathering will help to ignite further discussion, create new partnerships, and break new ground.

I invite you to join us in continuing today's discussion through the IRA journals, publications, and online resources (www.reading.org). I also want to invite you to continue this discussion at our annual convention in Atlanta, Georgia (May 5–8), and at the World Congress on Reading in San Jose, Costa Rica (July 28–31, 2008).

We probably will not resolve this important issue here today, but by the end of the day, if we have added some new lines of thought to the discussion, if what you hear today helps to form alternative strategies, if you simply make a new friend and colleague, then this fifth Global Perspectives in Literacy event will have been worthwhile.

The plenary session, attended by teacher education specialists, development specialists, public health experts, and educators in Washington, DC, with an additional 1,000 from abroad connected via Webcast, featured slide presentations on Mexico's Oportunidades program, by Dr. Jorge Escobedo, and on Chile's JUNAEB program, by Francisca Infante. They were followed by formal responses from four panelists. The attendees then split into two smaller groups for breakout sessions.

Greetings from the leadership of the Pan American Health Organization were delivered by Dr. Jose Teruel, its assistant director. He noted that PAHO, founded in 1902, is the oldest continually functioning international public health organization. He noted that education is a very important element in proper health, along with other elements that make life better, including nutrition, a good environment, clean water, jobs, housing, and security. "There is too much poverty in the world, and reducing poverty is our No. 1 goal," he said. "Today's meeting should provide just a few examples of ways to proceed, though the meeting is neither the start nor the end of our efforts. As we work together with colleagues from around the world, we hope to remove the question mark from the meeting's title and begin to decide what is possible in making the link between literacy and health to build a prescription for economic development and achieving the Millennium Development Goals."

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Mexico's *Oportunidades* Program

Dr. Jorge Escobedo

MEXICO IS A NATION OF CONTRAST, *wealthy in resources but with wide population sectors living in poverty. Nearly half of the Mexican population lives in poverty, and half of them, 25 million individuals or 5 million families, live in extreme poverty, in want of food and means for economic betterment. Mexico has one of the highest inequality indexes in Latin America. Poverty is concentrated in rural areas. While 35 percent of Mexicans (8.2 million households) live in rural communities, 59 percent of those living in extreme poverty live in rural areas (3.5 million households).*

Mexico has decades of experience in programs oriented to the poor population. However, most of these programs were inefficient because the subsidies were not targeted. Two-thirds of the budget for nutritional programs in 1994 emphasized generalized subsidies, producing a skewed coverage because 77 percent was oriented to urban areas but only 23 percent was assigned to rural households. Therefore, 59 percent of poor rural families received no support and 28 percent received less than \$8 (U.S.) per month in 1996.

In 1993, Mexico spent at least \$738 million for nutrition and alimentary programs, nearly \$275 per undernourished citizen per year, which was above the recommended \$250. In spite of this high investment, results in the lowering of chronic undernourishment in Mexico between 1988 and 1999 were unsatisfactory. The prevalence of stunting was 44.9 percent in the southern part of the country, where only 15.1 percent of the budget was assigned.

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THE OPORTUNIDADES PROGRAM: COMPONENTS AND CO-RESPONSIBILITIES

In 1997, the Mexican Government created a Program for Education, Health and Nutrition (PROGRESA) to support families living in extreme poverty. In 2002, the name was changed to *Oportunidades*, and the program has become one of the main instruments of social policy in Mexico. It combines the giving of monetary resources with coordinated interventions in health, education, and food intake.

Oportunidades has grown significantly in recent years. While in 1997 PROGRESA supported 300,000 families, nowadays *Oportunidades* covers 5 million families in extreme poverty.

The main goal of *Oportunidades* is to allow families that live in extreme poverty to fulfill their capabilities and widen their options for gaining wealth. This goal is achieved by

Evaluations have shown that children in the program attend school regularly, have balanced diets, and receive more regular medical care.

increasing their education, health and nutrition options and by helping link them with new services and development programs that improve their socioeconomic conditions and quality of life.

Because extreme poverty is concentrated in rural areas, seven out of each 10 client families live in communities with fewer than 2,500 inhabitants, many of them native Mexican Indians.

