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Early Childhood Development: Practice and Reflections

Following Footsteps

Twenty years on:

A report of the PROMESA programme in Colombia

Marta Arango
Glen Nimnicht
with Fernando Peñaranda

Bernard van Leer Foundation

About the Bernard van Leer Foundation

The Bernard van Leer Foundation, established in 1949, is based in the Netherlands. We actively engage in supporting early childhood development activities in around 40 countries. Our income is derived from the bequest of Bernard van Leer, a Dutch industrialist and philanthropist, who lived from 1883 to 1958.

Our mission is to improve opportunities for vulnerable children younger than eight years old, growing up in socially and economically difficult circumstances. The objective is to enable young children to develop their innate potential to the full. Early childhood development is crucial to creating opportunities for children and to shaping the prospects of society as a whole.

We fulfil our mission through two interdependent strategies:

- Making grants and supporting programmes for culturally and contextually appropriate approaches to early childhood development;

- Sharing knowledge and expertise in early childhood development, with the aim of informing and influencing policy and practice.

The Foundation currently supports about 150 major projects for young children in both developing and industrialised countries. Projects are implemented by local actors which may be public, private or community-based organisations. Documenting, learning and communicating are integral to all that we do. We are committed to systematically sharing the rich variety of knowledge, know-how and lessons learned that emerge from the projects and networks we support. We facilitate and create a variety of products for different audiences about work in the field of early childhood development.

The views expressed in this publication are those of the authors and not necessarily the views of the Bernard van Leer Foundation.

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The name PROMESA was given to the project by the local community. It stands for PROgrama para el Mejoramiento de la Educaci n, Salud y Ambiente, which, roughly translated, is the programme to improve education, health and the environment

November 2004

Following Footsteps
reports of studies tracing the footsteps of former participants in early childhood programmes

Bernard van Leer *Foundation*

About Following Footsteps

Following Footsteps are reports of efforts to trace former participants of early childhood projects and programmes. They are studies that follow the progress of the children, their families, the workers, the communities or the organisations five or more years down the line to find out how they are faring. Some of the programmes were originally supported by the Bernard van Leer Foundation; others were not. Some of the studies were commissioned by the Bernard van Leer Foundation, while others were not. Each of the programmes studied is unique, and the methods used for tracing, gathering data and analysing are many and varied. As a whole, the studies will contribute to our understanding of the effects, and effectiveness, of early childhood programmes.

About the series

Following Footsteps is a sub-series of *Early Childhood Development: Practice and Reflections.* The series as a whole addresses issues of importance to practitioners, policy makers and academics concerned with meeting the educational and developmental needs of disadvantaged children in developing and industrial societies. Contributions to this series are welcomed. They can be drawn from theory or practice, and can be a maximum of 30,000 words. Information about contributing to the series can be obtained from the Programme Documentation and Communication at the address given on the back cover.

About the authors

Marta Arango was born in Colombia and educated there and in the USA where she received a PhD in Education from the University of California in Berkeley. She co-founded CINDE — the International Center for Education and Human Development — and is its Director. CINDE focuses on the development of innovative programmes for the healthy (physical and psychological) development of young children. Marta has become an international advocate of innovative programmes for young children and excluded people. She has received a number of awards, including the Simon Bolivar award, Colombia s highest award for personal contribution, and was honoured by the Inter-American Development Bank at its 1999 meeting for her contributions to early childhood education in the region.

Glen Nimnicht received his Doctorate from Stanford University. As a Professor at Colorado State College he started the New Nursery School, which was used as a model for the development of the nationally implemented Head Start and Follow Through programmes. He co-founded CINDE and has been responsible for growing this non-profit organisation into an internationally recognised centre for the development of innovative early childhood programmes. Glen has received many awards, including the Kellogg Child Development award granted by Hanna Neil World of Children Foundation.

Fernando Peñaranda graduated as a Medical Doctor and has Master s degrees in Public Health and in Education and Social Development. His work has included research, evaluation, parenting education, community health, primary health care, strategic planning of health services, control of malaria, integrated social development projects and institutional training. He is currently Coordinator of Evaluation in CINDE Medellin.

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Foreword

When Marta Arango and Glen Nimnicht decided to visit Marta's sister at her convent in a village on the Pacific Coast of Chocó in 1976 they found a location only dreamed of by intrepid tourists. It is one of the more important ecological areas of the world with lush unspoiled forests, a rich biodiversity, beautiful beaches and the ocean, with no roads, telephones or electricity to speak of. At the same time, it was, and is, one of the most vulnerable and neglected parts of Colombia.

The inhabitants lived in great poverty and want, almost completely cut off from the rest of the world. Their housing was extremely basic, their water was not safe to drink, they had few opportunities to make a living. In terms of provision of services – schooling, transport, literacy, health, control of endemic malaria, infant mortality, basic sewerage, lack of latrines, inadequate nutrition, life expectancy – they were poorly served.

During the visit there were conversations with the nuns and with local people and by the time they returned to the city, Glen and Marta – who were planning to start CINDE – had decided to take on the challenge of a social development project. With past experience in the USA and Venezuela, they were looking for a research and development project that could test out some of the principles and concepts they had developed. While the situation on the coast of Chocó was extreme, they felt that if they could demonstrate success in such a desperate case, then their approach could be used in other less extreme circumstances. And thus was the project PROMESA born.

This report describes and summarises what has, to a large extent, become the life work of the authors. And it shows, beyond all doubt, that success was achieved in this extreme case. While their specific aim was to create an environment for the healthy physical and psychological development of young children, they understood that this could only be achieved in the context of a social development programme that would embrace all areas of life.

Key to the work were the principles and concepts from which flowed the strategies and activities of PROMESA. They made three basic assumptions about social change: that there needs to be a critical mass; that there must be a cumulative effect that accelerates the rate of change; and that to achieve sustainable development there is a need to empower people at all levels.

The evidence speaks for itself. At all levels there were improvements: in health, nutrition, sanitation, general health, infant mortality, rates of malaria, housing, employment

opportunities, income levels, community cooperation and activities. But the most striking are the changes in the children and in the women who implemented the programme. PROMESA used a combination of learning through play and empowerment to improve the lives of the children and their families beyond their wildest dreams. Where the average years of education of the mothers in the programme in 1980 was 3.5, some 60 percent of the children now complete high school and a fair proportion go on to further training and university. This was achieved through a combination of attention to children's psychological, emotional, nutritional and health needs as well as to their cognitive abilities. At the same time their mothers or, in some cases, their grandmothers, learned that their children's future was in their hands and their power.

One of the fascinating aspects of the PROMESA project is that the staff of CINDE never worked directly with the mothers or with the children. Local women were trained to be parent educators and they held weekly sessions with mothers during which they introduced games and toys to be used with the children at home. When the mothers saw the difference in the children, they realised that they too could be 'teachers' and their confidence in themselves increased. As time went on, some of the parent educators (promoters) became multipliers who supervised the parent educators, and some of these became programme advisers who supervised the multipliers.

The principle of the critical mass was applied at all levels of the project: an accumulation of positive experiences for the mothers and for the promoters and for the children that were mutually reinforcing, a range of activities for different members of the families, and a range of activities at community level in which all age groups participated.

In 1988 a new project that included rural and urban areas was implemented in the inland part of the province. Supported by Plan International, this project is known as CINDE-PLAN and this report covers activities in two of the urban areas involved in the project. Again, the results are positive but different which, for the reader, is an absorbing lesson about how programmes change from one set of circumstances to another: the setting was different and thus the problems were different; the funder was different and thus the expectations were different; availability of services was different thus the activities were different. But the values and attitudes transcended changes in the programme and, as the authors suggest, CINDE-PLAN was not so much a child of PROMESA as a sibling that shared a common heritage.

What the two projects had in common was that they both contributed to the intellectual development of the children, and the self-concept of the mothers was improved in the process by their increased education and competence. It is a pity that

circumstances (time, money and security) decreed that only a small number of women from the two projects could be interviewed in 2001 but their comments were overwhelmingly positive. Their levels of education had increased, they felt better able to attend to the physical needs of their children and their self-confidence had improved enormously. Many of these women, from being among the poorest and least-respected members of their communities, had become leaders whose views were solicited and whose advice was sought. As one of them said: 'We are still housewives, but different kinds of housewives'.

If anyone doubts the reliability of an organisation evaluating and reporting on projects it has implemented, they should read the authors' comments on how much they doubted the children's test results between 1999 and 2001 because they were so high. They checked everything possible, including rescoring all the tests, and could only come to the conclusion that the major differences 'must have been the effects of the programme'.

There is much to be learned from this report and we are helped in our learning by the 64 'lessons learned' in Chapter Five which have been arranged under a number of headings. These are of value to anyone involved in programmes of human and social development and, while it is impossible to summarise them in a few words, it is possible to highlight one feature that we all need to keep in mind. This is that it is essential to believe in the capacity of local people. This means that an external organisation should not do what the people can do themselves. The proof comes when the external organisation empowers the local people to enhance their own abilities to identify and solve their problems. The evidence is that PROMESA still exists but is run entirely by the local people.

The tracer studies

The early childhood interventions supported by the Foundation are action projects that are implemented by locally based partners in 'the field'. Their objectives are concerned with developing and improving the lives of children and their families and communities in the here and now, based on the hypothesis that this will lay the foundation for improved opportunities in the future. These projects have not been conceived or implemented as research studies in which children/families have been randomly assigned to 'treatment' or 'control' groups, and they have not usually been subjected to tests or other research instruments.

Evidence exists on the longer-term effects of early childhood interventions, much of it coming from longitudinal studies that have been implemented as research projects in

industrialised countries. The outcomes are mixed, although usually fairly positive. Other evidence, mostly anecdotal, is available from early childhood projects such as those supported by the Foundation, and again, this is mostly positive.

After more than 30 years of support for field projects, the Foundation decided in 1998 to commission a number of studies that would trace former participants of projects to find out how they were faring some years after they had left the programme. Although evaluation has been a major element in early childhood programmes supported by the Foundation, we had never, until then, gone back to find out how people were doing a number of years later.

Other similar studies have taken place in countries as widely spread as Jamaica and Kenya, Ireland, Israel, the USA, Botswana, Trinidad and Honduras. Each of the programmes studied is different in its target group, in its context, and in its strategies. This means that the methods used to trace former participants and discover their current status are almost as varied as the original programmes. In the studies that we commissioned, we emphasised an anthropological and qualitative approach that uses small samples of former participants, matching them for the purpose of comparison, where possible, with individuals/families that share similar characteristics.

The present publication from CINDE does not fit precisely into this definition of tracer studies. While it does trace some of the former participants and report on the findings, it contains far more. The Bernard van Leer Foundation supported PROMESA for its first eight years from 1978. Statistics and other data were collected from the earliest days until 1995-96 and resulted in a number of publications from CINDE. In 1998 the organisation asked for support to round off the data collection and write up a report. This is thus more than a report of a tracer study; it is a report that describes and reflects on work that was conceived in 1976 and still exists today.

We are delighted to be able to include the report of this long-term study in our series of Following Footsteps. It is the last report to be published in the series and it is perhaps fitting that it is a study that covers the longest period of time.

It was our intention from the beginning to share the results of the individual studies with as wide an audience as possible. We have also published *Introducing Tracer Studies,* which contains guidelines for implementing tracer studies and is based on the experiences in the field.

We anticipate that each study report will be a source of learning and reflection in its own context and country as well as for a wider public. As a whole, we hope that these exercises in following footsteps will contribute to a better understanding of the effects, and effectiveness, of early childhood programmes.

Ruth N Cohen
Bernard van Leer Foundation
November 2004

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Marta Arango
Glen Nimnicht

Medellin, March 2004

Executive summary

This report describes the project PROMESA that was implemented on the Pacific coast of the province of Chocó in Colombia and its extension to the inland area of the province under the name CINDE-PLAN. The four villages where PROMESA was first implemented were isolated with few transport facilities or services of any kind. The CINDE-PLAN programme covered both urban and rural areas where transport and other services were available but mostly inadequate. There were no programmes in the province specifically aimed at young children from birth to six years of age.

The report includes contextual information about the populations and on the areas where the programmes were established, the concepts and principles underlying the programmes, the strategies and activities planned and undertaken, and findings and outcomes from evaluation. It concludes with lessons learned from the more than 20 years of operation.

PROMESA began in 1978 and statistics were gathered from 1980. These included measurements and tests of children at various ages as well as interviews with adults. CINDE-PLAN was started in 1988 and the data used in this report were collected from 1995. In 1999 and 2001 researchers from CINDE returned to the original four villages and two of the municipalities where the extension programme was implemented and interviewed participants. The findings are thus a combination of quantitative and qualitative data.

The overall aim of the programmes was to influence the physical and emotional health of the children as well as their intellectual development. This was undertaken through a variety of activities covering: the environment (including sanitation, sewage, clean water, malaria control, housing); generating income (including training, provision of tools, revolving loan funds); adult education (including literacy and other skills); health (immunisation, nutrition, training health aides, establishing local pharmacies, encouraging availability of doctors); communications (including radio telephones); cooperation with other agencies both local and national; and work with the children.

All the work with children was carried out by local people (mostly women) who were trained by the project – CINDE staff never worked directly with the children. The main thrust was to stimulate the development of young children by means of play, and mothers attended weekly sessions run by 'promoters' to learn about the toys and games (based mainly on local culture and materials) so that they could work with their children at home. Older siblings were also involved and a child-to-child component was developed as part of the project. The project found that as mothers saw how their children developed through play they became even more enthusiastic about what they

were doing, fathers and other family members became involved and, in time, the whole community participated in different areas of the work.

The condition of the children improved from the earliest years – they were healthier, taller and heavier than their counterparts in earlier years. Their school performances improved: by 1989, 36 percent of the PROMESA children reached fifth grade, compared to 12 percent in 1980. By 2001 the children of promoters had achieved an average of 10 years of education – their own mothers had achieved an average of 3.5 years – and of 53 adult children of promoters under 28, 19 were studying at university or were working as professionals or in semi-professional occupations.

The average years of education for children in CINDE-PLAN was 7.9 years in 1997. These figures can be compared to the national census from 1993 when the average for the province of Chocó was 6.5 years and 7.96 years for the country as a whole. By 2001, 60 percent of eligible age children of promoters in the four PROMESA villages and 21 percent in CINDE-PLAN had finished high school. The 1993 national census showed a high school completion rate for Chocó of 16 percent and 35 percent for the country as a whole.

The impact of the programme was felt in areas other than the children's education. Women who had been in PROMESA expressed feelings of competence and self-confidence in themselves, they were leaders in the community to whom others came for advice. There were also many improvements in general health, including malaria (which had been endemic in the coastal region), and infant mortality in the 0-5 age range fell from 11.7 in 1980 to 7.6 in 1989. There was better access to clean water, streets and beaches were cleaner, housing was much improved. Adults in the communities who had little formal education as children had taken courses to increase their qualifications and be better able to improve their own lives.

In the final chapter of the report an analysis of what has been learned over the years is summarised in the form of 'lessons learned'. These are arranged in nine sections concerning: implementing projects aimed at the healthy development of children; planning and implementing social development projects; engendering empowerment and sustainable development; implementing research and development programmes on a long-term basis; forming relationships with foundations and financial agencies; and the implications for different actors: policy makers, funding agencies, training institutions, implementers and community leaders.

In 1997 the work of PROMESA was taken over by a local NGO which was run entirely by the local people on the Pacific coast.

Photo: Courtesy CINDE

Chapter one

Introduction

PROMESA was initiated in 1978 in four villages on the Pacific Coast of Colombia. Designed to set the conditions for the healthy development of young children, it has a holistic approach that includes creating an appropriate physical and psychological environment. This report looks back over more than 20 years of experience to see what has happened to participants from the many areas where PROMESA has been implemented, including the original four villages.

Integral to PROMESA's approach is the concept of integrated community development where individuals must be involved in their own process of development, and for this development to occur, there must be a process of change in the intellectual, physical, economic, and socio-cultural aspects of their lives and their environment. This process serves to strengthen the participants' individual and collective self-esteem, as well as their ability to identify and solve problems.

The Pacific Coast

The Pacific Coast of Colombia is a marginal region; it is also the poorest region of the country, inhabited mainly by ethnic minorities (Afro-Americans and Native Americans). Ecologically, it is one of the more important areas of the world and is rich in biodiversity. But at the same time, it is one of the most vulnerable and most neglected parts of the country.

Approximately 75,000 square kilometres in size (6.2 percent of the country) with a population of about 900,000 (2.7 percent of the country's total), it comprises the states of Chocó, Valle, Cauca, and Nariño, Chocó being the least developed and populated, with the widest dispersion of the population.

The Baudó, Atrato, and San Juan are the main rivers crossing the region, serving as the primary communication networks. This area is of strategic importance for commercial activities, which are concentrated in the Port of Buenaventura.

In spite of its economic potential and great cultural and natural diversity, the region has a very poor record in terms of human development: 85 percent of the population have unfulfilled basic needs, compared to the national average of 32 percent. Rates for literacy, schooling, infant mortality, life expectancy, and provision of basic services are significantly lower than those in the rest of the country. In addition, the government has little institutional capacity to channel

Photo: Courtesy CINDE

resources to the region and its presence is weak in general. There is armed conflict, with guerrilla and paramilitary groups fighting for control of the region, which, along with the growing illegal production of coca and amapola (solidified poppy extract used to make heroin) for the drug market, has aggravated the situation. The increasing number of internally displaced persons living in the urban centres has made the poor living conditions even worse and stretched the already inadequate provision of basic services beyond the breaking point.

The development initiatives for the region in the last 20 years have generally followed a 'centre-periphery model' in which the Pacific Coast was seen as peripheral to the decision-making centres of the Andean interior. This has resulted in the Pacific Coast being poorly integrated as a region, despite its inhabitants' fight for recognition and autonomy.

The soil in this area is not generally conducive to agriculture; principle crops are rice, plantain, yucca, and some fruits, with only rice having any commercial value. The area's rich natural resources – minerals, lumber, and fish – provide its economic base, but local communities have not benefited. For example, because of a lack of technological development, there is little local processing of resources. In addition, the methods used to obtain the resources are damaging to the environment, in spite of national legislation.

Lack of services

When the project started, there were no early childhood programmes, nor were there any activities supported by the government institution in charge of programmes for children (the Colombian Institute of Family Welfare). There was one very low-quality hospital and only one very poor airport.

Health conditions in the area were the most critical in the country in terms of contagious and tropical illnesses associated with poverty, malnutrition, inadequate environmental and personal hygiene, and high birth and mortality rates. The rate of infant mortality in some places is 177 per thousand (the national average is 32) and maternal mortality is as high as 125 per thousand births in some places (maternal mortality nationally averages 20).

When PROMESA started, programmes were planned at the central level and there was a lack of institutional coordination, with poor resources, obsolete equipment and physical facilities, and an inadequate epidemiological model that failed to acknowledge the communities or ethnic and gender differences. There was almost no network for health services and the few trained staff were poorly allocated. Services for pregnant mothers and children and for controlling tropical illnesses like malaria were either deficient or nonexistent, as were any strategies for the promotion of health.

There were problems at all levels of education. At present these problems persist, particularly at the early childhood, high school, and higher education levels, with high dropout rates, irrelevant educational content and processes, lack of textbooks and materials adapted to the different ethnic groups, and weak bilingual and bicultural perspectives. This is compounded by a serious lack of preparation among administrative personnel in the educational system and poor allocation of resources. Under the best of circumstances, the dispersion of the population and the lack of communication infrastructure would make the provision of services expensive and difficult.

Sanitary conditions are very poor and there are few aqueducts; water is usually carried by women and children. By 1994, 48 percent of the people in towns had running water (the national coverage is 82 percent). Only 10 percent of the people in urban areas have access to sewage systems; there is no way to dispose of solid residues. In rural areas only 12.8 percent have running water and 2 percent have sewage systems. It is ironic that one of the regions of the world with the highest rainfall has no access to clean running water.

PROMESA: the first four villages

PROMESA was initially developed in four communities located on the hot, humid Pacific Coast of Chocó (table 1.1): the municipalities of Bahía Solano and Nuquí and the townships of Valle and Panguí. All were very similar in terms of health conditions, which were uniformly poor, and goods and services, which were hard to get.

When the project started, there were only two access points in or out of the area. One was plane service from Bahía Solano with three irregular flights per week on an old DC3 to Medellín, Quibdó, and Cali. The other was a supply boat arriving about once a month from Buenaventura, a port about 170 miles south of Bahía Solano. Where and when the boat would land and the prices of the goods it carried were the cause of great speculation. For example, the petrol it brought cost five to six times more than petrol in most parts of the country.

Within the region, there was a road covering the 11 miles between Bahía Solano and Valle, but road travel was extremely irregular. Although the distance between the communities is short, the trip took an hour or longer because of the condition of the cars and the road. The principle means of transportation was by boat or canoe along the rivers and the coast. Most maritime traffic went to Buenaventura, although there was some travel to Panama to buy consumer goods.

There were mail and telegraph services in Bahía Solano, Valle, and Nuquí, but the only telephone line was between Valle

TABLE 1.1. THE FIRST FOUR COMMUNITIES

	Bahia Solano	Valle	Nuqui	Pangui
Population Urban Rural	 3800 1500	 1300 1000	 3000 1500	 500
Occupations	• Fishing • Agriculture • Tourism • Public employment	• Fishing • Agriculture • Public employment (espacially in educ.)	• Fishing • Agriculture • Public employment	• Fishing • Agriculture
Transportation	• Irregular flights to Medell n, Quibd and Cali • Road to Valle • Boats to Buenaventura, Jurado and Panama	• Road to Bah a Solano • Irregular Boat to Buenaventura and Panama	• Small airport, irregular service • Boats to other communities and to Buenaventura	• Boats to other communities and to Buenaventura
Medical Services	• 1 hospital • 2 medical doctors (often absent) • Several nurses and aides • Several places where medications are sold	• 2 nurse s aides • 1 small pharmacy	• 1 health centre • 1 medical doctor Some nurses and aides • Several places where medications are sold • a small hospital	• 1 health centre with a pharmacy • 1 nurse
Education	• 2 primary schools • 4 (out of 6) years of secondary school	• 1 primary school • 1 complete secondary school (6 grades) • 1 vocational agricultural high school (to 4th level only)	• 2 primary schools • 1 secondary school (to 4th grade)	• 1 primary school
Government Services/ Agencies	• ICA (agricultural services) • Caja Agraria (agrarian bank) • INDERENA (natural resources institute) • INPES (national fishery institute) • SENA (national training service) • Corporation for the development of Choc • National police	• National police	• ICBF (Colombian institute for family development) • Caja Agraria (agrarian bank) • National police	• National police

and Bahía Solano. To communicate with the rest of the country, the communities used short-wave radio, but the only short-wave radios were in the police station in Bahía Solano and in the Catholic Missions.

The area is rich in natural resources, but the lack of transportation limited marketing opportunities. Commercialisation was in the hands of a few businessmen, generally outsiders to the region, who made big profits. Income for most people was from farming and fishing and averaged only 1700 pesos per family per month, a little less than US$ 40. The working wage was about six times lower than wages in other areas of the country.

A typical house in this region was made of wood with a thatched roof and was built off the ground. Over 95 percent of the houses lacked bathroom facilities or latrines.

The educational level was low, with adults averaging less than three years in very poor schools. It has been estimated that 70 percent to 80 percent of the adult population were illiterate.

Secondary education was provided by three incomplete high schools in Valle, Bahía, and Nuquí. The Normal School in Valle was the only school in the entire region where a student could complete a full course of high school study. The lack of high schools forced the young to look for early employment in the interior of the country. 'Employment' could be defined as domestic positions for young women and hard labour for the men.

The basic diet was composed of fruit, plantain, rice, yucca, fish, and an occasional piece of pork. Because mothers in the region breast-feed their children up to one year of age, the children from 0 to 1 year had less alarming nutritional problems. But nutritional deficiencies were high among children from the ages of 1 to 8. In addition to malnutrition, the children suffered from endemic parasites, diarrhoea, and other illnesses produced by an environment where there was no system for disposing of human waste and garbage.

If we add the problem of malaria to this, it is easy to see that the level of health in the region was among the lowest in the country. The lack of effective health services further aggravated the situation.

The extension of the programme: CINDE-PLAN

In 1988 the PROMESA programme was extended to Quibdó and Istmina in the interior of the state of Chocó under the name CINDE-PLAN.

Quibdó is the capital of Chocó, with 130,000 inhabitants, most of whom live under very precarious conditions. When the programme started, only about 5

percent of the population had access to sewerage; 15 percent had running water, which was not pure. Even though the houses were better than those on the coast, most of them were in very bad condition. There were better possibilities for study, but the quality of the schools was very low. There was a hospital and some minor health posts that offered limited health services.

Istmina is the second largest city in Chocó, with approximately 12,000 inhabitants. Health and sanitary conditions were similar to those in Quibdó.

Most of the people in these cities earn their living through small enterprises, such as selling food or making cloth, and working in insecure, poorly paid jobs day by day.

The river that passes Quibdó flows to the Caribbean, and there are small riverboats that go between Quibdó and Cartagena (one of Colombia's most important Atlantic ports). Istmina is on a river that flows to the Pacific, and there are also some small riverboats that travel on it – between Istmina and Buenaventura. Quibdó is 16 hours from Medellín via a road 83 miles long, which is suitable for trucks and jeeps. There is also a rough dirt road from Quibdó to Istmina, a travel time of four to five hours when the road is dry, which is not very often. The trip from one city to the other can take as long as a day and often is not completed. Both cities have air service to Medellín by small planes.

How we became involved in Chocó

The International Center for Education and Human Development (CINDE) became involved in this area of Colombia when Marta Arango and Glen Nimnicht, the two CINDE directors (who are also husband and wife), spent a brief family vacation visiting the four communities and the Catholic missions of the Teresitas sisters, a group of nuns dedicated to work with the Indians in these communities. During that visit, they observed the work the nuns were doing and were able to talk to the nuns and the people in the community. It was obvious that something needed to be done to improve the conditions for the healthy development of young children. For example, in Valle, a town of approximately 2000 people, there were only two outdoor latrines and the only indoor toilets were in the mission. The yards, the streets, and the beach, the same places where children played, were used as latrines. There was no form of garbage disposal, and dogs, cats, chickens, and pigs roamed freely in the streets.

Many of the houses had standing water under them, where mosquitoes thrived. The only control for malaria was fumigation, which was carried out by the government, but in the previous five years, none had taken place in this area. No effort was made to drain away the water or cut the weeds, and there was no local service to detect or treat malaria. The only

first aid facilities were what the nuns had at the mission, and the most complete was in Panguí. Most of the adults appeared to be sick and listless, without the energy to do anything more than exist. Many of the children were obviously malnourished and sick, with skin diseases and infected sores. There were public elementary schools and high schools, but aside from Valle, where the nuns operated the school, education was unpredictable because the teachers did not stay long and the schools were often closed.

The Teresitas sisters originally went to these four communities to work with the Indians up-river. They had not seriously thought about doing work with people of African descent, but they realised that the needs of the people in the towns might be as great as the needs of the people living along the river. They saw the problems the people had and wanted to do something to help, but they had not been formally trained in social development. They had no experience, and they were not much better off financially than the people who lived in the town.

In the conversations that took place during that first visit, the nuns expressed the desire to do something if someone would help them, give them some training, and guide their initial efforts.

The two directors listened and thought about the possibilities. CINDE was a new institution with two directors, one other professional, and a secretary. It was 'international' because it had educational activities in Colombia, Venezuela, and the USA. The directors, a Colombian and a US citizen, had experience directing educational programmes for minority groups and people living in impoverished circumstances in the United States. Their ambition was to work in a programme for research and social action in South America. Based on this, CINDE had a clear philosophical perspective: it was a scientific organization with the objective of developing and testing materials and processes that had the potential to improve education and human development. The questions that faced us as the directors of CINDE were, Could the conditions in these four communities be improved as part of this process? Or were they too extreme to contribute to CINDE's concept of scientific development?

Our response to the last question was 'no'!

1. If we could demonstrate success in such an extreme case, our approach could be used successfully in less extreme circumstances.
2. The very fact that it was an extreme situation might make success more difficult, but if our social development programmes were successful, this would be an excellent demonstration, because, judging from the situation in the past, there would not be many things happening in the next few years that might bias the results of such a project; there was an opportunity to develop approaches and test them

without other interventions going on. **3.** There were also some interesting possibilities for research. For example, we could measure the effects of the direct participation of mothers in the education and psychosocial development of their young children.

As a result, a mutual commitment was made and a partnership was formed between these diverse groups: the Catholic sisters, moving from the concept of pure missionary work to social service and social development; the people of the community, who wanted to solve some of their problems; and the social research and development institution, which wanted to develop practical models for educational and social development while contributing to the improvement of the community. This proved to be a good partnership, with each group learning from the other. The Teresitas sisters had the human resources to undertake the project at the local level, the people from the community had the willingness and desire to solve their problems, and CINDE could provide the technical support and had the knowledge of how to write and present a proposal for funding to the Bernard van Leer Foundation in The Hague, the Netherlands, which became another partner in the process.

Characteristics of unsuccessful projects

Our approach was based on our knowledge and experience in other parts of the world. Most developing countries are faced with the problem of bridging the gap between the different sectors of their society and between themselves and more developed countries. Many specially planned social development projects have attempted to diminish these differences, but the results have been greatly disappointing, and it is extremely difficult to identify what has contributed to any progress made in this area. However, we can list a number of characteristics shared by unsuccessful projects:

- Social development programmes are often planned at the national level without the real needs at the local and regional level being taken into account.
- There is a tendency to overemphasize the role of outside experts (and outside technological resources) in these projects. Not enough attention is given to the meaningful involvement of local human resources and the development of intermediate technologies to solve their problems.
- In the development phase of many projects, there is a great deal of dependence on external human and technical resources, without considering what resources will actually be available when the funding stops. This is especially true of projects started on a demonstration basis.
- Development projects often have unrealistic expectations. Too much is expected to happen in too short a time, or there is a discrepancy

between the written plans and the allocation of resources for their implementation.

- The material aspects of the project are emphasised during implementation, without enough attention being given to human resources and institutional development.
- Development projects in general tend to focus only on partial aspects of the problems they want to solve. Very seldom do development projects focus on an integrated approach to education, health, nutrition, and occupational training.
- The political instability of many governments in developing countries contributes to the absence of long-range plans and strategies that can support a systematic developmental process.
- Formal educational systems tend to lack relevance in social and individual terms and have curricula that do not take the specific needs of local and regional groups into account.
- The cultural, knowledge, and experience base of the groups of people for whom development projects have been designed tends to be ignored and, quite often, dismissed.
- Too much time is spent diagnosing comprehensive needs when immediate and initial needs can be readily identified and action taken to meet them.

A much more comprehensive analysis could be made of the characteristics of development projects; however, a glance at the problems mentioned above makes it clear that new approaches (where we can profit from past experience) are needed.

PROMESA was designed as an integrated social development project, which included education, nutrition, health, and sanitation and focused on the healthy development of young children (ages 0-6). The methodology was based on the maximum use of local human and material resources and on the cultural knowledge and experience of the people, involving the parents in learning how to stimulate and strengthen their children's intellectual, social, and emotional abilities and improve the health conditions of the family and community. It was started in the four rural communities of the Pacific Coast in Chocó, Colombia, and then was expanded to 30 more communities in the same area. Initially, it was coordinated by the Catholic Sisters of Teresitas Missionaries under the direction of the International Laboratory of Education (LIDE). (The name was later changed to the International Center for Education and Human Development [CINDE].)

The programme was initially focused on the psychosocial component for children aged 3-6 years and on the educational processes for community leaders, mainly women at the beginning. In Chocó there was no kind of early childhood care or education programme at that time, public or private.

We started in this way because that was the component in which we had more knowledge and our previous experience with families in the USA and Venezuela had been very successful. We also thought that the use of the parent-child toy library, where mothers attending a weekly meeting could take a toy home to use with the children, could become a motivating factor to participate. The communities knew that gradually we would work in other areas like health and sanitation. What was amazing for us was that in spite of all the needs the communities had, there was no need to convince them that this was the best way to start. They saw this as an opportunity to do something for them and their children that would help them to develop better.

Similarities and differences between PROMESA and CINDE-PLAN

Because PROMESA was a small project, implemented in a very isolated area with a small population, it was relatively easy to manage. Expanding to a bigger project with greater coverage and impact over a larger area of Chocó was a great challenge and very different from the original implementation of PROMESA. One of the differences was the need to involve other partners, in this case, Plan International, a large international NGO. Operating a small programme designed and developed by a local NGO, with financial support from a foundation like Bernard van Leer, which wants to innovate and experiment, is very different from carrying out a joint venture with a big international NGO, which has its own interests, philosophy, and administrative style.

The programmes described here were implemented in both PROMESA and CINDE-PLAN, but with a different emphasis in each context.

Similarities

The objectives of both programmes were the same: to create environments conducive to the healthy development of young children, especially children from 0 to 6 years of age. The general objectives of both projects were defined initially by the researchers and the founders, based on observations, information, and interactions with the communities. The specific objectives were defined through a participatory process with the participants.

The philosophy of both programmes was the same, and the same principles were applied in both contexts. The strategies and methodologies were also the same, with some adjustments made in response to specific aspects of the contexts. The training of community leaders and their organisation at the community level received a great deal of attention in both projects.

Differences

Financing

As mentioned above, CINDE took the initiative to contact the Bernard van Leer Foundation, which financed PROMESA with a fixed grant over three-year periods. CINDE had the freedom to design an innovative programme within the objectives of the Foundation, while monitoring the process using established procedures, such as periodic reports and visits to the field. The financing was moderate and dedicated exclusively to strengthening the psychosocial development of children with the participation of the families and the communities. PROMESA was conceived as an integral project, so funding was also needed for the health, sanitation, economic, and other dimensions of the programme. This money was acquired from other international and national institutions.

CINDE-PLAN was financed by Plan International, which contacted CINDE to implement a programme in Chocó with the PROMESA philosophy but on a larger scale. Plan is an international NGO that finances and implements children's programmes. At the time they financed our programme, their emphasis was on children of a basic educational age (older than our age group). At present, they place a great deal of emphasis on children from 0 to 6.

The amount of money available to the programme depended on the number of participating children and families. Plan financed all the dimensions of the programme. All the personnel were CINDE employees, and there was an administrator to handle the money according to Plan guidelines. The funds were administered by the team following Plan guidelines and using accounting procedures from both institutions.

Implementation

In PROMESA, the work initially focused on the family and on strengthening the psychosocial development of their children. As the community identified new needs and interests and as resources became available, health, sanitation, production, and other components were implemented. Very little money was spent on building physical facilities and infrastructure. The designers of the project implemented the programme and prepared the institutional and field teams directly. Every community was free to choose the programmes they wanted, but basically, all the programmes were implemented in each community at different times in the process.

From the beginning, CINDE acted as an external agent and did not work directly with the parents, communities, or children. Its role was to prepare community leaders for their new roles, to serve as facilitator in the development process, and to act as a link with other institutions. The first educational agents were the Teresitas sisters, who were replaced three years later by community

leaders selected by the community. Initially, there was a programme director, a field coordinator, and two educational agents in each community. CINDE personnel conducted the training in this first phase of the programme, but as the project advanced, this role was played by multipliers. Each community had a coordinator who was responsible to the community and was in charge of paying the promoters and handling the project money. The focus of the implementation was on preparing educational leaders to implement the programme and preparing the community's own human resources to identify and solve their own problems. CINDE's role increasingly changed to become advisor and guide.

The main educational agents who worked with the mothers were 'promoters' (mainly mothers) in the communities, who received a stipend of half a minimum salary for their work. After the initial phase, this was carried out by multipliers, who were originally promoters and had developed higher levels of competence and leadership.

One very important aspect of the implementation of the project was the process of community organisation and participation that led to establishing PROMESA as a legal foundation. This opened up opportunities for the participants to receive funds, administer them, and manage their own programmes

The CINDE-PLAN project started as a long process of negotiation with Plan and the development of a joint venture to expand PROMESA to other areas of Chocó. The idea of Plan working with CINDE was to have an innovative community programme centred on young children – in essence, expanding the scale of the PROMESA experience. However, Plan is an institution that implements programmes for children on a worldwide basis, using personnel they have selected, and at that time (1988), their focus was on older children and their families. It was not easy to change their established pattern, and what was implemented was not exactly what had been planned. The CINDE-PLAN programmes took on a personality of their own, using many of the ideas that had been successful in PROMESA but with a different flavour.

A lot of emphasis was placed on preparing a team of professionals to coordinate implementation and to involve people from the community, but a great deal of the budget was spent responding to the needs identified by the community – improving physical facilities, such as schools, health centres, and water tanks.

The programme was implemented by local professionals prepared by CINDE's advisors, working under a local director appointed by CINDE and selected by both CINDE and PLAN. PROMESA played a very important role in the planning, evaluation, and organisation of the different groups. They had leaders in

each neighbourhood who participated in the implementation, although they were not in charge of these activities as they had been in PROMESA. They had to respond to the needs and interests of the community, but at the same time, they also had to answer to the project team.

Chapter two

Concepts and Principles

Figure 2.1 PROMESA as a model for social development

The main objective of the PROMESA Project was to create an environment for the healthy physical and psychological development of children, with the participation of the family and the community, using mainly local human, institutional, and material resources.

In developing this programme, we made some basic assumptions:

1. ***In a setting like PROMESA's, there must be a critical mass to start the process of social change; a single small project is not enough.*** When we started, there were so many negative environmental factors affecting the children's development that no single element could correct the situation. For example, the building of latrines alone was not likely to have a huge impact. Consequently, to start a process of change, there had to be an educational programme that could reach the family in many ways. While the results of this integrated approach might not be as striking in the short term, over time the effects will be greater, which leads to our second assumption.

2. ***To sustain change, there must be a cumulative effect that accelerates the***

A typical home on the coast of Choc . Photo: Courtesy CINDE

rate of change. This is crucial, because as people start to experience success, their expectations exceed the ability of one project to satisfy them. Here, the concept of having a critical mass of programmes becomes important, because it can ensure a constantly accelerating rate of change.

3. ***To achieve sustainable development, there is a need to empower people at all levels.*** The key to sustainable development lies in the ability of people to identify and solve problems in new ways, based on the conditions of their environment. This is only possible when high-quality human resources can be developed at all levels.

One of the errors we made was to think that we could bring about most of these complex changes in six years. We set out to do too much with too little. It was like trying to paint an ocean liner with a toothbrush. The second problem was that when working with communities, it is not ethical to stop abruptly just because the grant has run out. There are real, compelling, moral and intellectual obligations to prepare people to continue in a project of this nature.

Conceptual base

As a research and development project (a big D and small R) PROMESA started with a clear conceptual base, which was gradually enriched and refined, and which we are still trying to articulate. It was designed as an alternative delivery system for programmes to support the healthy development of young children from 0 to 6, based on the participation of families and communities in the care, education, and development of their children. As such, PROMESA was conceptualised as a human and social development project with a very strong educational component.

PROMESA was developed with an optimistic perception of people's ability to improve the conditions of children's environments. To this end, the project focused on processes of social participation, where people collectively constructed and shared goals and adopted new behaviours. Central to this approach was the idea that parents and other adults should participate in the reorganisation of their own families and communities by adopting new practices, playing new roles, and establishing new ways of relating to each other. In this way, they would reinforce their newly acquired attitudes and behaviours and could develop strategies to sustain the collective changes. There were three closely interrelated concepts – empowerment, sustainability, and effectiveness – that were very important for implementing the project.

Empowerment

We consider empowerment to be basic to the social development process. In this project, empowerment was conceived not only as the acquisition of power by

the people (understood as the capacity to control and dominate aspects of their environment), but as developing in them the individual and collective capacity to (1) define what they wanted to do, (2) understand how to do it, and (3) actually do it. This implied developing people's potential in terms of knowledge, skills, abilities, and values, and acting in response to contextual possibilities and demands. This concept of empowerment also includes the creation of conditions that facilitate access to services that support the healthy physical and psychological development of participants' children and families.

Sustainability

The concept of sustainability was central to the project: creating the conditions to support the continued accomplishment of goals and objectives after the external intervention was completed. This required a focus on five aspects of the programme:

1. ***human*** – providing local human resources with the knowledge, ability, motivation, and values needed to direct the process and to sustain its effects in the future (sustainability cannot be achieved without empowering people);
2. ***social*** – developing a process to create the relationships, interactions, norms, and organisational systems to enable individuals to continue developing their actions and accomplishing their objectives;
3. ***administrative*** – encouraging people to build their own structures and relationships within their environment to obtain the resources needed to continue the project's processes and actions;
4. ***cultural*** – building on people's cultural and experiential base to reinforce or change behaviour patterns and habits so as to support the processes and guarantee accomplishing the objectives;
5. ***environmental*** – improving and preserving the physical environment.

Effectiveness

In order for the programme to be effective, the project objectives had to be achieved with the resources at hand, through a process that would enable people to continue in a sustained way.

Five basic concepts were initially used to shape the pedagogical model and to guide implementation.

Work with families and communities in a responsive way
To achieve sustainable, integrated social development, each individual and community must generate and be involved in their own developmental processes. This requires a 'responsive process' that leads to cumulative changes in a critical mass of people in the areas of human and social development – namely, psychosocial and educational, physical, productive, and socio-cultural. Through these processes, individuals and

groups gradually (1) strengthen their self-confidence and ability to solve problems and (2) obtain more psychological energy to face more complex problems and to use the resources from their environment more effectively.

The concept of responsiveness was adapted from the psychosocial theories of Moore and Anderson (1960), whose work guided the development of the 'responsive educational model' that CINDE initially applied to the education of young children. At present this model is being applied to educational development across a range of levels. The main strategies of the model, as applied to PROMESA, are (1) to work within the families' and communities' own cultural frames of reference as a basis for their learning, (2) to strengthen self-concept at the community and individual level, and (3) to improve people's ability to identify and solve problems.

Work towards developing healthy physical and psychological environments

The healthy development of young children depends on the quality of the environments in which they grow during the first years of life, the most important being the family, followed by the community. The quality of these environments depends on how basic human needs are met and requires certain physical, social, and psychological characteristics if healthy development - both physical and psychological - is to be fostered in children, families, and communities.

In our work, we used a variation of Maslow´s (1970) hierarchy of needs. Maslow felt that human energy is spent fulfilling the following basic needs in a hierarchical way: (1) the basic physical needs for food, clothing, and shelter, (2) the need for physical and psychological safety and freedom from fear, and the need for (3) a sense of belonging and affiliation, (4) love, and (5) self-actualisation.