Oportunidades offers poor families scholarships for children and teenagers, from third grade through secondary school, as well as school supplies or money to buy them. Starting in secondary school (after six years of primary school), the amount of money from scholarships is higher for girls than for boys, to give them an incentive to stay in school. Nowadays *Oportunidades* offers scholarships to 5.3 million girls, boys and teenagers from families in extreme poverty. *Oportunidades* thus covers the whole circle of life in the families it benefits. Each family receives or may receive \$17 (U.S.) for nutrition support, \$24 for elderly adults, \$5 for energy support, and education subsidies anywhere from \$12 (for children in third grade of primary school) to \$75 (for girls in the third year of high school). Each family may receive up to \$187 (nearly 20 percent of the family income). In addition, a youngster who has finished high school may receive a \$272 (U.S.) savings fund.

Oportunidades provides monetary resources to complement family income and encourage better nutrition. The money is given to the mother in the household, because women generally are more efficient than men in distributing the monetary resources at home. *Oportunidades* also provides nutritional supplements for children less than 2 years old, undernourished children aged 2 to 5 years, and pregnant women or those who are breast-feeding. Youth who complete high school have access to a savings fund. All families in the program receive a basic package of health services and health-care workshops.

These supports to individuals in the program are aimed at hunger relief in the short term, as well as development of capabilities and a link to other development options in the long term.

Families in the program must assume some co-responsibilities. In the field of nutrition and health, all members of the family must go to health-care-services, and those older than 15 years have to attend self-health-care workshops. As for school attendance, all young men (8 to 21 years old), must go to school regularly, and high school students have to attend self-health-care workshops. Graduating high school students with a savings fund have to get a bachelor's degree before the age of 22, as well as set up their own savings account.

The Mexican government, sharing these *Oportunidades* responsibilities and the co-responsibilities of families in the program, helps poor families in urban and rural communities by investing in human capital.

OPORTUNIDADES' CONTRIBUTION TO NUTRITION AND EDUCATION

In the last 10 years, *Oportunidades* has been evaluated by independent experts from the International Food Policy Research Institute, the National Institute of Public Health, and the Research and Superior Studies in Social Anthropology Center in Mexico. These evaluations have shown that children in the program attend school regularly, have balanced diets, and receive more regular medical care.

Education

The impact of *Oportunidades* is evidenced by increased school enrollments and graduation rates in the country. Between 30 percent and 40 percent of high school students now

attend preparatory school (bachelors), and the graduation rates in high school has increased 23 percent. Registration for the first grade of preparatory school has increased 85 percent in rural communities, and 11-year-old children experienced a 46 percent reduction in the school dropout rate. There was also a 42 percent increase in the number of boys attending high school and a 33 percent increase in the number of girls. Also noted was a reduction in the school attendance gap between boys and girls, reflecting a change in parents' expectations regarding their daughters' education.

Health and Nutrition

Oportunidades families seeking preventive care increased by 35 percent in rural communities and 25 percent in urban ones. Observers noted an 11 percent decrease in maternal mortality and a 2 percent decrease in infant mortality. This program has had an impact on reducing stunting. In children younger than age 2, height has increased one centimeter and the prevalence of anemia has decreased by 12.8 percent. More than 90 percent of children who receive nutritional supplements have adequate consumption of iron, zinc and vitamins A and C. In children under age 5, the prevalence of stunting has decreased 10.8 percent in rural children, and the average number of days of child illness has decreased 20 percent. The prevalence of stunting has decreased 12.8 percent in the poorest communities of Southern Mexico. Decreases in unhealthy habits have also been observed among rural teenagers, such as a decrease in smoking rates (14 percent) and alcohol consumption (12 percent).

Ten years after its inception, *Oportunidades* has contributed to an important change in the lives of 25 million Mexicans. Positive impacts in education, health, and nutrition of the poorest families in Mexico have been widely recognized. The World Bank, the Inter-American Development Bank, the Economic Commission for Latin America and the Caribbean, the Organisation for Economic Co-operation and Development, as well as the United Nations Children's Fund have considered *Oportunidades* as a successful practice in social policy and a model to be followed by other countries.