We reasoned that these needs apply not only to individuals but also to groups of people, communities, countries, and society in general and that to address these needs, the cultural, social, economic, and political context needs to be taken into account (Arango and Nimnicht 1977). We also reasoned that these needs are not fulfilled in a hierarchical way, which would imply starting with the basic physical needs and finally arriving at self-actualisation – that only people who are completely free from fear or have completely satisfied all of their basic physical needs can achieve self-actualisation. On the contrary, we strongly believe that all the needs can be met simultaneously and, when this is done intentionally, the skills developed to attend to the high-level needs can be used very productively to attend to the low-level physical and psychological needs as well.

We used a variation of Maslow's concept of needs in three ways: (1) to define short-term and long-term objectives, (2) to define the methodology to achieve these objectives, and (3) to develop indicators of the quality of the environments where children and families live, taking into account all their 'needs' as defined by Maslow (figure 2.2).

The short-term objectives were defined as those that are related to the first two needs defined by Maslow: people's basic needs and their physical and psychological safety. However, the most important objectives are those related to satisfying the three other levels of needs: affiliation, love, and self-actualisation. These become the long-term objectives and can be measured by improvements in the quality of the human resources in each community, their organisational skills, their ability to solve their problems in new and creative ways using resources from their own environment, and their individual and collective self-esteem.

Work within an ecological perspective

An environment that sustains learning needs to take many of the unseen forces that play a negative role in social and human development and turn them into positive forces on a permanent and continuous basis. It also needs to respond to people's needs in a broader context than the immediate environment because every individual or group is influenced by many forces that come from the broader socio-political environment.

Figure 2.2 PROMESA: Programme for the improvement of education, health and the environment

This concept, derived from the perspective of 'human ecology' outlined by Bronfenbrenner (1979), implies a broader definition of 'cultural context' and what is culturally relevant. It helped us clarify the types of relationships that were needed among the different environments and institutions involved in the project.

Considering the environment as a combination of all those forces, elements, roles, and relationships that define an individual's or group's physical and psychological space, and which contribute, in a direct way, to developing their potential, PROMESA focused initially on the family and the community. (As the most important environments in the early development of a child, the family and community are also crucial to the development of the potential of individuals and groups.) Later, the programme focused on schools and other institutions, using strategies to influence the broader context. As the environment for the child and the family improved, the participation of different community groups and institutions increased in both quality and frequency.

Use an integral and integrated approach

An educational model that fosters the healthy psychological development of children and their families needs to use an integrated approach that deals with different aspects of development and involves all the people from the communities in different activities.

PROMESA was designed as an integral and integrated programme, but initially we only had resources to work on psychosocial and educational components. We gradually incorporated other activities, in the areas of health, productivity, and culture, as people identified new needs and actions and as resources became available.

This concept of integral and integrated community development was based on the notion that individuals must be involved in their own process of development and, for this development to occur, there must be a process of change in the intellectual, physical, economic, and socio-cultural aspects of their lives and their environments. In PROMESA, CINDE was committed to implementing projects in the areas of education, health, nutrition, environmental sanitation, production, culture, conservation, and appropriate technology. For this approach it was crucial to involve all the people in the community in different activities, according to their interests and needs, with the family as the integrating factor. This led to the strengthening of the participants' individual and collective self-concept and their ability to identify and solve problems.

In order to target children and their environment, an integrated approach is essential. Integral to this approach is community involvement, including participatory strategies and mechanisms

Figure 2.3. Short- and long-term objectives based on Maslow s hierarchy of needs

that build on the cultural strengths of the families and the communities. Inter-institutional and inter-sectoral complementarity is also a necessary condition for implementing integral programmes.

Use strategies that influence early childhood policies and programmes at all levels

To influence policies and programmes related to early childhood education, care, and development, it is not enough to implement programmes at the community level and to improve the quality of life for children and families. There is also a need to disseminate information to politicians, policymakers, trainers of personnel, and programme implementers at different stages of the implementation process. There was a conscious effort from the very beginning to disseminate information about the project to a broad range of people at all levels.

The implementation process included strategies and activities (such as national and international meetings, visits to projects, publications, and group discussions) designed to influence top decision makers, programme designers, and implementers in generating policies and programmes for the integral care and education of children from 0 to 6 and for the improvement of the physical and psychological environments where young children grow and develop. A great deal of emphasis was placed on the training of institutional leaders at the

international, national, and regional levels in the design and implementation of innovative participatory early childhood programmes. The design and use of educational materials to support programme design and implementation was a very important part of this process (figure 2.4).

Pedagogical and implementation principles

The five concepts listed above were operationalised through five pedagogical principles, which provided the basis for implementing the programme. These were also translated into the indicators used in the evaluation (Arango and Nimnicht 1983, 1990).

The five pedagogical principles

Perspective

The perspective principle implies that real learning only takes place when learners adopt a variety of perspectives during the process. This means that the learners should, at various times, be initiators, followers, producers, transformers, observers, and evaluators because each one of these perspectives provides learners with different information about their learning experience and presents a different reality, which their mind needs in order to manage and interpret the process of rediscovering their reality and constructing knowledge. Traditionally, education has kept learners in the perspective of the follower, as a passive element in their environment.

Figure 2.4. PROMESA as a model for social development

In terms of working at the community level, there are certain types of activities that foster different perspectives, such as working in groups and participating in the different activities that emerge from them, identifying problems and working in different aspects of their understanding and solution, participating as a learner on some occasions and as a teacher of facilitators on others, for example. The ability to provide and appropriately use the different perspectives is related to a group's culture and is achieved as part of a gradual and systematic process of stimulating participation, identifying problems, and solving problems in group situations.

At the individual and group level, some of the indicators that show that the principle is being used include the following:

- ***As initiators,*** individuals and groups define the activities they want to carry out, and through this process, they define objectives, determine the human and material resources needed, set their own rules and limits, assess the quality of their work, and plan the next steps.
- ***As followers,*** they follow the rules they set, listen to others, and follow their ideas when they are useful, working within the time and resource limits at hand.
- ***As interacters,*** producers, transformers, people work in small groups to identify, analyse, and solve their own problems; they use other people as resources, and through this process, each becomes a teacher for the others. They ask their own questions and try to find their own answers. They transform aspects of their environment to meet their objectives.
- ***As evaluators and observers,*** learners observe their own reality and evaluate it in terms of broader criteria, using these observations to identify their own problems. They assess their own work and the work of others.

This principle incorporates many aspects of the other principles.

Relevance or personalisation

Relevance and personalisation imply that learners exercise a great deal of control in terms of their interaction with the environment, since the learners themselves are the best ones to decide when to initiate an activity, to determine when they are having problems, when their interest is decreasing, how fast they should proceed, which resources to use, and so on.

This principle has to do with the learner's degree of freedom and the options learners have to regulate their own learning. Clearly, these options have to take place within a context that provides limits and requires a certain amount of direction and guidance in order to help the learner clarify and understand these options.

Some indicators that are related to the use of this principle include the following:

- Content, resources, and experiences reflect the culture and lifestyle of the learners.
- Learners can choose problems and experiences that are relevant to them.
- Learners can work at their own pace.
- The same concept is dealt with using different materials and activities so learners can choose their preferred mode of learning.
- The same concept is encouraged in different learning experiences to facilitate integrated learning and interconnected discoveries.
- Learners assess their own work or get feedback from other people, experiences, and materials, which allows them to plan their next steps.

The autotelic principle

Autotelic means that the rewards for an activity come from the activity itself and not from some outside source. In other words, people learn something because they want to know it, not because of a grade or an external reward. The internalisation of this principle is crucial for the achievement of self-direction and self-reliance.

The autotelic principle refers to cognitive behaviours that can only be brought in when learners feel emotionally and psychologically safe. This safety relates to the affective risks involved in the situation – the possibility of loss of self-esteem, failure and frustration, rejection by others, or the appearance of stupidity – this is even more important when we are dealing with people of different life styles and cultures. If the learners are confronted with tasks, resources, and activities that place them in unfavourable circumstances, the situation is bound to be less autotelic.

Indicators that show that this principle is being used include the following:

- One activity leads to the next.
- Learners can make mistakes without fear of being punished.
- Learners are encouraged to find new and different ways of solving problems and expressing themselves.
- Learners set their own limits, expectations, and goals.
- Learners assess their own work in relation to their goals and expectations.
- Learners do not look for approval at every step.
- Learners identify their own resources.

The productive principle

This principle implies that new information should be organised in such a way that learners can assimilate it into their own knowledge and previous experience – there must be a relationship between the new learning and experiences and the learner's previous frame of reference and experience. This enables learners to 'anticipate' new events by understanding the relationship between the activities and their experiences.

In order to create and organise experiences and events that are productive, we need to use content that is either defined by the learners themselves or identified as needed, in conjunction with relationships that are meaningful, interesting, and familiar to the learners. The less familiar we are with the knowledge and experience base of the community and its different groups, the less we know when we are meeting the criteria of productiveness.

In other words, the appropriate use of the productive principle implies active participation of the learners in defining their own objectives and activities. Learning is productive when the following occur:

- Learners ask their own questions and find the resources within their own environment to satisfy their own answers.
- Initiative and personal expression are allowed.
- Learners can make mistakes and use these mistakes in the learning process.
- The outcomes are not firmly specified but, rather, learners can use their own approach to accomplish their objectives.
- Learners can find meaningful activities to work on, either independently or in small groups.
- Learners need a leader only as a resource.

The reflexive principle

The reflexive principle concerns the learners' ability to look back upon their actions and see what they did and how they did it. It involves the whole problem of feedback by which the learners come to understand the significance of their actions and how to regulate them.

No one can grow without feedback, and by this we do not mean just telling learners whether they are right or wrong. It means guiding people to look at their own actions, so they can better understand how they are functioning.

The environment allows learners to view themselves when the following occur:

- The materials and experiences reflect their lifestyle.
- They can see their products for a period of time.
- They set their own objectives, assess them, and plan their next steps.

The principles in practice

These five principles, when taken as a whole and implemented in the environment, provide a climate that supports individual and group development. However, the operationalisation of such an environment is not simple. It involves a delicate balance between flexibility and structure, and attitudes of openness, respect, interest, and concern for people and their problems. Furthermore (and highly important in community programmes), it requires a willingness on the part of the implementing agency to understand the life styles and values reflected in the community and to use

the experience and cultural background of the people involved.

Implementation principles

The implementation principles were derived from the concepts and principles discussed above.

The principle of respectful intervention

One of the most difficult things about working with people is establishing, from the beginning, a relationship of mutual respect and understanding. In order to do this, several things have to happen from the moment the idea of a project emerges. The cultural arrogance that has been cultivated in all of us for so many years has to change to an attitude of cultural and professional humility, which requires listening to what people have to say until an understanding is developed about their point of view, and establishing a dialogue where all involved give, receive, and learn from each other. Then, their ideas need to be incorporated in the project's plans, and the people, themselves, need to be involved in the actions. (Even though we always had great respect for the people, this principle was greatly enriched by the experience of Gerry Pantin who coined the term. [Pantin G, 1979])

There is also a need to establish mechanisms for negotiating and solving conflicts. When this happens, a partnership is established and, together, professionals, the community, parents, and children can start a long journey to learning, growing, and changing their current situation. Unless these conditions are established, and the proper attitudes developed, people working with the community, parents, and children will be constantly surprised by the fact that things go wrong, even when all the resources, energy, and the best of intentions are put into a project.

The principle of self-direction and self-reliance

Every effort needs to be made to encourage people's autonomy and decrease unnecessary dependence. One very important step in that direction is to identify the needs and priorities with the people themselves whenever possible and, together, to analyse the resources in the environment that can be used to attend to those needs. One of the great challenges facing many projects is providing services and education in ways that motivate and involve people in meaningful ways, leading to their own growth and development and building their own self-confidence. That is why it is extremely important – from the beginning of the project – to work on the idea that people from the community will be participants in the project and not merely beneficiaries. This requires a continuous process of communication.

The principle of cultural relevance and self-expression

One very important part of the success of a project involves providing services

or education within the cultural frame of reference of the participating groups. Understanding the cultural and historical perspectives of the people, and using processes through which they develop new understandings about their own culture, their present conditions, and the reasons for these conditions, are very important processes in the first phase of any project. It is crucial to understand how the concept of 'time' is managed in the cultural context in which one is working and its availability for certain activities or members of the community. It is also very important for making plans and determining time lines. This requires observation, listening, and asking questions before formulating specific plans. It also requires involving the participants in the process of reflection and analysis prior to taking any action – a process that leads to an understanding of why something should be done, how to do it, and when it is appropriate to do it.

Anticipating and analysing the potential consequences of alternative actions are important parts of the reflection process. Quite often, this first step in a project is ignored or accelerated because organisers wish to get the project going on time and are in a hurry to get on with the objectives. If this happens, the consequences for the project can be disastrous. In addition to being of great importance at the beginning of a project, these processes need to be present throughout its development because the complexities of a culture are not totally learned or understood at any one point in time. The expression of a culture changes under different social and political conditions.

The principle of involvement and participation

From a project's inception, it is essential to involve participants in identifying problems, setting priorities, identifying their own roles and functions, analysing strategies, and selecting resources. Their level of involvement in the project should increase gradually as the project advances. The community's participation in developing the materials to be used in the project strengthens their sense of involvement, but it requires skilled communication. The role of external agents is not that of a passive listener; rather, they need to establish a relationship of mutual respect and understanding, where dialogue and reflection will lead to the identification of the best alternatives and ideas for implementation.

The organisation principle

The main objective of community projects should be to empower people to take control over the main factors that affect their lives and to solve their own problems by using existing resources in appropriate ways. This requires people to get organised in ways that make sense to them in terms of what they want to achieve in the project, and they need to expand their relationships within their

own context, as well as in other socio-cultural and political contexts.

The organisation of informal networks that serve as support, interaction, and self-help systems are essential from the beginning of a project if community-based actions that lead to the identification and solution of participants' own problems are to be sustained with a minimum of dependency on external sources. And as the project develops, these networks should also develop into more complex organisational patterns. As people help each other, they become stronger, both individually and collectively, leading to collective action, which increases people's levels of self-confidence, self-trust, pride in their own work, risk-taking abilities, and sense of direction and gives them renewed psychological energy to tackle more complex problems.

The principle of articulation and complementarity

One of the challenges of working with children is helping them develop in an integrated and holistic way. This requires a concerted effort on the part of all those persons and institutions that influence their growth and development.

Unless the agencies and institutions that attend to different aspects of childcare and development find ways to complement each other and to articulate their actions in terms of their strategies, guiding values, and allocation of resources, the consequences for children and the community might well be negative, and the waste in terms of time, money, and human energy, excessive. For that reason, it is necessary to work towards the development of long-term partnerships between parents and children, among families, between parents and schools, between schools and communities, between communities and government and non-government agencies, and among communities themselves.

The impact principle

Creating the critical mass necessary to have a continuous impact on both the home and the community – to make a real difference in terms of the problems that the programme is dealing with – is a very important dimension of effective parent-involvement programmes. This can be accomplished by involving a large enough group of people with a great enough variety of opportunities for interaction and learning, and providing enough input into the family to make a real difference in the quality of family interactions and lives.

A single programme directed at children and their mothers is not enough to turn a negative physical and psychological environment into a positive one in a short time. On the other hand, the organisation of family centres with a diversity of programmes and opportunities for collective reflection, interaction, and planning of activities for

different members of the family can make a real difference and can produce the necessary cumulative effect in the family and the community. A step in the right direction can be taken by organizing (1) programmes for parents to provide them with opportunities to discuss problems concerning the health and development of their children and to discuss and analyse new ways to interact with them, to stimulate their development, and solve their problems, (2) activities for older children to help them learn to interact in more meaningful ways with their young brothers and sisters, and (3) self-development and income-generating programmes for teens and adults.

Also, involving significant numbers of people in a programme can have a positive snowball effect because people find interesting and unique ways to support each other and to disseminate the ideas they have found most useful.

The principle of flexibility and diversification

Participants' needs and interests change as they grow and develop as a result of programme activities and strategies. This requires flexibility in ongoing planning as well as implementation. In addition, there is a need to allow for emerging diversification among programmes and the communities involved in the programmes.

Chapter three

The Programme: Strategies and Activities

Getting started

The main objective of the project was to create an appropriate environment for the healthy physical and psychological development of children, with the participation of the family and community, using mainly local human, institutional, and material resources. This objective was met through the following strategies:

- preparing a group of community leaders to work effectively with the parents of young children in the areas of education, health, and sanitation, with the focus on solving their own problems with their own resources;
- providing parents with strategies to use at home and in the community to strengthen the psychosocial development of their children;
- developing appropriate technologies with resources from the environment to facilitate the solution of some local problems;
- improving educational, health, and sanitation conditions in the communities;
- organising community services (education, health, and sanitation) in an integrated fashion;
- testing the feasibility of using a methodology for developing social programmes based on the maximum use of local resources and the cultural knowledge and experience of the people;
- determining which of the main strategies were more effective for achieving the proposed objectives and analysing the implications for similar programmes in other places.

The main objective was to be accomplished at two levels. The immediate pay-off would be reached when children learned more and the communities had more latrines, more ways to dispose of garbage, more pure drinking water, effective ways to control malaria, and more and better first aid and health care. The long-term goals would be reached when the communities learned how to provide a healthy environment for their children and when they could sustain that environment after the project ended. To do this, the parents and community needed the self-confidence it takes to start new activities; they needed to know what to do, how to do it, and how to get organised to do it. They also needed to know how to solve the problems related to organising, managing, and financing programmes. But first they needed to understand their reality and to learn to internalise their problems.

We started with weekly meetings for groups of mothers with children between three and seven years of age. In these meetings, the mothers learned how to stimulate the intellectual development of the children by playing with them at

Photo: Courtesy CINDE

home, using educational toys and games and other activities. We knew from our previous experience that (1) the mothers would consistently come to the meetings, (2) they could learn how to use the educational toys and games, (3) they or someone else in the family would play with the younger children using the toys and games and other interesting activities, and (4) the younger children would learn the things that the toys and games were designed to teach (Nimnicht *et al.* 1978).

We also knew that while the toys and games would attract the mothers to the meetings every week for at least a year, we could use the meetings to present other concepts to them and to start a process of self-direction and community improvement. The idea was that by beginning with learning how to use the educational toys and games, the mothers would be encouraged by their success in this process and would be prepared to try other ideas. Ways of improving the environment for the healthy development of the children could be brought up in the meetings and could serve as a basis for action for solving community problems.

We planned to do this one step at a time, going (1) from the simple to the complex, (2) from the immediate pay-off to the delayed pay-off, and (3) to the idea that the solution to every problem requires action by every individual as well as participation and action by the family, the neighbourhood, and the community.

The concept of going from the simple to the complex and working on one thing at a time was successful at first, when we were working with the first group of parents on stimulating their children's intellectual development. But as soon as other ideas began to emerge, this evolved into a more complex and systematic process for three reasons:

- After the initial experiences of success, the nuns and the community were not willing to go one step at a time.
- The people in the community and the staff had more than one idea that was important, and they did not have the same priorities. The people saw at once that malaria was a problem that needed attention, but some of them also saw such problems as the lack of latrines, lack of pure water, and lack of garbage disposal services as problems that needed immediate attention. Several sanitation campaigns were started almost simultaneously.
- A group of mothers meeting to learn how to stimulate their children's intellectual development could discuss other problems, but they were not the ones to take action. Other people had to be involved, and several groups emerged, working on specific tasks they defined as priorities.

So, instead of undertaking one problem at a time, several projects got underway simultaneously in each community. The systematic development we had envisioned did not take place (and we are still organising ongoing programmes and

developing the materials to implement them). Looking back, this was probably good because what did happen was that the high expectations that developed from the initial programme were met by PROMESA satisfying many different needs at the same time. For example, (1) a group of women learned how to make mosquito nets under the initial guidance of the nuns, (2) men started draining away standing water and cutting down weeds, (3) in two communities, people were trained to diagnose malaria by taking blood samples and examining them under a microscope, (4) some groups built public latrines for the entire neighbourhood, (5) a group of mothers got together to earn money by making clothes to sell in Valle, (6) a carpenter's club was started in Nuquí, (7) a small water-powered generator was built in Valle, and (8) some people learned to grow vegetables. All of these projects required additional work, and we did not have as much success with any one programme as we would have liked, but starting them made people believe that PROMESA was a promise for the future.

Over time, the various groups became more stable and were related to specific and persistent problems, such as how to improve income-generating skills, how to solve economic imbalances at the local level, how to organise the sale and distribution of rice and wood, how to get a plant to generate hydroelectric power for the whole town of Valle, and how to set up a community store. Some of these groups are functioning now and others are still emerging. As advisers and facilitators, we did not push the groups and communities to get organised but helped them as they became aware of the need to organise in order to solve community problems.

To implement the programme, CINDE's staff initially held training seminars for the nuns and community women who worked in PROMESA. They, in turn, conducted the meetings for the 'PROMESA Mothers' (the mothers who participated in these weekly meetings) and took care of any local training that was needed. The mothers worked at home with their children, helped by neighbours and friends. As other groups formed and got organised, CINDE's staff, the nuns, and other community leaders looked for technical assistance to help these different groups achieve their objectives. For example, the nuns could teach the women to make mosquito nets. SENA, the national training service, provided a person to teach gardening. Some Peace Corps volunteers helped to set up the malaria laboratories and build the demonstration centre. Another volunteer guided the development of the electrical plant in Valle, and CINDE staff built the moulds for making the water-sealed toilets for the latrines.