HEALTH AND EDUCATION CHALLENGES

Oportunidades is seeking to increase the quality of the services provided to the affected population, as well as to increase coordination between health and education sectors, to increase coverage and quality of services. *Oportunidades* needs to promote a link with other social policy strategies to make more strides in reducing poverty. In the future, the challenge for *Oportunidades* will be to redefine health priorities. While undernourishment is still a problem, poor diets and eating habits have led to an increasing rate of obesity. Infectious diseases are a common cause of morbidity, but the increasing incidence rates of chronic conditions, such as diabetes, hypertension or coronary heart disease in the poorest populations, deserve new health and education policies. Health-care workshops are introducing these concepts in their contents, but formal education programs will have to be developed to address these lifestyle-related health conditions in their curricula. *Oportunidades* has been shown to be a program that focuses on results, and it must keep demonstrating this. (For further information, www.oportunidades.gob.mx)

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Education and Health: Steps Towards Equity and Development in Chile

Francisca Infante¹

IN CHILE, SCHOOL HEALTH has a long tradition, taking on a very important role at the end of the 1990s with public policy reforms aimed at reducing poverty and inequity in the nation. School health is an intersectoral program that acts at the national, regional, and local level to successfully place student health on the political and social agenda; empower communities of parents, teachers, and students to implement health promotion activities; and mobilize education and health authorities toward advocating for equitable access to health, education, and psychosocial programs.

Deserving of special mention is the Skills for Life Program implemented by Chile's National Association for School Assistance and Scholarships (*Junta Nacional de Auxilio Escolar y Becas*, or JUNAEB). The Skills for Life Program is a psychosocial intervention in the school setting that has shown direct impact in National Education Assessment scores. Chile has been successful in implementing a school health program. However, more efforts are needed to coordinate school health with other sectors that have direct impact on improving Chileans' quality of life and making the country's social development more equitable.

THE POLITICAL CONTEXT IN CHILE²

In 1990, as Chile began recovering its democratic tradition and remaking its political system, the nation began a process of strengthening social policies directed toward overcoming poverty. Significant reforms have been made in the education and health sectors.

The return to democracy transformed state action on social matters, complementing economic growth with social objectives. Living conditions improved significantly, particularly in income, education, housing, and health. These social advances are explained in part by sustained economic growth during most of the '90s, averaging 7.1 percent annually and doubling per capita income, along with the strengthening of public social action. Democratic values and rights-based approaches introduced new objectives for social equity and social justice, and advocates attempted to move strategies, both universal and focused, beyond social assistance and toward social investment and capacity building.

¹ Paper co-written by Francisca Infante, Advisor for the Subsecretary of Public Health, Chilean Ministry of Health and Maria Paz Guzman, School Health Program Director, Junta de Auxilios Escolar y Becas. Paper presented at Global Perspectives 2008 by Francisca Infante.

² This section has been adapted from Frenz, P. (2007). "Innovative Practices for Intersectoral Action on Health" Paper prepared for the WHO Commission on Social Determinants of Health. Ministry of education and the National Association for School Assistance and Scholarships (Junta Nacional de Auxilio Escolar y Becas or JUNAEB)



Both health and education reform had three clearly defined streams. First, sectoral policies centered on equal opportunity: guaranteeing an adequate level of services and benefits for all the population. Second, specific programs and intersectoral action were directed toward the poor and other vulnerable groups to ensure access to the opportunities available through sectoral policies, economic growth, and development in general. Third, a policy of decentralization was implemented. Local and regional levels received more resources and responsibilities for decision making, execution, and delivery. To support this process, mechanisms were reinforced to bring in private-sector actors, consultants, NGOs, and academic institutions in the design, planning, and carrying out of policies and programs. Following the focusing of policies, criteria for territorial equity were also introduced.

By the mid-'90s social policy innovation had brought a proliferation of new programs. A major one was school health as an intersectoral initiative between the ministry of health and the ministry of education, along with JUNAEB.

SCHOOL HEALTH IN CHILE³

Chile has a long tradition in school health services, starting in 1899 with the first Latin American woman doctor, Eloísa Díaz, who visited public schools in order to do medical exams and screening. In the 1950s, this became an obligatory vaccination and exam service to eighth graders. By the 1970s, health services in school settings had increased to nutritional, dental, and ophthalmological services. However, it was not until 1992 that school health became an institutional program and key strategy for assuring quality and equity of the educational system—and an Educational Reform Objective. Consequently, since 1992, the alliance between education and health has been working on solutions for ophthalmological, otolaryngological, orthopedic, and dental health problems.

The current school-health organizational structure was based on the coordination among schools, primary health care, secondary health care, and JUNAEB. JUNAEB was responsible for performing the health screening and providing health services at the school setting and referring vulnerable students to primary or secondary health care.

Most of the work was assigned to JUNAEB, which has the institutional commitment to feed the country's poorest schoolchildren with the aim of encouraging their continued attendance and providing support so that students can successfully complete their studies. Education and health authorities, along with other stakeholders, created Vida Chile, an intersectoral coalition responsible for coordinating and monitoring actions in order to assure that national, regional, and municipal strategies were reaching the poorest, promoting civil participation at the local level, and providing political support in order to place students' health on the political and social agenda. Vida Chile and the School-Health Program had complementary actions at every level of intervention.

By the end of the '90s, there was common agreement on the priority of student health as a cause and consequence of equity. In other words, integrated human development and a good academic success rate are both seen as crucial for equitable health outcomes; at the same time, health, psychosocial, and emotional environments are seen as vital to equitable academic success.

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³This section was adapted from JUNAEB's executive description: "Programa de Salud Escolar 1990–1996" (JUNAEB, 1997); and Evaluación del Proceso de Promoción de la Salud en Chile (1998–2006) y Recomendaciones para una Nueva Etapa (Jaime Sapag, 2007).

SKILLS FOR LIFE, A SUCCESSFUL PSYCHOSOCIAL SCHOOL PROGRAM

Building upon this systemic approach with school-health interventions at the national, regional, and municipal levels, JUNAEB's evaluators saw the need for incorporating psychosocial support to students along with the other health-care services provided in the school setting. JUNAEB developed the Skills for Life Program (SLP), an intervention targeting municipal and subsidized private schools, located in neighborhoods with high levels of at-risk children, particularly children from the first and second transition level of kindergarten up to fourth grade of primary school (children ages 4 to 9).

The aim of the SLP, in the short term, is to increase the academic success rate of schoolchildren by raising learning levels and lowering subject repetition and dropout rates. In the medium to long term, the program is seen as reducing health impairment (depression, suicide, abusive consumption of alcohol and drugs), preventing violent behavior and enhancing well-being, personal capabilities and life expectations.

The SLP's framework includes developmental, evidence-based interventions on prevention of mental health problems, child clinical psychology, and community-based strategies. The underpinning ideas of the SLP are:

- Kindergarten and primary school are the best alternatives to protect children at risk, minimize disruption in their development, and so reduce future psychosocial problems.
- Major importance is placed on the role and meaning of interactions with prominent adults in their everyday environment: the home and school.
- Interventions are more effective and efficient if they are included within the natural context in which children grow and learn: the educational community.
- The development of protective and preventive interventions represents an efficient strategy to protect children at risk in the long term.
- Focused preventive interventions require that the population most at-risk is identified, guaranteeing the results of such actions in schoolchildren.
- Intervention programs at local levels require a local network that facilitates and ensures efficient coordination between the school and external psychosocial support services.

To implement the SLP at the local level, JUNAEB calls public and private bodies (municipal authorities, municipal corporations, universities, etc.) to present proposals or projects within the framework of the Technical and Administrative Foundations of the SLP model. Such bodies ensure the sustainability and neighborhood insertion of the program.

JUNAEB has provided training, supervision, and technical support on a permanent basis for the teams responsible for project implementation at the local level. These tasks are the responsibility of the regional sections of JUNAEB and its national directorate, through the Student Health Program coordinators.

The set-up and continuity of the program are achieved through the progressive incorporation of children who enter class each year in establishments running the SLP. In each school, the SLP provides direct support in technical, administrative, and managerial aspects, with the final aim of guaranteeing the supply, within the educational community, of the know-how necessary for the effective development of psychosocial work.

The SLP program has six main areas developed from the First (kindergarten) Transition Level up to grade 4 in primary school, implemented on a continuous and progressive basis: These are:

1. *Promotion of psychosocial health and development in the educational community.* The aim is to promote mental health, by favoring the protective characteristics of teachers, parents, and children; through the self-care of the teacher; skills for creating a positive emotional environment in the classroom and positive interaction between parents and teachers, and the ability to effectively communicate and to establish healthy interpersonal relationships.
2. *Early detection of behavioral risks through standardized tests taken by parents and teachers.* The aim is to detect those children who demonstrate psychosocial risk factors and disruptive behavior in school and at home.
3. *Prevention of psychosocial problems and behavioral risks.* Children identified as at risk are sent to prevention workshops carried out in the school through group activities run by the psychosocial team during the second year of primary school (second grade). The objective is to modify antisocial behaviour, so contributing to a reduction in the emergence of mental health problems in the later school life of such children.
4. *Referral to health care and follow-up of children at greatest risk.* The means assuring access to mental health care, whether psychological, psychiatric, or neurological.
5. *Development of a local support network* in order to reinforce a local network that facilitates and ensures coordination between the school and existing support centers and psychosocial care programs at neighborhood level. The SLP carries out awareness and information interventions in the local community (workshops, activities) and establishes mechanisms that allow for the evaluation of the network's effectiveness. Another important objective of the network is to strengthen the existing capabilities and resources of schools to consolidate and maintain the program.
6. *Evaluation and follow-up of the program.* The objective of this unit is to provide regular and permanent evaluation of program administration and the efficiency of the proposed intervention model. This evaluation process includes the revision, processing, and analysis of information gathered for each unit or component of the program, during the different stages of SLP implementation, in each of the neighborhoods and schools taking part.

At present, 850 schools have SLP projects in 96 municipalities across the 15 regions of the country. This program covers 145,000 children, 116,000 parents, and 7,300 educators, at a cost of \$30 (U.S.) for each student. Direct action is implemented at kindergarten and during the first stage of primary education.

According to the evaluations, the most frequent risk factor for children is the lack of social contact, or shyness, found in 31.3 percent of children. A factor that occurs less frequently in the study group of children assessed is a low attention and concentration level, found in 16.7 percent. The prevalence of risk factors is significantly greater in boys than in girls. The results of risk profiles (a combination of risk factors) indicate that 19.0 percent of children present some form of risk profile. These profiles are present in 17.3 percent of girls and 20.7 percent of boys.

Impact evaluations of the program have shown that children who take part in preventive workshops significantly improve their risk behaviors and increase learning motivation as well as attention and concentration capacities. Boys also show improvement in

the risk levels for aggressive behavior, resulting in higher scores in the National Quality of Education Assessment (SIMCE).

CHALLENGES FOR SCHOOL HEALTH AND SOCIAL POLICIES

School health programs, especially the SLP, are successful comprehensive sustained programs targeting the poorest. Sustaining this program requires political will and support, intersectoral actions, school management strategies, classroom environment training, teacher–parent involvement and successful treatment and referral to health systems. The players exert direct impact on students’ psychosocial well-being and school academic performance. Currently, school health programs and the SLP are exploring strategies to broaden the programs’ audience to include adolescents by incorporating sexual health and livelihood skills, as well as sustaining their focus on early childhood development.

The School Health Program has been very successful in the intersectorial action between the Ministry of Health, Ministry of Education, and JUNAEB. However, there is still a need for coordination with other sectors that provide direct services to school settings such as the Ministry of Interior with its drug, alcohol, and violence prevention programs; and with other government ministries such as Housing for comprehensive interventions in the neighborhoods and houses where children live, and Agriculture for developing policies on access to fruits and vegetables, and Labor for assuring equitable working conditions for teachers and parents.

In sum, any one sector’s success is not enough to assure equitable human development. When the main objective is not only individual health and success but social equity, more actions are needed, particularly on integrative comprehensive public policy with complementary actions in schools, work, health services, housing, commerce, and agriculture. For public comprehensive policy, the government’s role is key in regulating and coordinating public and private actions, as well as complementing the targeted program with population-wide strategies to address not only the most poor but the whole social gradient. (For further information, visit www.junaeb.cl.)

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Responses

Dr. Jeffrey Puryear

Vice-President for Social Development, Inter American Dialogue/Codirector PREAL

Dr. Puryear previously headed the Ford Foundation's regional office for the Andes and the Southern Cone

Dr. Robert Prouty

Lead Education Specialist, EFA Coordinator, World Bank

Dr. Prouty lived in rural Africa for 10 years and spent much of his career working on teaching and learning issues in Africa

Dr. Linda Gambrell

President, International Reading Association

Dr. Gambrell is also a professor of education at Clemson University

Dr. Sofialeticia Morales

Senior Advisor, MDGs and Health Targets, PAHO/WHO

Dr. Morales previously was director of social development and education at the Organization of American States