Sometimes CINDE's staff provided the leadership and sometimes we followed, trying to keep up with the nuns and the community people.

Strategies

One of our main strategies was to obtain the active participation of everyone in the community. They participated in the education of the children and in identifying and solving both their own problems and the broader community problems.

CINDE's methodology is evident in its strategies:

- Initially, work was done with the family as the mediator in their children's education and the integrator of all learning (as is the case in most of CINDE's social development programmes).
- CINDE's techniques make it possible to identify the existing knowledge of individuals and communities and to create channels of communication, which allow groups and individuals to learn from each other. New knowledge is presented in such a way that the community and the family can understand, assimilate, and use it, integrating it into what they already know.
- One of the basic strategies in presenting new ideas is the use of concrete and tangible elements that enable people to understand the concepts and to evaluate their own progress as they become more involved in the programme. One example of this is the use of toys and games in strengthening the psychosocial development of children.
- In this approach, acquiring new knowledge and identifying and solving problems takes place gradually and systematically through periodic meetings and workshops, which provide opportunities for learning and for sharing ideas. They also serve as mechanisms for systematising knowledge and experiences. Follow-up activities and an evaluation system in which the entire community participates encourage people to reflect on their new learning and actions.
- CINDE emphasises coordination among institutions and the formation of interdisciplinary working teams or study groups. Inter-institutional coordination is critical at both the local and regional level in order to maximise the use of scarce resources, as well as promoting more integral, pertinent, and productive institutional activities.

Other strategies that guide CINDE's actions in the communities include the following:

- gradually improving the self-concept of all members of the community (families with greater self-esteem have greater confidence in themselves and in their ability to work together to solve the problems that they identify as priorities);
- improving the ability of individuals, families, and communities to identify and solve their problems by first looking for and using the resources available in their environment and then identifying the external factors

that could also aid in their solution;
- preparing families to function as active agents in the process of community development and organisation (from the very start of a programme, families play an important role as active agents in the education of their children and the identification and solution of problems at the family and community level, with the result that all actions are beneficial not only to those directly involved in the programme but to all members of the community);
- using community resources appropriately to solve problems and to identify and secure national and international resources to supplement local ones.

CINDE uses organisational and management strategies that build self-reliance and support the community. The most important of these include the following:
- Community leaders, especially women, are the main educational agents, organisers, and managers of the programme.
- CINDE, as an external agent, does not work directly with parents, communities, or children. Its main role is to prepare community leaders for their new roles, to serve as facilitator in the development process, and to act as a link with other institutions.
- Inter-institutional coordination and complementation at the local and regional level is an important dimension from the beginning of the project.

In this project, PROMESA, a community-based organisation and support network, first emerged in each community and then became the planner, evaluator, and implementer of the programme. CIDEAL, a local NGO, was formed to provide technical assistance and take over CINDE's role.

At the beginning of the project, attention was primarily directed towards the educational and organisational processes of families and communities. Later, as the community identified other needs, strategies were developed to secure resources to attend to those needs. Family and community centres, built and administered by the people, became a tangible way of supporting organised actions. These centres also provided a vehicle for strengthening the autonomy and cultural identity of the communities.

The use of radiophones in the most isolated communities was the key to stimulating people to broaden their relationships and support each other on a long-term basis.

The learning process: training, materials, monitoring, and follow-up

The long-term objectives of the learning process are to develop people with healthy self-esteem, who have the ability to identify and solve problems and are prepared to sustain this ability. For this reason, we made great efforts to build

the basic level of education necessary for this to occur. The focus in the adult population was to develop practical literacy along with the necessary competencies, abilities, and attitudes to help children develop their intellectual abilities. They were also helped to develop positive attitudes toward education in order to create a healthier environment for children. This strategy aimed at rapidly changing the attitudes of people towards education and at building a system to reinforce the learning that was taking place at all levels of the community. The mothers could stimulate the psychosocial development of their children using educational toys, materials from the environment, and other activities, but more inputs were needed for other members of the family. This was where the development of family and community centres came in – to improve the basic level of education in the entire community by giving every member of the family a chance to participate in different learning activities and, when they went home, to share what they had learned and to help and reinforce each other.

Such a programme cannot be planned and carried out in a linear way, so we developed a flexible learning system that could encompass several activities at once in response to community priorities. Using the flexible learning system, different components of the learning processes and materials were developed to be used separately in different combinations in the different communities. This system was originally developed in the early 1970s at the Far West Laboratory in the USA by the founders of PROMESA for use in a national early childhood educational training programme.

The flexible learning system as a model

The flexible learning system is a competency-based learning system originally designed to help the staff in US day-care and Head Start centres and public schools to carry out responsive educational programmes for young children. By accommodating individual differences, it allows learners to progress at different rates, while providing them with a high degree of control over their learning. All staff are provided with the same basic understanding, so that the programme can be implemented coherently, but it also accommodates differences in the needs, interests, and characteristics of the communities or institutions where the programmes are implemented.

Learning starts with the perceived needs of the participants and is integrated with on-the-job experience: participants do not have to leave home for long periods or go without an income during the training. The learning focuses on developing the competence to perform the functions of staff working in early childhood education. Some competencies (such as *understanding the programme,*

how to plan the work, and *how to evaluate*) apply to all personnel regardless of their functions or the age of the children. Others are applicable to different age groups, such as *using games and other materials* and *testing young children.*

Learning units

The system uses learning units, which are designed to interact with each other and fit into the total system in a variety of ways. Learning units are process-oriented, self-directed learning modules, which vary in level of difficulty, the learning methods used, and the amount of time needed to acquire the competencies in the unit. All units, however, contain similar materials, such as a brief statement about the content of the unit, specific objectives in terms of competencies, a brief statement describing the learning process and the approximate time and amount of effort required to complete the unit (number of hours of reading, hours of observation, or practice per day or week), resources available to learners and resources they must secure to use the unit, and the conditions under which the learning should take place in order to produce the desired outcomes.

There is also an assessment system, which includes an initial assessment to help learners determine their needs, ongoing assessment during the training to provide feedback, and a final assessment to determine the learner's level of competence at the end of the training. A series of learning experiences, or tasks, guide the learner toward accomplishing the specific objectives. These are tailored to the level of difficulty desired and the different objectives, such as understanding, applying, or communicating the knowledge learned.

The use of the flexible learning system in the programme

The activities of our programme focused on what the parents and community could do to stimulate the psychosocial and physical development of their children and to improve the environment. To achieve this, we adapted the flexible

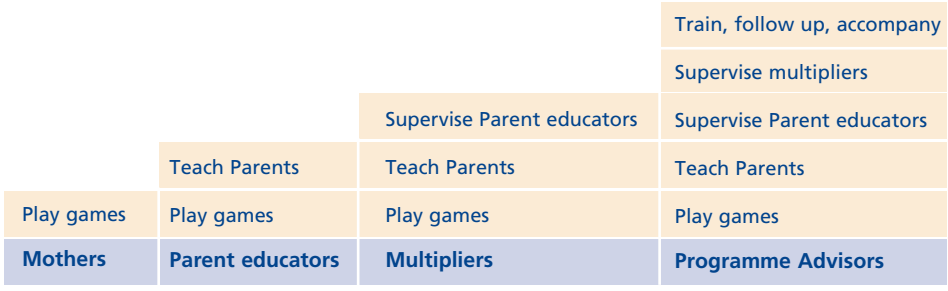

Figure 3.1. Hierarchy of competencies in the support system

learning system to use in preparing community people to be part of this support system. Obviously, for this to succeed, the system had to consist of a hierarchy of competencies (figure 3.1): the people who instruct the parents (promoters or parent educators); the people who instruct, assist, and supervise the parent educators (multipliers); and the people who instruct, assist, and supervise the multipliers, who develop materials, and who evaluate the results (programme advisors).

In this hierarchy, people at different levels in the system contribute to the successful implementation of the programme. In this example, parent educators must be able to play the games with the children and must know how to teach the mothers. In order to teach the mothers, they must be able to organise meetings, conduct discussions, role-play and demonstrate the use of the materials, observe the mothers, and make suggestions. They need to have reached a level of understanding or learning that allows them to apply these skills, but they do not need to teach them. The multipliers, on the other hand, must know not only how to organise meetings, role-play, and so on, but they must also be able to teach these skills to the parent educators. In addition, they must be able to assist, guide, and supervise the parent educators. The programme advisors must be able to understand, do, and teach all of these things and must also be able to develop materials, keep records, evaluate the progress of the programme, and make adjustments as necessary.

In addition to the specific competencies that people at each level need, everyone needs to know how to play educational games with children. They also all need to know how to provide a safe environment and how to help children learn, and so on. This is the simplest form of a competency-based Flexible Learning System; in our project, we also included programmes for health, nutrition, sanitation, and other areas.

There are several areas that contribute to the system's flexibility:

- Participants may enter at different points. For example, a person may start in one of the parent programmes, in a health programme, or in an adult education programme. A person might start at the bottom area of competence and move up from being a parent to being a parent educator or even a multiplier.
- People can obtain these competencies in several ways. In some cases, it might be through practical experience; in others, it could be through working in the field under the direction of an assistant or an intern, through individual study, or even through workshops.
- Another way is how a person demonstrates his or her competence; it cannot be by a formal test, but rather should be by a process of observation

in the field, or by simple role-playing. In Chocó the activities were often ahead of the development of materials, which provided a good opportunity to test out different approaches. The materials that were finally produced were not those used in the initial phase of the project, but they reflected refinements that grew out of the process. The unit on malaria is a good example. It grew out of community experience and efforts to combat malaria during the first two years of the project and now consists of a guide for a group facilitator to follow, 25 booklets about malaria with audio tapes for people who cannot read, a booklet on how to make mosquito nets, a play to help explain the causes of malaria, and five posters for group discussion about the causes and evolution of malaria.

All of the units we developed are related to the two levels of objectives for creating a better environment for the healthy development of young children. Six of them are health-related:

1. how to fight malaria;
2. how to have healthy children;
3. how to have a healthy pregnancy;
4. how to feed your baby (breast feeding and nutrition);
5. first aid and health care in the home;
6. dental care.

Four units deal with parent education and education for children:

1. infants: teaching parents how to observe, care for, and stimulate the development of children from birth to three years of age;
2. preschool: teaching parents how to stimulate the intellectual and social development of children from three to six years, using educational toys, games, and other activities;
3. first and second grade: teaching parents how to extend and improve children's learning through playing and developing other activities;
4. child to child: teaching older children how to work with young children, while strengthening their own learning and teaching them how to be parents in the future.

The units dealing with adult education include the following:

1. basic education: developing literacy and basic math skills;
2. elementary education: providing adults with the opportunity to complete elementary school;
3. life-support skills: providing opportunities for adults to learn cooking, sewing, gardening, carpentry, and other skills that can improve their quality of life;
4. arts, crafts, income-generating skills, and production groups: providing adults with opportunities to learn skills to increase the family's income;
5. leadership training: providing community people with the opportunity to learn how to organise themselves to solve their own problems and, in the process, learn to plan, organise, finance, manage, and

evaluate programmes.
The crucial part of implementing each unit needs to be clearly understood; this is the objective of guiding people to learn to solve problems at the personal, family, neighbourhood, and community levels, and to develop organisational and leadership skills. Each unit should contribute to accomplishing these objectives at three levels: (1) comprehension, where people acquire a better understanding of the problem, its causes and consequences, and alternative approaches or possible solutions, (2) application, where people work towards solving the problem at the personal, family, neighbourhood, and community level, and (3) communication, which takes place in two ways: through the leaders or facilitators as they work with the community and through every person teaching others what she or he has learned.

We felt that problem solving was crucial to the final success of the programme and for the parents' and community's ability to maintain and improve the environment for the healthy development of their children. Starting with the idea that a person needs to perceive, understand, and internalise a problem before it is a problem, we went beyond that: people also need to personalise the problem or make it their own. People living in marginal circumstances tend to feel that they are powerless to solve their own problems; someone else must do it. In the first step of our approach, the person needs to say, 'While I am waiting for the government to build the aqueduct, what can I do directly? What can I do to motivate or influence the government? I can boil water or carry it from the spring.' In the process of doing something, the person generates feelings of strength and self-confidence. The next step is to stimulate the family and the neighbourhood to think of ways they might get the aqueduct built instead of waiting passively for the government to do it. This creates feelings of group strength and self-confidence. As part of the process, we (together with the people involved) analysed improvements in their self-concept as they moved toward the solution of problems.

The knowledge and skills, the ability to see how the problem can be solved individually as well as collectively, the learning of organisational and leadership techniques and teaching others what one has learned oneself helps a person or group develop self-confidence. A self-confident person with the knowledge and skills necessary to solve a problem, along with organisational and leadership skills, can maintain and improve the environment for the healthy development of children. No single learning unit will accomplish all of these things at once but our reasoning is that with the successful completion of each unit, the people in the community grow in that direction.

The daughter of a Promoter said:
PROMESA is a programme that has

helped the Coast to progress. It has helped the families and the community. My mother was a participant mother in the programme, then she became a leader and promoter. She became a teacher for her own children and for many other children of the village who could not go to the school, or were beyond school age. She says that she has learned a lot in PROMESA, specially at home improving the relationship with my father and treating her children well. My brothers and I learned with the toys of PROMESA. I have also helped PROMESA in several programmes. We made mingas in the Coast for cleaning, padding the streets; we dried the mud to eradicate malaria. I worked in Quibdó in the escuela nueva and the child-to-child programme.

The training process

The promoters (who were selected by the community with criteria identified by them and CINDE personnel), multipliers (who were selected periodically by the promoters), and programme advisers (who were selected by CINDE) were the main agents trained to implement the programme and to use the flexible learning system.

Play as a basic strategy for implementing the programme

The use of toys and games and play-related experiences to foster human development is a very important element in CINDE's methodology. Playing is one of the most important needs of every child from the moment of birth. Besides being the most natural way of learning, creating, and expressing feelings and anxieties, play demonstrates how children are developing physically, socially, affectively, and intellectually. Through play and the way they relate to the people and resources in their environment, children accomplish the following:

- They develop their body, senses, and physical abilities, such as jumping and running.
- They discover the world around them and learn to relate to others.
- They learn about their culture – the customs, beliefs, ways people relate to one another, and their roles and functions within the community, as well as the music, dances, arts, and crafts of the community.
- They develop their imagination and creativity – the ability to create new objects and games, to find new solutions to existing problems, and to express themselves.
- They develop language and intellectual abilities.

The parent-child toy library

The parent-child toy library is a very valuable tool for promoting children's development. This concept was developed by the early childhood education division of the Far West Laboratory for Educational Research and Development and later adapted by

CINDE as the *circulating library*. It trains parents to use a limited number of educational toys to help their own children learn specific skills, fundamental concepts, and problem-solving behaviours. The major goal is to help each child learn how to learn rather than teaching specific content.

This approach is based on five lines of complementary thinking:

- One comes from the social-psychological theories of Moore and Anderson (1960), who advanced the notion that all societies have used games to help their children develop the skills, attitudes, and understandings that cannot be learned through direct experience but which they will need later in order to contribute to the society in which they live. Moore and Anderson called these autotelic activities because the rewards for success and punishment for failure are within tolerable limits for the learner and the society and are a part of the activity itself – not external to it. They called these activities folk models because they developed naturally over time, but Moore and Anderson clearly suggest that scientific models could be designed to function in the same way.
- The second comes from developmental psychology, particularly the work of Piaget, who felt that there is a clear relationship between children's development and their ability to learn. This has been applied in two ways: in the ordering and sequencing of learning through the use of toys and games, and in creating a learning environment where children can learn those things they are capable of learning when they are capable of learning them. This means that the adult who is responsible for a child must understand what to do and when to do it – to wait for the time when the child is ready to learn a specific thing.
- The third (which is supported by research in both sociology and psychology) is the notion that working directly with parents will be productive if the family knows what to do and how to do it. This is based on studies in many countries with different socio-economic systems, which have consistently shown that (1) the social class of parents is strongly correlated with the educational achievement of their children, (2) parental expectations and aspirations are good predictors of their children's academic achievement, and (3) when parents feel they have no part in making the decisions that affect their lives, their children do less well in school than one would predict from the child's initial ability. Furthermore, the evidence seems clear that programmes designed for children living in marginal circumstances have not been effective in improving their intellectual development unless there has been extensive involvement of the family.
- The fourth is related to what the objectives of early childhood education

should be. We feel that two things are crucial in the healthy mental development of young children: (1) children need to learn how to learn and (2) the learning process supports the development of a healthy self-concept (see Nimnicht and Arango 1970). At the same time, however, it has been recognised that society also has some expectations that need to be satisfied. Most modern societies expect young children to learn their colours, the names of shapes, their ABCs, to count, and by seven or eight years of age, to be able to read, add, and subtract. If a child does not meet these expectations, her self-concept will probably suffer because society will treat her differently than it would if she did meet them. The way children learn was the most important consideration in designing the toys, and it was approached by incorporating problem-solving skills. We also tried to incorporate the skills and understandings that society usually expects, and the final consideration was to focus on things that are universal and which do not have a heavy cultural bias, such as colour, shape, size, mathematics, and logic. It was reasoned that additional toys and games could be developed to teach things related to a specific culture.

- The last is a concern for economics. From the outset of the development of these materials, there was a concern that it could take years if we had to wait for the money, train the teachers, and build classrooms. The programme had to be designed so that it would not require more teachers, classrooms, and money than a conventional programme. This led CINDE to seek an alternative: working directly with the parents, who, in turn, could assist their children in developing their intellectual ability. This has been as effective as conventional programmes, if not more so.

One thing we had not anticipated was the use of the educational toys and games as part of a delivery system to reach parents for other purposes. We have since discovered that they can be used in this way because the prospect of having a new toy or game to use with their children is an attractive incentive to parents to attend a meeting. In addition, we have realised that learning and working with people can be done by appealing to the adult's need for play.

The development of problem-solving abilities

Developing and sustaining a healthy environment for children depends upon people's ability to solve problems as individual parents, as a family, as a neighbourhood, and as a community. A person or group of people must have four characteristics if they are to solve problems successfully:

- First, they must be willing to risk failure. This requires a healthy self-concept – a reasonable understanding of their abilities, of what is possible

and what is impossible. They do not spend time thinking about previous failures but can put them aside and go on to new things.

- They need the mental set of a problem solver: they must be able to change their point of view or consider someone else's. People with the mental set of a problem solver look for answers themselves instead of waiting for someone else to provide them. They make mental leaps; they form and reform classification systems to serve their needs. When one approach does not work, they break their mental set and look for another. They look for order and logic and use a variety of methods to solve problems.
- In addition, people must obviously have the necessary knowledge and skills to solve any particular problem. Even a simple problem like building a family latrine will remain unsolved without the knowledge of why it is important (which enables them to see it as a problem) and the skills to build it.
- And, they must understand their reality. That is, they must know what the main problems they face are, what potential resources they can use to solve them, and what cultural practices are important to the process of solving problems.

We have been writing about individuals as problem solvers, but the same concepts can be applied to a group of people, a family, a neighbourhood, or a community.

Participation, community organisation, and participatory planning as the basis for implementation

The programme was conceived from an educational perspective, using education as a means for human development and social transformation. To this end, the parents who initially participated in the programme looked at ways to identify and solve community problems, and they began to realise that they needed to be organised in order to solve them. Because the concept of community organisation and participatory processes was new in this region, these groups became an important means of fostering community organisation, participation, and group learning.

This approach is part of the principle of 'multiple perspectives', which promotes the adoption of different roles for the learner, involving respect and horizontal relationships. The added recognition of popular knowledge and common sense formed the basis for participation. People said, 'In PROMESA we felt that we were trusted... They didn't give us fish; they taught us how to fish.' The opportunity to be strong participants helped people win confidence in the process and in themselves while they learned and solved their problems, which in turn, provided more opportunities for participation, and so on.