THE IMPORTANT RELATIONSHIP *between health and education is both a paradox and a synergy, Puryear noted. There is little distinction between using health care to improve education and vice versa. Health problems prevent children from putting their minds to work in school. But the real issue is how to intervene, he said. In Latin America, education is not doing well. "There is a serious deficiency." There is some improvement in the quantity of children in school, but not much improvement in quality, as shown in national test scores.*

The most important question, Puryear said, is, Which interventions are the least expensive and most feasible in Latin America? Many governments there have limited capacity. Chile is an exception, but even a strong government cannot do everything, so we must set priorities. And we must define "education." Traditionally it means simply getting kids in school, but it should mean making sure that the children are learning. There is concern that curricula for reading and writing suffer when the agenda includes health.

Gambrell noted that there are "fascinating connections" between health and education and the economy. Because literacy is critical to good health, IRA wants to foster literacy at all levels. Literacy is essential not only to *promote* access to health, but to actually *make it more accessible* to citizens. That means making the materials prepared by experts more understandable and useful to target users.

Morales said that all agree on the need for evidence-based learning outcomes. All know that children from wealthy families are learning the most. So from a health perspective, it is important to identify the poorest and rethink our role in the synergy be-

The most important question is which interventions are the least expensive and most feasible in Latin America?

tween education and health to supply skills for life. We know that if we increase preschool attendance, we have a chance to reduce the dropout rate, she said.

Prouty said education “derives its sectoral legitimacy from its cross-sectoral relevance,” referring to education’s impact on health, on democracy, and peace. So one challenge to the traditional approach to education is the fact that “we justify education programs as cross-sectoral but we don’t design them that way.” The result is turf battles and budget fights.

Second, we emphasize the at-risk and marginalized child, the millions not being served. They tend to be rural, speak a minority language (which makes them five times less likely to be in school), and have disabilities. But the problem is not just getting the children in school, but achieving quality learning outcomes.

A third challenge is how to measure progress. Literacy measures differ among adult populations, so measuring children is something yet again. Some studies test children, some use proxies such as eight years of schooling. But, “to be honest, different countries have different goals in education. So we must measure by asking, are they teaching what they set out to teach?”

A fourth challenge is that collaboration among government ministries is not always effective. The lesson is to cultivate donors and help local actors. The local level offers the biggest opportunity for cross-sector collaboration, so we must truly support it.

It was noted that many governments under-invest in education, and that health funding outshines education funding. There’s a payoff from health coverage that can be seen regardless of funding, as in reduction of HIV among girls in South Africa. But the reality is, neither sector can achieve its goals alone.

Members of the audience noted that health intervention at the primary-school level may be too late. Good health begins with a healthy pregnancy, and low birth weight is related to diabetes and poor nutrition. The issue of when to intervene in health shows the need for government coordination and community buy-in. As Infante noted, there are many public policy choices. We must intervene always, and must sustain the intervention to address all health components. “We must take a lifecycle approach.”

BREAKOUT SESSIONS

Following the discussion of the issues highlighted in the two main presentations, the participants met in breakout rooms to begin to tackle some of the challenges at a more detailed level.

Are public schools the appropriate venue for health education?

There’s a need to focus on practical issues, to identify barriers to progress, and to develop strategies for overcoming them. While schools have their own intrinsic challenges in countries where society’s institutions are weak, participants said, schools represent a unique place for bringing people together. Particularly in war zones, or during other emergencies, schools can be a platform for health and nutrition and reaching parents through their children. In central Africa, where people are coping with the spread of HIV, schools play a special role, as they do in parts of the African bush, where schools may have been built by the World Bank.

Integrating health and education also poses potential problems for the teaching workforce, many of whom may have little professional expertise in health education. Participants are worried that societies throw an awful lot at schools, expecting teachers to become health diagnosticians and the school an employment center. Schools can get overloaded and infringe on teachers' time.

The challenge of putting schools at the health focal point also involves the reality that not all communities have schools. In rural parts of the developing world, such as in Zimbabwe, schools are not always available near where needy people live, and so other institutions, such as libraries or religious facilities, do double duty. Schools must be multifunctional facilities, open on weekends, for example. But there are ways, such as bringing in a nurse, to take the burden off the teacher, whose objective is student learning. Other outside guests who can supplement school curricula include painters, drama coaches, and motivational speakers.