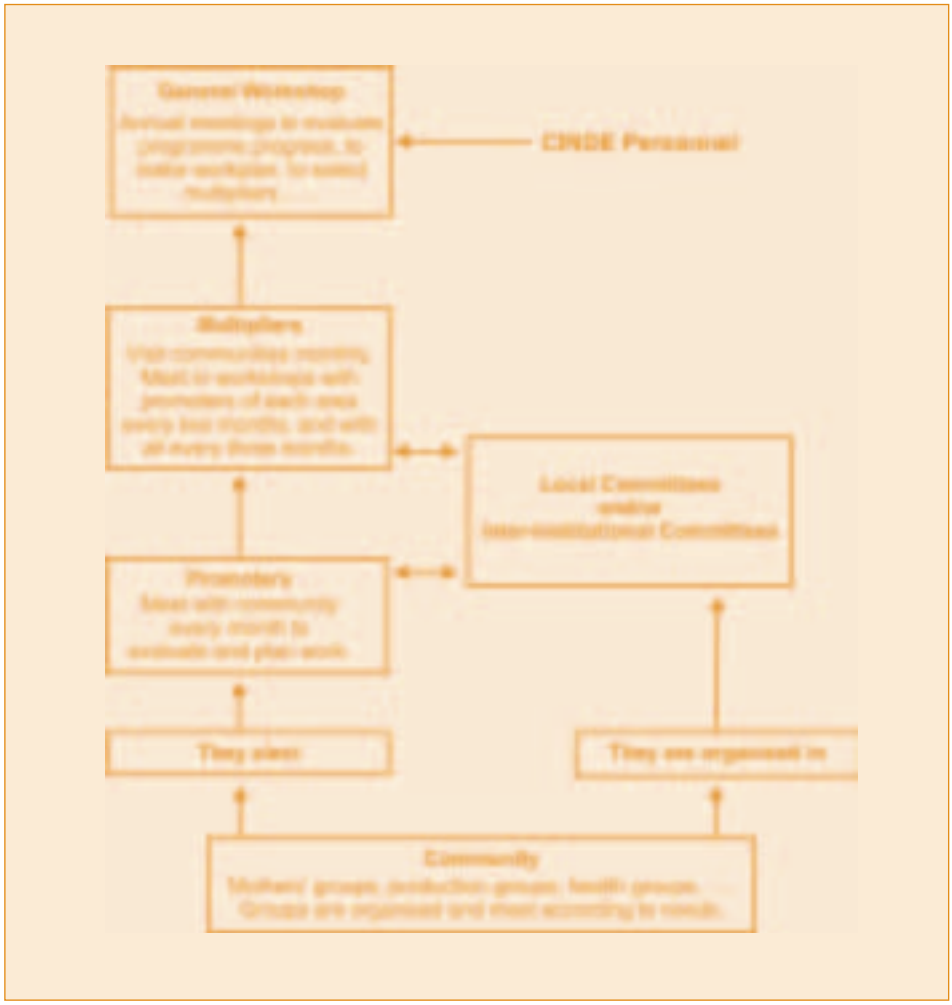

Figure 3.2. Process of planning and evaluation

This also influenced the evaluation process, without which it would not be possible to assess individual and social transformation. People gradually learned to apply more complex evaluation instruments. A wide range of community-based groups and local institutions, such as the local hospitals, schools, government authorities, parents, and promoters from PROMESA designed and implemented activities together, after a common plan was defined. These plans became the reference for evaluating what was done and what results were obtained. Participatory planning and evaluation were also important for disseminating information about the programme, its

outcomes, and the way resources were used – a process that gave a feeling of transparency to the way resources were allocated, as well as confidence to the individuals and groups involved. The democratisation of information was critical for establishing credibility and legitimacy in the programme.

Trained leaders emerged from the community. They were elected through a democratic process and gained legitimacy and community support. They were able to foster communication between institutions and the communities, developing more respectful relationships. One problem, however, was that while the cascade training system used to democratise knowledge and experience worked, it also acted as a barrier because, initially, the leaders and promoters who emerged were housewives and agricultural workers with very little formal training or status in the community. We became aware that in this kind of process, promoting empowerment and sustainability is critical.

Inter-institutional and inter-sectoral complementarity

PROMESA required strong inter-institutional and inter-sectoral relationships for financing and implementation. The fact that the initial funding was just for the educational and psychosocial components forced us to look for financial support for the other components, such as health, production, and nutrition. It was also necessary to find partners to help implement the other components, since CINDE's strengths are in education and psychosocial development.

We found financial support from a variety of national and international sources, the most important of which were the following:

- The first foundation to fund the programme, the Bernard van Leer Foundation financed the psychosocial and educational processes for seven and a half years.
- CEBEMO, a Dutch foundation joined forces with us, financing health and production one year after the programme started. Their partnership with PROMESA lasted for seven and a half years.
- The Canadian International Development Research Centre (IDRC) financed research on the biological control of malaria for about six years.
- Nutrition programmes were funded for 14 years by several French and Swiss associations.
- Other Dutch and German foundations, like Memisa, Solidarity, and Misereor, funded special activities, such as the latrines, community pharmacies, and some production groups.
- Plan International provided nine years of financing for the expansion of PROMESA to other parts of Chocó.
- There was a great deal of financial support for different components and

special projects from Colombian institutions like the Secretary of Health, the Secretary of Education, INURBE (the government agency for housing), and SEM (the national agency in charge of eradicating malaria).

The following were among the main institutions that participated in the programme:

- SENA, the National Learning Service, is in charge of providing technical training and adult education courses aimed at improving income. They assigned full-time personnel to conduct courses and assist people in vegetable gardening, carpentry, arts and crafts, organising wood mills, accounting, and establishing PROMESA as a legal community organisation.
- CIB, the Corporation for Biological Research, became our partner in malaria research. CIB worked on the biological aspects of malaria control while CINDE worked in the areas of education and community participation.
- SEM trained personnel to use microscopes and in other aspects of diagnosis and treatment and provided diagnostic materials and medications.
- Plaidecop, an agency in charge of integrating services on the Pacific Coast, provided much of the equipment for the malaria project and for improving communication in the area.
- The Secretary of Education provided personnel to direct and implement the *escuela nueva* programme.

As a result of this process, some very interesting dynamics were established among these agencies, leading to greater cooperative planning and evaluation and serving as an important mechanism in strengthening decentralisation at the municipal level.

Programme activities

Improving the psychological environment

These activities involved the continuous participation of adults through meetings, workshops, self-study groups, and follow-up activities aimed at improving the quality of family interactions and community life. Initially, the main strategy was to work with groups of parents (mainly mothers) of children from three to six years of age, who were interested in improving their interactions with their children at home, and to stimulate their intellectual development. The mothers attended two-hour meetings every week, where they learned how to interact better with their children through play, using educational toys and games in their homes. They could also discuss other problems, and they planned activities such as draining away stagnant water from under the houses.

The success of seeing the children learn under their tutelage and the success of organising community projects built their self-confidence and gave them the

psychological energy to gradually undertake more complex activities and increase their participation in the project. When activities such as draining water were organised, other people from the community, especially men, became involved, but the mothers who attended these meetings were the glue that held the programme together. Gradually, other programmes, such as adult education, child-to-child, play and learn to think, and *escuela nueva* were added.

Increasing the family's ability to attend to the needs of their children

Early stimulation and initial education at home

In 1981, PROMESA extended its activities by organising a programme for mothers with children from zero to three. It consisted of a series of at last 36 meetings in which mothers learned the main aspects of child care and development and how to provide a healthy, safe, and stimulating environment for their babies and toddlers. They also learned to observe their babies, respond to their needs, and stimulate their healthy emotional and intellectual development with toys and games and other materials from the environment. Carried out by local leaders, the programme was usually coordinated with the regional health department to implement a component of growth and development that encouraged mothers and health workers to understand the relationship between nutrition, growth, and development.

Preschool programmes

Preschool programmes were designed to improve the family's ability to attend to the psychosocial development of children between three and six. These were organised in a number of ways:

- In the 'preschool at home' or 'parent-child programme', parents (especially mothers) and other members of the family attended weekly meetings to learn how to interact with their children in order to foster their healthy psychosocial development and how to improve other aspects of the home environment. In the process, they strengthened their role as educators of their children and, using educational games and other activities, they stimulated the child's intellectual, social, and emotional development.
- The 'integrated home-school programme' consisted of community preschools run by local promoters or by mothers and, in many cases, included nutrition programmes run by mothers for the children.

One of the main objectives of these programmes was the participation of the family in the integrated physical, intellectual, social, and emotional development of their children, combining the best elements of traditional centre-based models with the benefits of parent programmes. The children attended a community centre in the mornings for two to five days a week, while the mothers or another member of the family came one afternoon per week to a two-hour

meeting, where they learned about the development of children from birth to six years of age, how to use games to encourage their children's intellectual and social development, how to use other simple methods to encourage the children's development, how to improve their interactions with their children, how to identify problems and possible solutions in the children's physical or psychological development, and how to identify other things they could do to improve the environment or the family.

At the centre, the children learned concepts that are not easy to teach at home, and they participated in group and creative activities, such as art, music, drama, and field trips. The toy library, from which mothers could borrow games and toys to use with their children at home, was an essential part of this programme.

The child-to-child and youth-to-child programme

This programme was conceived to encourage other members of the family to attend the meetings when the parents could not. What often happened was that when a parent was unable to attend, they sent an older child, aged 10, 11, or 12. These brothers and sisters proved to be good substitutes for their parents, and this resulted in CINDE's child-to-child and youth-to-child programme. By stimulating the development of their younger brothers and sisters through play, games, cultural activities, and other initiatives to improve the environment, the older children develop leadership abilities and new learning tools for their future roles as parents and agents of change within their communities. Originally for children between nine and 12 years of age, the programme has been implemented in communities throughout Chocó and now includes children up to 18.

The play and learn to think programme

Play and learn to think is an educational innovation designed to complement the school curriculum by introducing games and cognitive development into the classical teaching system, which is based largely on memorisation. It seeks to develop the intellectual abilities and skills required for problem solving, including flexible thinking (inductive and deductive reasoning), the ability to organise and interrelate information, the ability to form and break patterns and categories, and so on, in children from first to fifth grade. This is achieved not only through the child's interaction with the materials, but also through the orientation and participation of the parents or teachers in weekly sessions lasting at least two hours and involving four or five children.

Escuela nueva

The *escuela neuva* (new school) is a modality of basic education that originated in the 1960s under the name *escuela unitaria* in Pamplona, Colombia as a model for rural education and for

communities where there are relatively few children. The name was later changed to *escuela nueva* and its main features are a close relationship between community and school and the very active participation of the children in their own learning through the use of educational materials and community activities. An important current feature is the participation of children in school government. The model has been widely disseminated and adapted for use in many countries.

There were many new schools *(escuelas nuevas)* in Chocó that were not functioning appropriately. The project decided to work with the teachers and emphasis was placed on the relationship between the schools and their local communities, improving communication skills, developing specific materials, the recovery of cultural practices, and improving learning strategies in general.

Enhancing parents' ability to attend to their own needs and personal development

These programmes can be divided into three principal types:

- Programmes designed to help parents make better use of their existing resources by strengthening their leadership, problem-solving, and community-organisation abilities. These programmes were open to everyone. They consisted of activities aimed at developing leadership skills and abilities, as well as meetings to discuss community problems and to consider alternative solutions and ways to get organised to solve problems. The groups often submitted proposals to funding agencies. At first, CINDE's staff wrote the proposals but over time it became a joint effort, and many times the community groups did it by themselves. An important outcome was the formation of PROMESA as a legal organisation.
- Programmes to enable parents to increase their income by improving their vocational skills or developing new skills and by forming production groups to produce goods for sale. These programmes included activities, such as courses in sewing, cooking, and gardening, aimed at improving the ability of the family to attend to their own needs while increasing their income. It involved organising production groups, which established revolving funds and set up courses to improve the quality of the work and to market their products. There was also vocational training, such as bread making, carpentry, wood cutting, fishing, farming, and small-business management, taught by SENA. Whenever possible, the programme also organised a tool bank to support vocational activities, as well as a revolving fund to help buy tools or materials for projects. With technical assistance from CINDE, people started forming groups in 1980, making arts and crafts, mattresses, mosquito nets,

clothing, and bread, which required little or no money to start. The first material for the mattresses and mosquito nets came as a gift from a textile factory in Medellín and the first two sewing machines were also gifts. As the production groups grew larger and more sophisticated, they needed money to start and function on a continuous basis. In 1983, with a grant from CEBEMO, a revolving fund was set up to support these groups – with mixed success. People learned to get organised, to manage and control their accounts, and to improve the quality of the work they did, but many of the loans were not repaid in full. However, as an educational experience for everyone involved, the programmes can be considered successful. We are in the process of doing a follow-up study and will report the results in another document so that others can learn from our experience.

- Programmes to strengthen the cultural identity of families and communities and to help them recover their own history and to use their free time in a healthy enjoyable way. These programmes emphasised socio-cultural activities designed to strengthen cultural identity, especially through important aspects of the group's history and culture. Groups were formed to organise different cultural activities, such as drama and music, local or folkloric games, and the study of native myths, legends, and cultural medical practices.

Improving the physical environment

From the beginning of the programme, many of the actions were oriented toward improving the physical environment, especially specific activities such as vaccination campaigns, cleaning the beaches, and draining water away from houses. As the programme advanced and there was money for health, nutrition, and sanitation, the activities evolved to include such things as primary health care, nutrition, latrines, and biological control of malaria. Adult education activities related to health and how to provide a healthy physical environment for young children were emphasised.

Primary health care

A primary healthcare programme administered by promoters selected by the community was the first programme organised. The promoters (including midwives trained in the programme) became health leaders for each neighbourhood, and because there were no pharmacies or doctors in the communities, each one had a small health centre at home to provide the neighbourhood with first aid, health education, and low-cost basic medicines. The programme was also organised in some of the Native American villages, where the promoters, who were men, became facilitators and teachers in a national programme sponsored by the Dutch government for recovering natural medicine practices.

Controlling malaria

Chocó is a humid tropical region, where malaria has always been endemic. The fight to control malaria was very important in the programme and went through three cycles:

- First, there was an intensive educational programme to develop an understanding of the causes of malaria and strategies to fight it. A learning unit was developed with community participation to (1) guide people towards understanding its causes through educational materials and cultural activities like dramatisations, (2) take action to prevent the problem, such as draining water away from the houses, making and using mosquito nets, diagnosing the type of malaria, providing medications, and following up treatment, and (3) communicating to others what had been learned.
- Then an experiment on biological control was combined with the educational programme.
- In the third cycle, there was a return to the educational programme and systematic diagnosis but with more community education, participation, organisation, and articulation of actions among different agencies at the state and local levels, along with systematising the methodology and developing materials.

Nutrition

A set of nutrition centres, organised with French and Swiss support, were run by mothers or community leaders. These were set up in the centres where children attended an informal preschool programme in the morning and had lunch. The programme included nutrition education for the family.

Relevant technology and environmental sanitation

Many activities, such as collecting water from roofs, using a dehydrator for vegetables and fruits, and making ecological mousetraps were organised using appropriate technologies. But, while a technology might solve the problem it was intended to solve and could be used in the communities, there were difficulties. In many cases, not enough education was provided to use the technology properly and in a sustained way, attitudes prevented its use, or it was not relevant because it could not be maintained with community resources.

Chapter four

The Formal Evaluation

When we started the project, we expected the following outcomes:

- There would be a significant improvement in the physical and emotional health and intellectual development of the children.
- The parents and the community would be better able to attend to the needs of the children.

The focus in this chapter is on the extent to which these outcomes were achieved and how the programme was evaluated.

This chapter is divided into two sections, based on the two stages of the project: (1) PROMESA, which began as a programme in the Pacific Coast region of Chocó, Colombia, and (2) CINDE-PLAN, which was a joint venture with Plan International to extend the PROMESA experience to other municipalities in Chocó. The evaluation of the first stage is based on information gathered from the first four communities: Valle, Panguí, Nuquí, and Bahía Solano. The information used to evaluate CINDE-PLAN is from the first two municipalities included in the extended project: Quibdó and Istmina.

Methodology

As a research and development institution, CINDE was set up to design, implement, and evaluate programmes and extract lessons that could be used in other contexts. So when we wrote the original proposal for PROMESA, we included an evaluation design. We started the programme with a baseline and a plan for periodically collecting data for evaluation. PROMESA was initially funded for three years, then for another three years, and ended up operating for 20 years. The initial evaluation exercise turned into a longitudinal study, which resulted in the kind of limitations inherent in a project that has gradually evolved.

The general design

Because the evaluation design was not completely structured at the beginning, in the end, it became an emergent one. It turned out to be a mixture of strategies in an attempt to accommodate the realities of the project. For that reason, it is not a conventional design, but one that needed a lot of creativity and reflection. Our strategies for each evaluated component are described below.

Sample, techniques, and instruments for data collection

At the beginning of the project, we started gathering information that could give us a baseline for the conditions of the people and communities in order to

Photo: Courtesy CINDE

identify changes when the programme was implemented. Two of the most important instruments were interviews for parents and tests for children.

Parent interviews

These interviews covered family structure, the educational level and occupation of each family member, family income, and a description of the house, including the type of sanitary and water services, as well as the type of floor, roof, and walls. The parents were asked about their aspirations for the child participating in the programme, whether they were able to attend to the child (physically and emotionally), activities done with the child by family members, and the parent's self-concept. Two more items were included in this interview: the mortality of children younger than five years and information about live births. Since 1980, all the interviews have included the same questions but in a different order; there have also been questions added over the years. (Information on the interviews is available from the authors.)

The interviews were administered by specially trained CINDE staff and were standardised by the researchers. In PROMESA, because of the small size of the communities, it was assumed that the programme had an influence on all the families, so the interview samples were taken from each community as a whole. Quibdó and Istmina, two of the CINDE-PLAN communities, are large towns, so the programme's influence could be expected to be restricted within sectors. These samples, then, were taken only from those families registered in the programme.

The interviews done in CINDE-PLAN between 1995 and 1997 were a part of a specific study that profiled the children

TABLE 4.1. NUMBER OF MOTHERS INTERVIEWED

Year	PROMESA	CINDE-PLAN
1980	203	
1986	274	
1989	175	
1992	121	
1995—1997		641
1999	83	145
2001	39	244

TABLE 4.2. NUMBER OF CHILDREN TESTED IN MATHEMATICS, LANGUAGE, AND LOGICAL THINKING (FIRST TO FIFTH GRADES)

PROMESA		CINDE-PLAN	
Year	Number Tested	Year	Number Tested
1980	261	1997	671
1981	463	1999	872
1982	551	2001	701
1983	492		
1985	541		

and their environment. The interviews done in 1999 and 2001 were administered to a set of mothers and promoters (called 'the stars') who had been educational agents in the programme.

CINDE carried out the profile study in different parts of the country, including Chocó and involving the PROMESA and CINDE-PLAN communities. It was aimed at forming a profile of the child's development, of the child's family and community environment, and of either the learning environment in the school or the school's ability to respond to the child's needs. The overall goal was to strengthen the policies, plans, monitoring, evaluation, and advocacy of childcare and development programmes at the regional and national level and to improve the learning environment for children, especially in preschool and first grade. This study was carried out through testing to evaluate the child's readiness for school, including intellectual ability, social development, and self-concept.

The information about the family was obtained through interviews with the mothers or whoever was acting as the mother in the household. Information about the learning environment came from observations and interviews with teachers, school directors, and school supervisors.

Testing the children

The children's tests were designed to assess academic achievement in math, language, and logical thinking over the five years of elementary school. A description of the tests is provided in the appendix. The tests were administered by specially trained members of CINDE's staff and standardised by the researchers. They were conducted in PROMESA in 1980, 1981, 1982, 1983, and 1985 (table 4.2) and in CINDE-PLAN in 1995–1997, 1999, and 2001.

The children's nutritional status was evaluated by measuring the weight and height of children between three and six

years of age. The information from 1989 and 1995 has been used for comparison purposes because the measures for those years were taken simultaneously in the Coast and in Quibdó. The coordinator of CINDE's nutrition programme took the measurements with the help of trained local promotoras (promoters). Weights were taken on Detecto clock-type scales.

Components, assumptions, and indicators

The analysis for both PROMESA and CINDE-PLAN has been divided into three central components: educational outcomes for children, health (especially in children), and parent outcomes. The indicators and assumptions in the two programmes are summarised below.

Educational outcomes for children

What was evaluated. The indicators we used were the average grade level of 12-year-old children and the educational achievement of these 12-year-olds.

PROMESA questions:

- Are children staying in school longer?
- Are they learning more or better than they did before?
- Are these improvements being sustained over a number of years?

CINDE-PLAN questions:

- Are children staying in school longer?
- Are they learning more or better than they did before?

The design. We chose a cohort design that permits comparisons of groups over time. This enabled us to check on the progress of the programme and, at the same time, use the earlier measurements as a kind of control against which subsequent measurements could be compared. The main assumption in this design is that the groups being evaluated come from the same population and have similar characteristics. It is important to make the evaluations under similar conditions; for example, if you are going to evaluate children in school, they should be evaluated at a similar time every school year.

For this study we used open cohorts, where 'subject entry is continued over time … [which] permits analysis of time and cohort trends within the cohort'(Paneth 2000). This design is particularly appropriate when one is dealing with long-term social or educational programmes, and when the entire population will eventually be involved. This is illustrated in figure 4.1, where T = time, G = group, and X = the evaluation. As an example, let's say we want to measure children as they enter the first level of school. We want to measure the same children again the next year, then the year after that, and so on until they leave school. We also want to compare them with children entering the first level after a change has been introduced into their environment in order to see if there are any differences between children coming into level one at different times – and if these differences persist over time as the children advance

through school. So, in figure 4.1, G1 is the first group of children (the first *cohort*); they entered school at time T0. In this example, we have only shown four measurements: when they entered level one (T0), level two (T1), level three (T2), and so on, but they could have been measured for six years or eight years, whatever was needed for the study. At time T1, when the first group of children were entering the second level of school, we added a new group (G2) (the second *cohort*): the children who were entering level one at time T1. These children were also measured at time T2 (when they entered level two) and T3 (when they entered level three), and so on. At time T2, a third group (G3) was added: children who were entering level one at time T2. For this kind of study, a new group can be added at each point in time and followed to the end of the study until the study is complete.

	T0	T1	T2	T3
G1	X0	X1	X2	X3
G2		X0	X1	X2
G3			X0	X1

Figure 4.1. Illustration of a cohort study

Impact on children's health

Assumptions. Improvements in sanitation, human development of parents, and a better overall environment for the healthy development of children should be observable through specific indicators of children's health.