The group discussed the roles of non-teachers, school nurses, and especially parents. Even with informed individuals and programs, health education effects are constrained by local laws and economic contexts. The success of health promotion efforts also depends on parental involvement, and on laws requiring adequate school diets. National policies are vital; taxes to discourage tobacco use, for example, are more effective than merely declaring a nonsmoking school. Similarly, nutritious fruits and vegetables must be priced to stay affordable to poor families.

Integrating health and education also poses potential problems for the teaching workforce, many of whom may have little professional expertise in health education

What are the Relationships Between Literacy and Health?

What part does literacy, reading and writing, play in promoting health? Literacy is important, because it prompts critical thinking. If you warn adolescents of the dangers of smoking, they say, "Come back to me in 60 years." But critical thinking makes the abstract more real. What drug abuse is like can be better expressed in novels and essays, while the more-traditional rote learning—saying things like "don't do drugs"—just washes over them. As educators we use reading and writing to make students grapple with making healthy choices.

There is a direct relationship between reading fluency and the comprehension needed to improve health. Students need to learn to read by grade 2 at the latest, reading 45–60 words per minute for fluency. This allows them to use their short-term memory, retaining just a few ideas for some 12 seconds, that translate into concepts for long-term memory. This is a biological concept that is amenable to improvements through good nutrition. In Mexico, however, many students are not fluent until grades 4, 5 or 6. If they're not fluent, they will act out in class, especially if they were abused or from violent families. No amount of education will make up for an iron deficiency. By age 16 or 17, people lose the ability to learn literacy, and can't always be remediated, which is worrisome.

What are the links between health education and economic growth?

But larger economic problems, particularly the lack of employment for young adults, could stymie gains made in health and literacy. Unless families are empowered to make decisions about life and health and to care about themselves, government and NGO efforts will not take root.

Health issues are also affected by global contexts. The current recession in the United States has exacerbated employment problems in Mexico. But the expansion of the new

savings program for high school students could lead to a better-educated populace more qualified for higher-paying jobs.

Sustaining effective health education programs requires political will and inter-agency compromise. There is an unhealthy competition between ministries within nations, at a time when the role of political alliances should be to create synergy between health and education agencies. Nonetheless, there is a fear in many quarters of “what comes next?” If subsidies to the rural poor were ended, would these families fall back into extreme poverty? The recent election in Mexico, others pointed out, shows that there is political will from politicians to make sure that the programs addressing the links between literacy and health are long-term state policy, that they have a budget. Health ministries need to have enforcement power over the other agencies to make their programs successful.

Participants expressed skepticism about whether progress on health in schools truly boosts economic development. The direct impacts are difficult to measure, though funders often insist that grantees attempt to quantify results. But improvements can be surmised. If workers call in sick or show up at their jobs intoxicated, you can assume there is a loss in productivity. Even if improvements linked to better health education are demonstrated, economic development does not necessarily translate into social and economic equity. Most agreed that the U.S. Head Start program, which is a collaboration between federal and local agencies, has shown results in pre-K student health.

Participants raised the question of when was the most effective time to introduce health issues into the education curricula. Perhaps the primary school years are too late to set children on a path to good health, it was said, so perhaps improvements in pre-natal care are the key.

The proper approach, many said, is to focus on the child, and then combine the twin goals of good education and good health. Many health programs have to be targeted differently between the extremely poor, and the near-poor, who, though less lacking in essentials, have a high incidence of obesity, alcohol, drugs, and teen suicide. A program must strike a balance between being universal and being targeted. We have to create interventions that address everyone in their own interest—if a middle-income wage earner loses his job, the whole family could suddenly join the ranks of the poor.

Others argue that if you provide all citizens with a good primary education, the playing field will level out. Programs to improve both health and education clearly require a substantial government investment. Is this a proper role for government? Funding for education doesn't always compete well against roads and ports as priorities of politicians.

Overall, both speakers and participants agreed that an integrated approach to economic and social development is advantageous. Both *Oportunidades* and JUNAEB have seen positive results in their programs which strive to improve health and education outcomes in their respective countries. Education and functional literacy can help populations become more healthy by giving them the ability and skills to access information on healthy practices and to develop critical thinking skills with which to make good health choices. At the same time, children cannot learn if they are not healthy. Good health and education are naturally linked—it is very difficult to have one if the other is absent.