What was evaluated. We looked at three indicators:

- the live-birth rate, defined as the number of live births divided by the number of pregnancies;
- the death rate during the first five years of life, defined as the number of children who died in their first five years of life divided by the number of live births;
- the children's height and weight.

Design and sources of data. We asked the mothers how many pregnancies, how many miscarriages, how many live births, and how many stillbirths they had had. We also asked how many of their children had died during the first five years of life. We have included official (government) data on infant mortality to make a rough comparison, knowing that because of under-registration, the government data are not so reliable.

Two different parameters were used to assess the children's nutritional condition: (1) the change in height and weight between two periods of time and (2) their nutritional status. For assessing nutritional status, we have used Z-scores (based on standard deviation) for height and weight, which indicates acute under-nutrition, and for comparing height for age, which reflects chronic under-nutrition. We have used the recommendations of the World Health

Organisation (WHO 1975) to classify under-nourishment.

We started collecting data in PROMESA in 1980. Here, we have compared information from the mothers' 1980 and 1989 interviews. Information on the children's height and weight was collected in 1985 and 1995.

For CINDE-PLAN, we used the results of interviews done in 1996 and 2001. For the nutrition component, we used the data for height and weight collected in 1989 and 1995. (Information on nutrition is from Quibdó.)

Parents' outcomes

Assumptions. If a programme like ours is going to have a lasting effect, the parents and the communities have to change. The parents need to learn what to do to support the healthy development of their children, They need to know how to do it, and they need to have the will to do it and access to resources. So the programme should be able to demonstrate specific changes in parents' self-concept, level of education, and ability to attend to the physical needs of their children.

It is important to note that most of the information about parents came from the mothers. We have used the term *parents* as a general category because, even though we did not interview the fathers, the programme was designed to involve both parents and many fathers participated, particularly in the programmes for health, adult education, improving housing, and the production groups.

What was evaluated. We used similar indicators to assess the ability of parents and the community to provide a better environment for the development of children. The fact that the children were staying in school longer and learning more is one indicator. This could only happen if the parents had learned some of the things they needed to know and if they had used them. The improvement in health is another indicator.

In **PROMESA**, we wanted answers to the following questions:

- Has the parents' general level of education (formal or informal) improved so that they are better able to help their children?
- Has the parents' ability to attend to the physical needs of their children improved?
- Has the parents' self-concept as parents improved?

For **CINDE-PLAN**, in order to get a more complete picture, we included specific questions (measured on a scale from one to five) to look at three dimensions of parenting: the parent's attitude towards her child, the parents' ability to attend to the physical and emotional needs of their child, and their attitude about themselves (self-concept):

Attitude towards the child:

- How do you think your child is,

compared to other children the same age?
- Are you content with your child?
- Is your child happy?
- Does your child enjoy playing?
- Does your child have friends?
- Does your child like to go to school?

The ability to attend to the physical and emotional needs of the child:
- Can you make or buy the clothes your child needs?
- Can you buy the medicine your child needs?
- Who plays with your child?
- Who reads to your child?

Attitudes about themselves (self-concept):
- Are you content with your life now?
- When you think about three years from now, how do you think your life will be?
- Do you think that you can help your neighbourhood now?
- Do you think that the people in the neighbourhood or community accept your ideas?
- Do you think that you have the ability to help your child to be successful in school?

Design and sources of data

In **PROMESA,** improvements in the parents' education were assessed through the activities and roles they developed in the programme.

Improvements in their ability to attend to the physical needs of their children were evaluated by changes in the houses (aside from the development of a healthier environment) and parents' participation in the production groups.

Improvements in the parents' self-concept were assessed through two general strategies: (1) analysing the changes observed in their lives, their self-image, and their locus of control and (2) identifying the influence on their children of improvements in their self-concept.

The data used to assess changes in parents' education came from the regular monitoring of the programme; no specific information was gathered on this topic.

The information used to identify changes in housing conditions as an indicator of improvements in parents' ability to attend to physical needs came from the 1980 and 1992 parent interviews.

The data about the production groups came from regular programme monitoring.

The mothers in **CINDE-PLAN** were interviewed in 1995, 1996, 1997, 1999, and 2001. Many of the same mothers were interviewed each time, and in 2001, there was a deliberate effort made to interview as many mothers who had been interviewed in 1996 and 1997 as possible. In the end, we had 96 mothers who were interviewed in 1996 and 1997. There were no differences between them and the other mothers in their responses, so we used the whole population for our analysis.

To assess changes in the parents' education, we looked at their roles and activities as well as changes in level of education.

Additional information

The project was turned over to a local NGO (CIDEAL) in 1997, but its inclusion in the Bernard van Leer Foundation's series of tracer studies gave us the opportunity to continue gathering information. This meant that interviews and testing could also be done in 1999 and 2001. It also meant that new items could be included in the parent interviews, such as their participation in the different programmes. In addition, special semi-structured interviews were administered to critical informants.

Finally, regular monitoring of the project revealed some important outcomes, such as changes in basic sanitation, immunisation levels in children, malaria control, parents' educational achievements, and parents' participation in production groups.

PROMESA findings

Education

Assumptions

We assumed that if PROMESA's parent-child programme was being effective in providing preschool children more opportunities to learn, then each year the children who entered the first grade should test somewhat better than the children in the previous year. If this pattern lasted through the elementary grades, it would indicate that the programme had a lasting effect.

If the children were staying in school longer and achieving more, then we could assume the following:

- The programme had been successful in helping the parents learn to stimulate the psychosocial development of their children.
- The mothers not only learned how to use the materials but also took the time to use them with their children.

In addition to these two main assumptions, we could assume that

- The mothers were able to generalise from the experience of using educational games to develop other activities that encouraged their children's psychosocial development.
- Enough mothers were involved in the programme to have an impact on the entire community.
- The educational climate had improved not only in the homes but also in the schools and the community.

So, in evaluating the intellectual development of the children, we were also evaluating one aspect of the parents' ability to attend to the needs of their children.

Sources of data

The mothers were interviewed in 1980, 1986, and 1989 to obtain information about the educational level of their 12-

TABLE 4.3. AVERAGE GRADE LEVEL OF 12-YEAR-OLD CHILDREN IN PROMESA

Year	Average grade
1980	2.6
1986	2.9
1989	3.7

year-old children. We asked about 12-year-olds because by 1989, the children who had been in PROMESA would be old enough to have finished the five years of elementary school.

We tested the children on academic achievement in math, language, and logical thinking. Children in the first, second, and third grades were tested in 1980, and children in all five grades were tested in 1981, 1982, 1983, and 1985. Here, we present the findings from 1981 and 1985.

Results

The children were staying in school longer. Table 4.3 shows the average grade level for children aged 12 years. Between 1980 and 1989, there had been an increase of one grade level.

Another way to illustrate this change is the percentage of children 12 years of age who reached fifth grade. According to the Colombian census taken in 1993, 25 percent of the 12-year-old children in the State of Chocó had reached the fifth

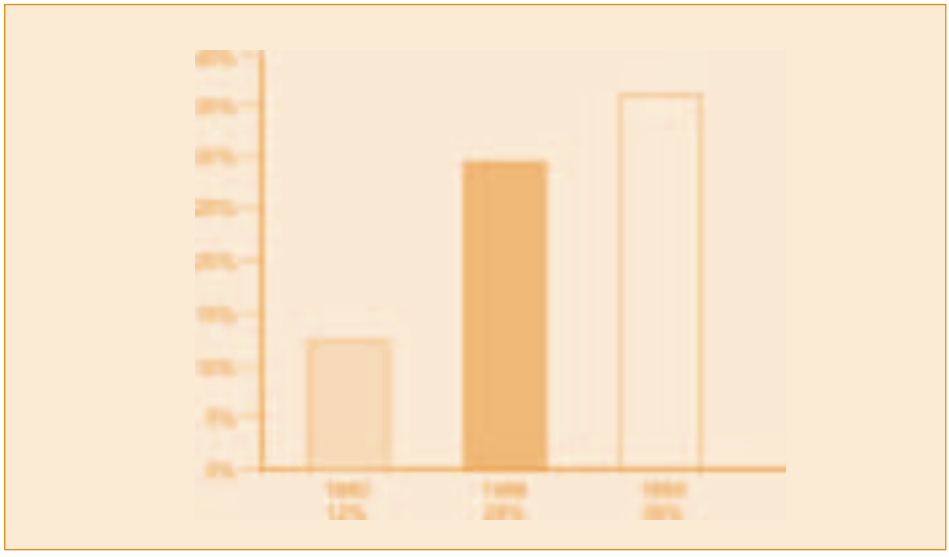

Figure 4.2. Percentage of PROMESA children who reached fifth grade

grade (in the country as a whole, it was 51 percent). In 1980 only 12 percent of the PROMESA 12-year-olds had reached fifth grade, but by 1989, this number had risen to 36 percent (figure 4.2). When the programme started, the percentage of children in the PROMESA communities who reached the fifth grade had been less than half the 1993 level for the region – and less than one-fourth the national average. By 1989, it had risen to well above the regional average.

TABLE 4.4. AVERAGE TEST SCORES IN MATHEMATICS, LANGUAGE, AND LOGICAL THINKING AMONG THE PROMESA CHILDREN

Mathematics			
Grade	**1981**	**1985**	**Significance (t-test)**
1	15.7	19.6	p < .001
2	17.1	21.7	p < .001
3	29.8	33.0	p < .05
4	25.4	31.0	p < .001
5	30.9	37.9	p < .001
Language			
Grade	**1981**	**1985**	**Significance (t-test)**
1	20.7	23.9	p < .01
2	16.7	22.9	p < .001
3	23.4	32.5	p < .001
4	29.5	34.8	p < .001
5	33.6	37.2	p < .001
Logical Thinking			
Grade	**1981**	**1985**	**Significance (t-test)**
1	9.4	15.0	p < .001
2	8.4	21.1	p < .001
3	10.5	20.3	p < .001
4	11.2*	19.8	p < .001
5	22.8*	25.9	p < .005

* Data for logical thinking in fourth and fifth grade are from 1982 (data for 1981 were not available).

The children were learning more. There was a steady – and significant – increase in school achievement (as measured by the tests) in mathematics, language, and logical thinking (table 4.4).

Health

The impact on health conditions

PROMESA's primary healthcare programme consisted of training local women to serve as paramedics. Despite their very low literacy level, these *promotoras* (promoters) learned to give first aid, take blood pressure, use a microscope to diagnose malaria, and recognise common illnesses and treat them. They also learned to conduct neighbourhood meetings to discuss health problems, such as household sanitation, how to obtain pure water, and how to clean streets and beaches.

In addition, the promoters learned to give vaccinations. Working with a government programme, they have contributed to an increase in the number of people who have been vaccinated. For example, the percentage of children who had received one or more of the recommended vaccinations in 1980 was 46 percent; by 1986 that figure had increased to 72 percent, and by 1989 it had reached 95 percent. The national government conducted a national campaign for vaccinations in 1985 and 1986, but this programme would not have reached the people of Chocó without the help of the promoters, who provided the transportation and lodging for the doctors and nurses and organised the campaign within the region.

The primary healthcare programme was also the base for the Flying Doctors Programme,[1] which brought young doctors and interns to the community once a month to examine people with more serious problems, provide medicine, and perform simple surgical procedures. Now there are doctors in Bahía Solano and Nuquí who go to Chocó for their year of rural service. They provide medical services to the villages along the coast, but for people living outside Nuquí and Bahía Solano, access to medical treatment is still restricted by transportation.

During the learning meetings we had with parents, they told us about their children's problems. Often, the child was undernourished, and they were sick – especially children between 0 and 6 years old. They had skin problems. Malaria was common. As a response, the health programme got started. It started first in Valle because it was the neediest population. At least in Bahía we had one medical doctor, one dentist, and two nurses, but in Valle they had no one.

[1] *The Flying Doctors Programme was a voluntary programme run by an NGO (the 'Air Patrol') located in Medellín. Professional volunteers from different health disciplines – medicine, nursing, odontology, and laboratory technicians – gave free attention to the people in these communities. The staff from CINDE coordinated health activities in the area.*

Efforts to improve the local environment have had mixed results. A campaign to install latrines has brought the communities from a situation of having no latrines to having 50 percent to 100 percent. The availability of safe drinking water has also been improved in the four original communities. Bahía Solano, Nuquí, and Panguí now have aqueducts, even though the water is untreated. Valle also has an aqueduct, but during some parts of the year, it does not provide sufficient water for the entire village.

The problem of garbage on the streets and beaches has been substantially improved, and in some areas, as a result of the malaria-control programme, stagnant water where mosquitoes breed is periodically drained away. Pigs and chickens still run loose, and there are still problems with rats.

The use of relevant technologies has had a positive impact. In the fight to control malaria, the promoters used microscopes to diagnose different types of malaria and prescribe the correct medicine. A network of radiotelephones was used to monitor the system. The combination of microscopes, radiotelephones, education, and community participation has reduced malaria by more than 50 percent, eliminating the deaths and mental disturbances caused by the disease. This fight against malaria is described in the publication Stories from Chocó (Nimnicht and Arango 2003).

The other direct contribution to health was the nutrition programme for preschool children, which was headed and run by the mothers. See 'The French and Swiss Connection and Nutrition' in Stories from Chocó (Nimnicht and Arango 2003).

Children's health

Deaths and live births

From 1980 to 1989, the rate of live births (live births divided by pregnancies) among the mothers interviewed in the four communities increased from 84.7 percent to 87.9 percent, which is small and of questionable significance. However, the death rate among children in the first five years of life (deaths divided by live births) showed a significant decrease from 11.7 percent in 1980 to 7.6 percent in 1989 (table 4.5).

Reviewing the official data, we found information that can help us understand

TABLE 4.5. MORTALITY RATES (X 100) FOR CHILDREN IN THE FIRST FIVE YEARS OF LIFE AND LIVE BIRTHS (PROMESA)

Rate	1980	1989	Significance (Chi squared)
Mortality in the first five years of life	11.7	7.6	p £ .0001
Live Births	84.7	87.9	p < .05

Table 4.6. Infant mortality per thousand live births in Chocó, Nuquí, and Bahía Solano

	1980	1993
Choc	86.6	73.6
Nuqu	71.1	11.4
Bah a Solano	84.4	78.5

Source: Dane (1998).

the kind of change that occurred. There is official information for two of the four initial PROMESA communities, Bahía Solano and Nuquí, which are central municipalities. The other two, Panguí and Valle, are grouped with all the other communities in the district. When we look at infant mortality, we find that in 1980 Nuquí had the seventh lowest infant mortality of the municipalities in Chocó: 71.1 per thousand live births. By 1993 it had gone to second place, with 11.4 per thousand live births. The average infant mortality rate in Chocó decreased from 86.6 per thousand in 1980 to 73.6 per thousand live births in 1993, a reduction of 13.3. The reduction in Nuquí was almost four and a half times that of the state (table 4.6).

There is no clear explanation for the impressive reduction in infant mortality in Nuquí. Many factors are involved in the rate of infant mortality in a community, so it is difficult to identify a single cause – such as a project – but what we can say is that something exceptional happened in Nuquí, and we assume that PROMESA played a role, even though other factors could also have been involved.

Height and weight

Another indicator of children's health is height and weight. In 1989 and 1995, the mothers in PROMESA's nutrition programme were interviewed and their three-, four-, five-, and six-year-old children were weighed and measured (table 4.7).

The difference in weight among four-year-olds in 1989 and 1995 is significant. And there is a noticeable improvement in acute under-nutrition (ZW/H), which is significant among children aged four and five, who would be expected to have benefited most from the introduction of the programme; however, there has not been as striking an improvement in chronic under-nutrition (ZH/A).

Parents' outcomes

Results

Improvements in the mothers' education. The average age of the mothers in 1978 was 36.6. This might seem to be a high average, but we are

talking about caretakers, and in Chocó many children are raised by their grandmothers. The average level of education for this group was 3.5 years of very poor schooling. It was very clear that most of the adults were not functionally literate – that is, they could write their names and read a few words, but they could not write a formal letter, fill out government forms, or even read a simple book.

There was no attempt to test the PROMESA parents in regard to educational achievement, but there is considerable evidence to show that the level of functional literacy among the mothers who participated in PROMESA increased:

- **The first indicator:** Reading was a regular part of the meetings with mothers. In the beginning, the nun in charge read the training materials, stopping to discuss with the mothers what she had read. The promoters gradually replaced the nuns and helped the mothers learn to read the materials by themselves.
- **The second indicator:** The majority of the mothers now make maps of their communities and can read simple booklets on such topics as health, caring for their children, and community development.
- **The third indicator:** Parents participated in informal educational programmes organised by PROMESA. When PROMESA began, none of the parents had attended educational courses after leaving school, but by 1989 about one-fifth had participated

TABLE 4.7. WEIGHT AND HEIGHT OF PROMESA CHILDREN BETWEEN THREE AND SIX YEARS OF AGE

	Number		Height (cm)		Weight (kg)		ZW/H		ZH/A	
Age	1989	1995	1989	1995	1989	1995	1989	1995	1989	1995
3		63		93.2		14.9		3.2		15.9
4	54	64	100.2	101.2	14.9	16.1**	22.6	3.1*	7.4	4.7
5	40	42	104.2	104.3	16.4	16.6	15.0	7.1***	10.0	9.5
6	29	17	109.3	109.8	18.9	18.8	19.3	11.8	14.8	23.5
Total	123	186								

Note: Nutritional status is determined by calculating the Z-score for the ratio of weight to height (ZW/H), which is an indicator of acute under-nutrition, and the ratio of height to age (ZH/A), which is an indicator of chronic under-nutrition.

* Difference is significant at $p < .001$ (using Chi squared).

** Difference is significant at $p < .005$ (using a t-test).

*** Difference is significant at $p < .01$ (using Chi squared).

in some kind of informal course taught either by SENA (the national training service), an adult literacy programme, or CINDE staff.

- **The fourth indicator:** Community leaders and promoters attended informal discussion groups and workshops to discuss community problems and to provide input for proposals to support different projects. At first these proposals were written mostly by CINDE staff. Gradually the people in the community became involved in organising and writing the proposals.
- **The fifth indicator:** Each community formed PROMESA committees for community organisation and development, all of which have become legal non-profit groups. These groups have received funds from CINDE or PLAN International, but the communities themselves have been responsible for paying the promoters and managing expenses. All of which has required a considerable amount of learning on the part of the parents.

Improvements in the parents' ability to attend to the physical needs of their children. There are several indicators that the children's physical needs are been attended to. We have already cited some: clean drinking water, latrines, garbage disposal, and draining standing water away from the houses.

Another indicator is the improvement in the houses themselves. In 1980 many of the houses were huts built on stilts with thatched roofs, palm siding, and *guadua*[2] floors. Other houses were constructed of wood with wooden or earthen floors and roofs of rusted zinc, cardboard impregnated with tar, or thatch. These houses had only holes for windows and doors. There was an improvement when cement houses became the preferred choice. The second preferred house had an asbestos[3] roof, wooden walls, and either a wooden or cement floor. So a good indicator of improvement in housing is the use of more stable materials for the roof, walls, and floor. In 1980, 45 percent of the roofs were made of cardboard and straw, which do not last long. In 1992 only 11 percent of the roofs were made from these materials; asbestos was the most common, with zinc second. It is important to note that asbestos is preferred because it is the most long-lasting material. No other materials are available for roofing. Data on these improvements is based on the interviews conducted in 1980 and 1992 (table 4.8).

Parents' participation in the production groups is another important indicator of

[2] ***Guadua*** *is a very hard, light, long-lasting kind of wood.*

[3] *In spite of CINDE´s team informing people that the individuals who worked with asbestos ran the risk of getting cancer and that the water from asbestos roofs could not be used for drinking or cooking, people still preferred asbestos because it was the most durable material available.*

TABLE 4.8. CHANGES IN MATERIALS USED FOR HOUSING IN PROMESA COMMUNITIES

	1980	1992
Roof	%	%
Asbestos	20	66
Zinc	35	23
Cardboard	19	3
Straw	26	8
Total	**100**	**100**
Floor		
Cement	23	55
Wood	59	39
Guadua	17	1
Dirt	1	5
Total	**100**	**100**
Walls		
Cement	11	44
Wood	59	39
Mixed	0	3
Palm	30	14
Total	**100**	**100**

their increasing ability to attend to the physical needs of their children. With the help of CEBEMO (a foundation in the Netherlands) and other foundations, PROMESA made small loans to groups of individuals to organise making mattresses, baking bread, setting up community pharmacies, and organising groups of fishermen to sell their catch and farmers to plant fruit trees. Ideally, the profits from sales would be put into a revolving fund to loan money that would be repaid so it could be loaned again; however, the rate of repayment was low, and the failures were high. The point here is that the groups succeeded in motivating people to get organised, helped them learn skills to increase their income, and served as a training ground for more productive ventures in the future. Many of the women reported that the first time they handled money was in the production groups.

Improvements in the mothers' self-concept

Assumptions

PROMESA aimed to improve the self-concept of the parents and their ability to identify and solve problems at the individual and collective level. We reasoned that improvements in self-concept would take place (1) as the mothers learned how to help their children develop and saw this development taking place, (2) as they learned to solve family problems, (3) as they learned to help or lead neighbourhood or community projects to provide a better environment for children, (4) as they learned to participate in meetings and lead those meetings, and (5) as they learned how to use the resources they had and how to improve their incomes. In the final analysis, these would be the things that decided the future of the project after CINDE had gone home.

What was evaluated

We focused on two dimensions of self-concept:

- self-image, or what one thinks about one's self;
- locus of control: how much control one thinks one has over the events that affect one's life.

There are three indicators of a healthy self-concept:

- when a person thinks he or she can help their family and others;
- when a person thinks her ideas are accepted by her family and others;
- when a person thinks he is able to solve problems.

Design and sources of information

One indicator of improvements in self-concept involves changes in the way the mothers lived. This information was included in the regular monitoring system.

However, the greater part of this analysis was based on data from (1) interviews administered to 'regular' mothers who participated in the programme at three different times and (2) specific interviews with mothers who had a lasting experience in the programme, whom we called *estrellas* (stars).

In 1989, regular mothers were interviewed and asked to reflect over the last 10 years and answer the following questions:

- Are you better able to help your family now?
- Are you better able to help the community?
- Can you solve your personal problems better now than you could before?
- When you propose some ideas to improve the family, the neighbourhood, and the community, are your ideas accepted?

I used to be very shy and it was difficult for me to conduct a meeting or to visit families at home. As I learned, I realized that I was able to do so. This was important to me.

In 1990, we selected the women who had the most positive responses to the questions on self-concept and interviewed them again to find out why they had responded as they did. In 1992, all of the mothers were interviewed again, but in a different form. In these interviews they were asked similar questions related to self-concept, but they were not asked to reflect on how they felt now compared to 10 years ago; rather, how they felt today. By asking the questions in this way, some mothers who had just been enrolled in the programme could be included in the study. The 'stars' were interviewed in 1999 and 2001. Additional information was gathered about their activities: their jobs and if they were studying.

To assess the consequences of changes in the mothers' self-concept on their children, the stars' children were interviewed to compare their educational level with those of other children of the same age in Chocó. They were asked about their jobs and if they were studying at the time of the interview.

Results

We analysed the information from the interviews about the mothers' attitude toward their ability to help the family, the neighbourhood, and the community; toward the acceptance of their ideas in the family, the neighbourhood, and the community; and toward their own ability to solve problems.

The indicators were operationalised through a three-item scale, where a number was assigned to each response: feeling less competent, (1); feeling the same, (3); and feeling more competent, (5). We added the three scores for each indicator to get a total score, giving us a range from (3) to (15), while the ability to solve problems (only one indicator) went from (1) to (5).

We reasoned that there should be a relationship between the answers to these questions and participation in the programme. For that reason, we divided the mothers into three groups – low, medium, and high – based on their participation in the programme. We ranked the mothers in these three groups across two indicators: number of programmes in which they participated and type of involvement. The pattern between these groups was statistically significant and was the same for all the questions in both 1989 and 1992: the mothers with the highest participation had the highest average score and the mothers with the lowest participation had the lowest average score (table 4.9).

As stated above, the women who had the most positive responses to the questions on self-concept were interviewed again in 1990, to find the reasons for their feeling better able to help their families and communities and for having more confidence than they did 10 years before.

TABLE 4.9. AVERAGE SCORES OF MOTHERS' FEELINGS ABOUT THEIR ABILITY TO HELP, ACCEPTANCE OF THEIR IDEAS, AND THEIR ABILITY TO SOLVE PROBLEMS, BY LEVEL OF PARTICIPATION IN PROMESA

Level of participation	Ability to help		Acceptance of ideas		Ability to solve problems	
	1989	1992	1989	1992	1989	1992
Low	11.57	11.48	13.15	9.93	4.53	
Med	11.91	12.53	13.76	11.18	4.51	
High	12.50	12.77	14.66	11.43	4.93	

Note: Because of the way we asked the questions about self-concept in 1992, we didn t include the indicator about the ability to solve problems.

Differences were compared using a t-test. All are significant at $p < .01$.

In regard to why they felt better able to help their families, 91 percent of the mothers said it was because they felt better trained and more knowledgeable. Many added that they had learned to interact better with their children and had more self-confidence, greater understanding, and more patience. One mother said:

Before, I was a mother without knowledge, insecure, lonely, and isolated. Since I entered the programme, I feel more capable because the knowledge I have obtained through the meetings has helped me to improve the life of my family. For example, before, I used to yell at my children for anything and I didn't understand them. I would get frustrated and I'd yell at them. Now if there is a problem, I talk to my children. I explain the consequences of their actions to them, and I have noticed that this is positive for them and for me.

In regard to the reasons for being better able to help the community, 60 percent responded in very general terms – that it was because of what they had learned from being a part of PROMESA (which could be because this is what they thought we wanted to hear). The other responses were more specific. For instance, 40 percent mentioned improved organisational skills in terms of an increased ability to hold meetings, organise groups, and orient people about how to solve problems. They also mentioned greater self-confidence as a reason for this, stressing that it helped them to organise meetings. One mother said:

Before, I was very shy, and I was embarrassed to talk in front of people. I thought that they would laugh at me and that they would not believe that I was capable of presenting an idea at a meeting. Directing a meeting was a sacrifice for me.

Now I can be in a meeting with doctors, with teachers, with people from the community action group, and I don't have any problem to talk or to go up to people.

Growing leadership within the community is also evident from the fact that 68 percent of the promoters commented that local people came to them to consult on problems and often accepted their ideas. A common remark was, 'We are leaders and friends of the community.'

In regard to the reasons for being more confident now than 10 years before, one mother answered:

I now know how to solve problems. On one occasion, when my nephew was studying at the school here, and he was working out in the streets collecting sand to raise the level of the street, he fractured his back. I immediately asked people from the community to help me get him to the hospital, and we got him to Bahía Solano, and there I explained that he was a poor child and so they helped us, and I went with him to Medellín, and there I went to find Sister Sofia, who sent me to a hospital, and there the doctors, knowing where he came from, decided to help my nephew.

Another mother said:

When I don't have money to pay the school fees, I am capable of going and talking to one of the teachers and explaining this.

The 'stars'

We have records for 83 mothers (our 'stars' for their star performance) who started in the programme between 1978 and 1980, with a range of two to 20 years' participation. Twenty-one percent participated five years or less; 34 percent participated between five and 10 years; and 44 percent participated 10 or more years. Forty-four of them were promoters. We have included all of these mothers in this analysis.

All of them came from the same background, with the same level of education. Their husbands were fishermen and farmers, and they lived in the poorest houses in the poorest neighbourhoods in the community. All of them had to be talked into joining the programme. The fact that they said yes may be the key to why they became stars.

The average age of the stars when they entered the programme was 37, and they had an average level of education of 2.7 years. They gathered fruit from the forest and wood to cook with. They lived in thatched huts or in wooden houses with holes for windows and doors. They were not respected by people with jobs, such as small merchants, teachers, or police.

All of these women were interviewed in 1999 and asked about the programmes they had participated in and to what extent they had participated. From those interviews, it was clear that most of stars had participated in most of the

TABLE 4.10. THE PROGRAMMES THE STARS FOUND MOST MEANINGFUL

Programmes	N	%
Education		
Early stimulation (birth to 3 years), preschool at home, and integrated home-school	33	40
Other activities related to parent education	23	28
Subtotal	**56**	**68**
Health		
Malaria	2	2
Other health programmes	3	4
Nutrition	3	4
Subtotal	**8**	**10**
Production groups	**7**	**8**
Community development and cultural activities	**12**	**14**
Total	**83**	**100**

programmes, so in 2001, the interviewers asked them what programmes were the most meaningful to them (table 4.10). Sixty-eight percent named the educational programmes.

The stars are now in their fifties and sixties. Ninety-five percent of them are housewives, but a different kind of housewife than they were in 1978. Now they are involved in the community and in other activities. They still dress the same way, but their houses are much better – some are wood with asbestos roofs, others are cement with asbestos roofs. To a casual visitor, the houses do not look very good, but a great deal of effort and money has gone into them. The real gains for these women are not visible. The real payoffs are their increased feelings of competence and self-confidence, their continuing contribution to the community, and the educational leaps that their children are making.

The children of the stars

[I remember that PROMESA] was very good, they gave enthusiasm to the village, they taught us with the toys, the village changed radically because of PROMESA. I had an ecological group, we made mingas to clean the beaches and pad the streets of the village.

It is a beautiful programme, I learned much with my mother at home, in

TABLE 4.11. WHAT DO YOU THINK WAS MOST IMPORTANT IN PROMESA?

The Programmes
• I liked everything, especially the stimulation and the preschool (programmes). You could get much experience.
• •The educational programmes for children.
• Iliked the making of clothing, the nutritional programme and the mingas (groups organised to work together in a community activity).
• •The social relationships with all kinds of people, and everything I learned in all the programmes, for instance, stimulation in children.
Children's learning
• •The educational part because my children learned how to read.
• Children learned a lot. They learned by playing. They learned to read.
• •The children learned the first steps working with the appropriate materials such as the ABC and the pack of cards by categories. That way they could learn how to read more easily at home.
• It was very good. The children worked a lot, and in the schools they were promoted to second grade because they already knew how to read.
Mothers' learning
• The mothers also learned how to teach their children.
• •[My daughter] learned how to read with cards and covers.
• •The experience with the toys — they taught us how to teach our children at home.
• •We had a lot of success. We were trained by PROMESA, even though we have not studied, but we were mothers.
Activities they developed with the community
• •I liked working with parents.
• •In the school we worked one hour with children who have difficulties in learning, then we took them to PROMESA, and those children learned a lot.
• •I learned how to care about my family, how to live and work with them and the community, how to use the community resources, how to work with them.
• •I learned how to express myself in the community. I was a promoter.

PROMESA and then in the PROMESA preschool. I learned how to read and count with all the materials of PROMESA.

[PROMESA] is a programme that has helped the Coast to progress. It has helped the families and the community. It is a programme that is looking for improving the environments for children. It is also looking for improving the parents and families' self-concept. My mother was a participant mother in the programme, then she became a leader and promoter. She became a teacher for her own children and for many other children of the village who could not go to the school, or were beyond school age. She says that she has learned a lot in PROMESA, specially at home improving the relationship with my father and treating her children well. My brothers and I learned with the toys of PROMESA. I have also helped PROMESA in several programmes, both in the Coast and Quibdó. We made mingas in the Coast for cleaning, padding the streets; we dried the mud to eradicate malaria. I worked in Quibdó in the escuela nueva programme in the accomplishment of surveys, and the child-to-child programme.

[I] finished high school, and got the first place in Chocó. The ICFES institution gave [me] a scholarship to study in the university, and [I have] graduated in mathematics and physics.

One way of assessing the development of our stars involves looking at their children: their educational level in comparison with other children their age and the type of activities in which they are involved. Another way is to analyse

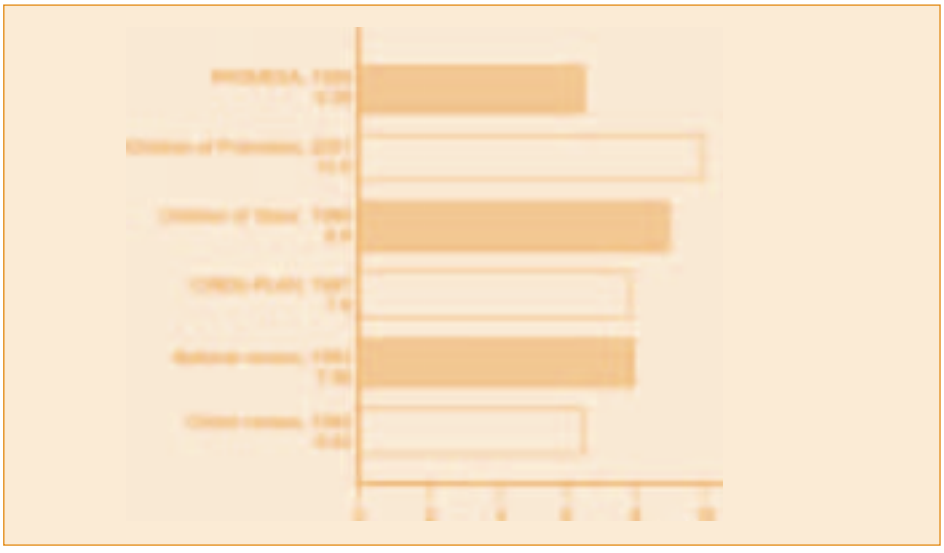

Figure 4.3. Educational level (in years) for young people aged 20 to 24

the impact of the women's change in self-concept on their children. Most of this information was obtained from the interviews administered to PROMESA mothers in 1989 and to stars in 1999 and 2001, and from a CINDE-PLAN profile study done between 1995 and 1997. A special interview was also done with children who were younger than 28 years old to find out what they were doing at the time, their memories of PROMESA, and their expectations for the future.

In regard to educational level, we compared young people aged 20 to 24 because they were old enough to have finished high school and because the national census of 1993 grouped age this way. We compared six groups in that age category (figure 4.3).

The level of education of children in CINDE-PLAN in 1997 was 7.9, which highlights the substantial gains in educational levels made by the children of the stars and the promoters. In 2001, the level for the promoters' children had reached an average of 10 years, compared to 6.3 in 1989.

Another way of looking at educational achievement is to see how many children finished high school (figure 4.4). Sixty percent of the 20- to 24-year-old children of the promoters had finished high school by 2001, considerably higher than the 21 percent in CINDE-PLAN in 1997, and almost four times the level in Chocó for 1993, which was 16 percent.

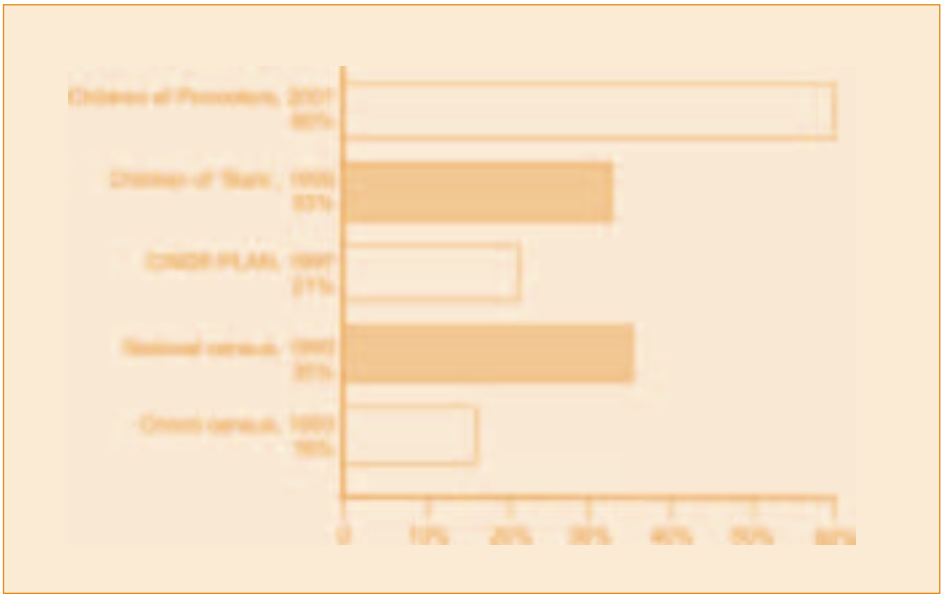

Figure 4.4. Percentage of young people who finished high school

TABLE 4.12. OCCUPATIONS OF PROMOTERS' CHILDREN BY MIGRATION STATUS, 2001

	Children who migrated				Children who stayed in Chocó			
	Gender				Gender			
Occupation	Male	Female	Total	%	Male	Female	Total	%
None	5	5	10	31	5	5	10	50
At home	0	3	3	9	1	1	2	10
Student	6	1	7	21	1	0	1	5
Labourer	4	0	4	12	1	4	5	25
Professional or semi-prof	7	2	9	27	0	2	2	10
Total	**22**	**11**	**33**	**100**	**8**	**12**	**20**	**100**

Sixty-two percent of the sons and daughters of the promoters have migrated to other parts of the country. Most have gone to large towns or cities where there are better opportunities for education and work. Table 4.12 shows what they are doing and what the ones who stayed home are doing.

We interviewed 11 of the young people who had migrated. All of them were enrolled in a university, with a range of majors, from physics and mathematics to preschool education. This group expressed a desire to return home and become involved in social development, and all but two recalled some positive experience in PROMESA.

[I plan] to help my family and community.

[I want to] work with and for the community.

Now I am working in Istmina with the municipality.

CINDE-PLAN

Introduction

This study assessed the impact of CINDE-PLAN on the children's physical and emotional health and intellectual development, as well as its effect on the parents. It also looked at what is involved in expanding a small, relatively easy-to-manage project, implemented in a very isolated area with a small population, to a bigger project with greater coverage and impact over a larger area.

This analysis is presented in three parts: the results of CINDE-PLAN's programme, a comparison with PROMESA, and lessons learned from this experience. The evaluation has also been divided into three central components: educational

outcomes for children, health outcomes (especially for children), and outcomes for parents.

CINDE-PLAN had wide coverage in five municipalities in Chocó, with more than 7000 families participating in the programme, but we will focus here on Quibdó and Istmina for the following reasons:

- They are very similar in every respect: size, location, public services, level of education, transportation, and communication with the outside.
- They were the first two cities to be involved in CINDE-PLAN and had more intervention from the programme than the other communities had.
- They were far more accessible than the other communities in Chocó.

Children's educational outcomes

Assumptions

In CINDE-PLAN, there were several programmes directed towards the family that differed from those in PROMESA. The early stimulation programme was not developed with the same methodology and with as much coverage as it was in PROMESA, but the health education programme had a very important component aimed at parents with children 0 to 3 years old. There were other programmes directed at older children, such as play and learn to think, and child-to-child, that were far more developed in CINDE-PLAN than in PROMESA.

Another important issue, which will be discussed below, was that the mothers' participation in programmes not specifically directed at children, such as sanitation, solidarity groups (income-generating activities), or community organisation activities, also had an impact on their self-esteem. This improvement in self-concept generated a better attitude towards their children and towards education – for themselves and for their children.

We assumed that the programme was contributing to a sustainable change in the children's intellectual development and was effective in the following ways:

- Different programmes were reaching families in Quibdó and Istmina, bringing about enough participation to have an overall impact in the communities.
- Mothers were able to provide better physical and emotional environments for their children.
- The educational climate improved not only in the homes but also in the schools and the community.

Sources of data

The data we have on academic achievement comes from testing children in the *escuela nueva* (new school – see below for explanation) project, starting in 1995 and 1996 and continuing until 2001. Although some minor changes were introduced, the tests were similar to the ones used in PROMESA.

In 1995, the profile of the children was taken at the time they entered first grade and consisted of a test of school readiness and an interview with the children and their parents. It also included an interview with the teachers and a description of the classroom and school. In 1996, we had a profile of the children entering school that year and tested children going on to the second grade (which included the children who had been measured in 1995). In 1997,1999, and 2001, the children were tested as they entered the second, third, fourth, and fifth grades.

To assess the level of education among 12-year-old children, we used the information obtained from interviews with the mothers in 1995 and 1996 (the profile), 1997, 1999, and 2001. Data from the 1993 Colombian census have been used as a baseline for comparisons.

Results

Academic achievement. In 1995, when the *escuela nueva* programme started, the schools were in miserable condition. One had 300 students with no toilets, latrines, or water. They had windows on only one side with no cross-ventilation, which meant that classrooms were dark and hot. There was no electricity. The furniture consisted of large, ugly tables and nondescript chairs. A blackboard and a piece of chalk were the only available teaching materials. There were some other materials but they were locked away in a special room to keep them safe. This school was fairly typical of all the schools. Some had latrines or toilets, but otherwise they were much the same.

So, in 1995 and 1996, as *escuela nueva* tooled up, latrines were built, floors were repaired, and some new classrooms were built. The first and second grade classrooms were furnished, and materials were provided. Training workshops were held for teachers, which was no easy matter. The *escuela nueva* project was originally designed for one-teacher rural schools. To facilitate teaching and learning under these conditions, learning centres had been developed for individual learning, with the teacher moving from centre to centre. This was not such a radical change for one-room schools where teachers have traditionally had to work in a way similar to the *escuela nueva* model, but when it was applied to a school where teachers had only one grade in a room, it was a big change. Going from teaching the children in a group – teaching everyone the same thing at the same time – to working with individual children or small groups studying different things at the same time was a big change that required considerable training.

With all of these things taking place during 1995 and 1996, we could not expect much change in academic achievement. After 1997, if the programme was effective, some changes should start to show, so the testing in

TABLE 4.13. AVERAGE TEST SCORES IN CINDE-PLAN SCHOOLS AFTER *ESCUELA NUEVA* WAS ESTABLISHED

Grade	Town	1997	1999	2001
Mathematics				
2	Quibd	16.5	18.2	20.9
	Istmina	18.1	19.4	19.5
3	Quibd	20.7	21.2	43.0
	Istmina	26.3	21.1	36.4
4	Quibd	29.2	29.5	41.3
	Istmina	30.0	30.4	33.7
5	Quibd	17.7	18.9	41.3
	Istmina	19.5	23.3	36.3
Language				
2	Quibd	29.7	34.8	40.5
	Istmina	34.5	31.0	39.8
3	Quibd	26.9	29.1	44.2
	Istmina	34.5	31.0	45.0
4	Quibd	38.4	30.2	52.4
	Istmina	41.0	42.7	51.5
5	Quibd	48.0	40.9	74.1
	Istmina	49.8	41.2	81.7
Logical thinking				
2	Quibd	20.5	25.3	37.8
	Istmina	23.0	32.9	28.3
3	Quibd	22.9	25.4	37.5
	Istmina	19.7	26.1	37.9
4	Quibd	24.0	16.4	35.4
	Istmina	29.2	18.9	34.0
5	Quibd	27.2	29.1	33.1
	Istmina	27.7	31.0	34.7

Note: All the differences between 1997 and 2001 were compared using a t-test and are significant at $p < .001$.

1997 became the baseline for future evaluations.

We expected some changes from 1997 to 1999 in the second grade. By 1999, the children who started school in 1995 were in the fourth grade, but again, we could not expect much change in the third and fourth grades because those children had been in the tooling-up period during each grade level, and the fifth-grade children had not been involved directly in *escuela nueva.*

By 2001, all of the teachers and children in a school were in the *escuela nueva* programme, and we expected to see significant changes between 1997 and 1999 to 2001. In general, the outcomes in 1997 and 1999 were as we had predicted. There were large and highly significant changes in all grades on all subjects from 1997 and 1999 to 2001 (table 4.13).

When the evaluators first looked at these differences, they thought they were too high and started to look for possible errors. They started in the field, asking the people who supervised the testing how the tests had been given, but the testing procedures were the same in 1999 and 2001. The evaluators examined the data in general, looking for classrooms where the scores were much higher than others, but nothing stood out to indicate coaching, and the teachers did not administer the tests to their own students. Next, they checked the scoring for possible errors favouring the children who were tested in 2001. They checked the instructions for scoring the test and they rescored all of the tests given in the fifth grade in 1999 and 2001. There were some minor differences in some tests because of addition errors, but these errors were not in the same direction: in some cases the rescoring was higher and in others lower.

After some reflection, we concluded that the major differences must have been the effects of the programme. Looking back at the original conditions in the schools, with no teaching materials, compounded by the irregular attendance of children and teachers, the test results become more credible. In addition, year by year the children were living in a cleaner environment, with latrines and better drinking water. Malaria was being brought under control through better prevention and treatment, and medicine was available for other illnesses. All these things could contribute to better school attendance and better performance.

The average grade level of 12-year-old children. We looked at the average grade level of 12-year-old CINDE-PLAN children at different times in the programme and compared it to the state and national averages. Using data from the 1993 Colombian census as a baseline, we found that the national average grade level for 12-year-old children was 4.7, and for Chocó, the average was 3.8.

In 1995, the average grade level for 12-year-olds in CINDE-PLAN was 4.5 – not

as high as the national average in 1993, but higher than the average in Chocó. In 2001, the average had reached 5.1, which is higher than the national average and a half of a school year more than we found in 1995. When one considers that the majority of the children start school at seven years of age, they could be in the sixth grade by age 12. The average for the CINDE-PLAN 12-year-olds was very close to that level.

Our conclusion is that the children are staying in school longer and are learning more, which indicates a general improvement in their intellectual development – a great part of which can be attributed to CINDE-PLAN.

Health outcomes

The impact on health conditions

As in PROMESA, health was a very important issue in CINDE-PLAN. Health services in Quibdó and Istmina were much better than those in Nuquí and Bahía Solano. Quibdó and Istmina had local hospitals that could offer a wider range of health services. But sanitary conditions, on the other hand, were very similar to those on the coast: most of the houses didn't have disposal systems for human waste, and people had to walk long distances to get water from the Atrato River.

The health component included education about sanitation and the prevention and home treatment of most common childhood illnesses, along with information about adult health issues, especially reproductive health, management of coronary diseases, and hypertension. The training was done by trained promoters who also taught mothers ways to stimulate a child's emotional and physical development in the first years of life and how to foster stronger emotional bonds between parents and children. Promoters also learned about oral rehydration, distributing oral serum as needed, and provided oral medications to control intestinal parasites. They distributed micronutrients to prevent anaemia and other illnesses caused by digestive deficiencies, as well as other common medicines for common illnesses. They formed a link between the community and the public health services, which facilitated people's access to these services.

Efforts were made to improve living and sanitation conditions, especially through the construction of human waste facilities and cement tanks to store rainwater.

The impact on children's health

Mortality

There was no real difference in the rates of live births or mortality in the first five years of life between 1996 and 2001 in either Quibdó or Istmina (table 4.14).

These were probably not the best two indicators to choose for any significant change over this five-year period of time. The official information for Istmina and Quibdó is not useful for measuring the

TABLE 4.14. LIVE BIRTHS AND MORTALITY RATES IN THE FIRST FIVE YEARS OF LIFE, QUIBDÓ AND ISTMINA

Rate	Communities	1996	2001
Mortality in the first five years of life	Quibd	6	7
	Istmina	10	13
Live births	Quibd	86	85
	Istmina	87	87

impact of CINDE-PLAN because the project influences specific sectors of the cities, and the official data cannot be broken down by sector. Even though we expected to see a significant change, we don't have the information that could show us whether this outcome was reached.

Changes in children's height and weight

The nutritional status of children in the CINDE-PLAN communities improved in a noticeable way. There was a significant decline in both acute (Z/WH) and chronic (Z/HA) under-nutrition (table 4.15). There seems to be enough evidence to support improvements in nutritional status, despite the small sample size in 1989, which

TABLE 4.15. PERCENTAGE UNDERNOURISHED CHILDREN BETWEEN THREE AND SIX YEARS OF AGE, QUIBDÓ

	1989			1995		
Age	Number	Z/WH	Z/HA	Number	Z/WH	Z/HA
3	15	26.7	26.7	34	5.9**	5.9**
4	42	27.5	16.7	41	17.0	9.7
5	22	18.1	31.8	41	17.0	7.3*
6	11	20.0	54.5	59	10.2***	6.8*
Total	90			175		

Note: Nutritional status is determined by calculating the Z-score for the ratio of weight to height (ZW/H), which is an indicator of acute under-nutrition, and the ratio of height to age (ZH/A), which is an indicator of chronic under-nutrition.

Differences were compared using Chi squared:

* Difference is significant at $p < .0001$.

** Difference is significant at $p < .005$.

*** Difference is significant at $p < .05$.

would justify a larger study to determine the exact magnitude of this change.

In comparing the results for PROMESA with those for CINDE-PLAN, it must be noted that in 1989, most of the PROMESA parents had been in the programme for four or five years, but the activities in the communities had been there for more than 10 years. The parents and the communities in Quibdó, on the other hand, were just starting in CINDE-PLAN. In addition, as part of PROMESA's nutrition programme, there was a free lunch for preschool children but this was not the case in Quibdó. The nutritional component of Quibdó's health programme only had educational activities for parents.

By 1995, the parents in Quibdó had been in the programme for five to six years, and we can see that the nutritional status of the children had improved (table 4.16).

Quibdó is the capital of the state, with doctors and medical resources and an opportunity for a more varied diet, but there were striking differences in the proportion of undernourished children between 1989 and 1995 (table 4.17). We had reasoned that a food supplement plus education for the parents would not make much of an impact, but when clean water is added, the probability of success goes up. If we also add improved sanitation, it goes up even more. Then there is malaria control and medicine. As developers, our objective was to improve the overall health of young children, not only conduct research on the effects of a food supplement on height and weight. Taking this approach, we cannot say what the impact from each of the inputs was, but we can be confident in saying there was enough of a critical mass of inputs to make a difference.

Evaluating parents' outcomes

What was evaluated

We used indicators similar to those used in the PROMESA evaluation but added a new one: the attitude of the mother toward her child. As indicated in the section on methodology above, we also

TABLE 4.16. AVERAGE HEIGHT AND WEIGHT FOR CHILDREN BETWEEN THREE AND SIX YEARS OF AGE, QUIBDÓ

	Height (cm)		Weight (kg)	
Age	1989	1995	1989	1995
3	94.1	94.9	13.1	15.1
4	99.1	101.5	14.6	16.0
5	100.9	109.7	15.3	17.7
6	103.2	111.2	16.4	19.8

TABLE 4.17. PERCENTAGE UNDERNOURISHED CHILDREN BETWEEN THREE AND SIX YEARS OF AGE, QUIBDÓ

	Z/WH		Z/ZA	
Age	**1989**	**1995**	**1989**	**1995**
3	26.7	5.9	26.7	5.9
4	27.5	17.0	16.7	9.7
5	18.1	17.0	31.8	7.3
6	20.0	10.2	54.5	6.8

Note: Nutritional status is determined by calculating the Z-score for the ratio of weight to height (ZW/H), which is an indicator of acute under-nutrition, and the ratio of height to age (ZH/A), which is an indicator of chronic under-nutrition.

included more questions in order to get a more complete picture.

Results

Improvements in mothers' education. As they did in PROMESA, mothers in CINDE-PLAN started to be involved in new activities, some of them attending meetings, others conducting them. They gained new knowledge on different topics in these activities, as well as learning and improving skills, such as reading and writing and being able to speak in public and express themselves.

There was notable progress in the level of formal education of the mothers in CINDE-PLAN. In 1996 the average age of the participating parents was 33 and the grade level was 5.1. In 1999, the average age was 35 and the grade level was 5.4. In 2001, the average age was 38 and the grade level had increased to 7.0. This increase in grade level between 1996 and 2001 was significant ($p < .01$). Obviously, many of these women had been going back to school – something that was not possible for the PROMESA parents because they did not have the access to formal adult education that was available in Quibdó and Istmina.

The attitude of the mothers towards their children. There was a significant difference between 1996 and 2001 on all of the interview questions, indicating an improvement in the mothers' attitude towards their children (table 4.18).

Ability to attend to the physical needs of the child. Parents were able to provide better physical conditions for their children. This was observed through changes in the living conditions of the CINDE-PLAN families. In Quibdó and Istmina, at the beginning of the project, very few families had access to water and proper waste disposal, but in 2001 more

TABLE 4.18. ATTITUDE OF MOTHER TOWARDS HER CHILD, AVERAGE SCORES FOR 1996 AND 2001

Interview questions and responses	1996	2001
How do you think your child is, compared with others of the same age? (1 = less good . . . 5 = much better)	2.7	4.3
Are you happy (content) with your child? (1 = no . . . 5 = very much)	2.7	3.4
Do you think that your child is . . . (1 = unhappy . . . 5 = very happy)	2.0	3.9
Do you think your child enjoys playing . . . (1 = alone . . . 5 = with many friends)	1.6	4.2
Do you think that your child has . . . (1 = no friends . . . 5 = very many friends)	1.7	3.4
Does your child like to go to school? (1 = not at all . . . 5 = very much)	2.3	4.0

Note: All the differences between 1996 and 2001 were significant at $p < .001$ (as calculated using a t-test).

than 90 percent of the project families had access to these amenities. Many of them had made substantial changes in their homes, and there was even construction on such things as floodwalls to prevent flooding, which also improved their living conditions.

This general evidence was complemented with a specific assessment of the parents' ability to attend to the needs of their children. The two indicators the evaluators used for the assessment of physical needs were the ability to provide clothing and to provide medicine. The two indicators used to assess the ability to attend to emotional needs were the ability of parents, siblings, and other people to play with the children and to read to them. In our analysis, we correlated these indicators with self-concept (table 4.20).

Mothers' self-concept. The mothers were asked to answer the same questions on self-concept in 1996 and 2001. The responses were found to be significantly more positive in 2001 ($p < .001$) (table 4.19).

Relationship between mothers' level of self-concept, attitude towards their children, and ability to attend to children's needs. For the results from 2001, we summed the average scores on

the indicators of self-concept and used the results as an overall indicator of self-concept. We then divided the mothers into three groups – low, medium, and high self-concept – and used this as a basis to look at the relationship of the mothers' self-concept to their ability to attend to the physical and emotional needs of their children, as well as their attitude towards their children.

We summed the six indicators used to measure changes in attitude towards the child in order to have an integrated indicator to cross with self-concept, resulting in a range for this integrated indicator from 6 to 30. We summed the two indicators for parents' ability to attend to physical needs (i.e., provision of clothes and medicine) to construct an integrated indicator with a range from 2 to 10, and finally, we used each of the two indicators for assessing ability to attend to emotional needs (playing with the child and reading to the child) to cross them with self-concept. Each of the indicators for emotional needs had a range from 1 to 5. All these indicators showed a positive correlation between mother's self-concept and her attitude towards her child, as well as the ability to fulfil the physical and emotional needs of her children (table 4.20).

Programme participation and outcomes in mothers and children. One way to identify relationships between the CINDE-PLAN process and outcomes was to compare the mothers' participation in the different programmes with some of the indicators we used to identify changes in the mothers and their children. In doing this, we looked at three issues: (1) a general description of the mothers' participation in the programmes, (2) the relationship between programme participation and self-concept in the mothers, and (3) the relationship between

TABLE 4.19. MOTHERS' SELF-CONCEPT, AVERAGE SCORES

Question	1996	2001
Are you content with your life now?	1.5	3.9
How do you think your life will be in three years?	1.5	3.9
Do you think that you can help your neighbourhood now?	1.4	3.2
Do you think that the people in the neighbourhood or community accept your ideas?	1.0	3.1
Do you think you are able to help your child be successful in school?	2.4	3.8

TABLE 4.20. RELATIONSHIP OF MOTHER'S SELF-CONCEPT TO HER ATTITUDE TOWARDS HER CHILD AND THE ABILITY TO ATTEND TO THE CHILD'S NEEDS, CINDE-PLAN 2001

Level of self-concept	Attitude	Attend to physical needs	Attend to emotional needs	
			Play	Read
Low (9—94)	22.0	4.1	8.3	6.5
Med (95—197)	22.8	4.9	9.8	7.8
High (198—274)	24.0	6.1	11.9	10.2

Note: Significance was calculated using a t-test to compare low and high averages: The mother s attitude towards her child was positively correlated with her self-concept at $p < .003$. There was also a significant positive correlation between mother s self-concept and her ability to attend to the physical and emotional needs of her child ($p < .001$).

programme participation and children's school achievement.

Mothers' participation. We had planned to look at the number of programmes the mother had been in and for how long; however, this did not work out as we had planned – the time was confusing. Although most of the women had been in various programmes for at least five years, they could not have been in the *escuela nueva* programme for more than five years, so counting the additional years was meaningless. Furthermore, most of them had also been in other programmes for at least a year. We reasoned that a year was enough time to know a programme and additional time, while valuable, was not crucial. In addition, some of the programmes, such as building latrines and getting good water to drink, did not take much time. Therefore, we only used the number of programmes the mothers had been in as an indicator of participation. We were not able to use the indicator of 'type of involvement' as we did in PROMESA because we didn't have that information.

In addition to asking what programmes the mothers had participated in, the interviewers also asked what three programmes they thought were most important. Table 4.21 compares the ranks of programmes by participation and by importance, as indicated by the mothers and the leaders. For the mothers, four out of five programmes are in the first five places for both participation and importance. Only one, *escuela nueva,* ranked differently. It appears that even though not many mothers participated in the *escuela nueva,* they saw it as one of the most important programmes. It should be noted that the interviewers asked the mothers what programmes

they participated in the most, not which ones the family participated in. In many cases the child was involved in *escuela nueva,* but the mother did not participate in it directly.

In comparing the rankings made by the mothers with those of the leaders, it is interesting to note that the programme with the most participation was community development. Although there is no agreement on the other high-participation programmes, there was strong agreement on the programmes with the least participation. Four out of five were the same for both groups: Children from 0 to 3, Children from 3 to 6, Adult Education, and Solidarity.

When we look at participation in terms of numbers, we see that 60 percent of the mothers did not participate in the two preschool programmes involving parents, and only 15 percent were involved in both programmes. This is consistent with the rankings: both

TABLE 4.21. MOTHERS' AND LEADERS' RANKINGS OF CINDE-PLAN PROGRAMMES BY PARTICIPATION AND IMPORTANCE, 2001

Mothers' Ranking			Leaders' Ranking		
Programme	**Participation**	**Importance**	**Programme**	**Participation**	**Importance**
Community Development	1	4	Community Development	1	12
Malaria	2	5	Learn to Think	2	6
Health Education	3	1	Construction	3	4
Latrines	4	7	*Escuela Nueva*	4	1
Water	5	2	Water	5	7
Child-to-Child	6	8	Nutrition	6	9
Learn to Think	7	9	Latrines	7	13
Construction	8	6	Health Education	8	5
Preschool	9	10	Malaria	9	2
Nutrition	10	12	Child-to-Child	10	8
Escuela Nueva	11	3	Preschool	11	10
Children 3 to 6	12	15	Adult Education	12	11
Children 0 to 3	13	11	Solidarity	13	3
Solidarity	14	13	Children 3 to 6	14	15
Adult Education	15	14	Children 0 to 3	15	14

programmes ranked low in both participation and importance. Sixty-seven percent of the mothers were involved in educational programmes for older children and young people, and 75 percent of the women were involved in two or more health programmes, with Malaria being the highest.

The programmes for adults and community development are a mixed group. They include Community Development, Adult Education, Construction, and Solidarity (income-generating activities). Seventy-two percent (72 percent) of the women participated in two or more of these activities. But these programmes differ widely in rank.

In PROMESA over 90 percent of the mothers participated in at least one of the programmes for mothers with preschool children. There was no child-to-child programme or learning how to think. PROMESA mothers also participated more in educational programmes than in health programmes. This highlights the fact that CINDE-PLAN cannot be looked at as a copy of PROMESA, as discussed below.

Programme differences in developing the mothers' self-concept. We looked to see if some programmes were more positive than others in improving the mothers' self-concept. We reasoned that if there were differences, they should favour the group of mothers that had participated in one or more educational programmes, compared to those who had not participated in any educational programme. We divided the mothers into two groups – those who had participated in one or more educational programmes and those who had not – and looked at the indicators for attitude towards child, ability to attend to child, and self-concept. We found no significant differences.

We must conclude, therefore, that what was important in developing the self-concept of the mothers was participation in a variety of programmes, regardless of what those programmes were. It is also important to understand that while the other programmes were not categorised as educational, they provided opportunities for learning and for improving self-concept. In this way, education was a basic element in all the programmes.

The impact of programmes on the children's school achievement. We looked at the possible impact of different programmes on the children's school attendance and academic achievement and asked what kind of impact the different educational programmes might have had. For example, did the children who were in learning how to think learn more than the children in child-to-child? However, *escuela nueva* was the only programme that was in all of the neighbourhoods, and the evaluators were not able to evaluate the impact of the other educational programmes because they overlapped and also because the

numbers of children in a single programme, such as child-to-child, were too small. We have to be content to say that *escuela nueva* plus a combination of other educational programmes is behind the improvement in school achievement.

The Differences between CINDE-PLAN and PROMESA

CINDE-PLAN was supposed to be an expansion of PROMESA, but it didn't come out exactly that way. As a result of working in a different setting, but especially as a consequence of implementing a 'joint venture' with another institution that had its own interests and philosophy, CINDE-PLAN was developed with some important differences. There were also changes in the team that implemented the project, which made a difference. In the discussion that follows, we compare the two projects, taking into consideration the differences in the way they were implemented.

- In CINDE-PLAN, 60 percent of the parents were not involved in any programme for parents of preschool children. In PROMESA, more than 80 percent were involved in at least one of the preschool programmes for parents.
- In CINDE-PLAN, 67 percent of the mothers participated in two or more programmes for older children. None of these programmes were a part of PROMESA before CINDE-PLAN was implemented.
- With the aid of SENA (the national training service), PROMESA offered a wide variety of adult education programmes in vocational training. There was no adult education included in CINDE-PLAN except a literacy programme for a few mothers.

These differences are understandable. First, the responsibility for decision making changed hands, which was like parents handing over responsibility to their children. The children make changes, which may bother the parents, but there is continuity. The founding values and attitudes transcend the changes in the programme; they are carried over into the next generation even though they are not done the same way. Another way of looking at it is that CINDE-PLAN was not a child of PROMESA but a brother or sister sharing a common background.

Second, there were more programmes for older children in CINDE-PLAN than in PROMESA.Third, if a programme like PROMESA wants to expand, it must find a partner – a government agency or an institution like Plan International. One cannot expect the partner to sit back and only pay the bills. The reaction of the Plan staff members demonstrated this very clearly.

While the outcomes in PROMESA and CINDE-PLAN were similar, there were also differences, which are highlighted in table 4.22.

In the final analysis, both projects contributed to the intellectual development of the children. In PROMESA, it happened through the efforts of the mothers. In CINDE-PLAN, it was probably a combination of educational programmes and parent participation that made the difference. In both programmes, the self-concept of the mothers was improved by their increased education and competence.

TABLE 4.22. COMPARISON OF PROMESA AND CINDE-PLAN

PROMESA	CINDE-PLAN
Location	
Implemented on the coast of Choc , in a very underdeveloped area.	Evaluated in the two most developed areas in Choc : Quibd and Istmina.
Education	
In the first 10 years, there were almost no improvements in the lives of young children that were not related to PROMESA. The schools were the same: miserable physical conditions, no materials, and unpredictable teachers. High school education was limited to a few students in two high schools in Valle. Now high schools have been opened in Bah a Solano and Nuqu because of pressure from PROMESA parents. Without them, educational opportunities would still be very limited. PROMESA did not have programmes for children older than eight.	Quibd is the capital of the state; most people there can read and write. There are opportunities to continue studying, as we saw when we looked at the educational level of the Quibd participants, which increased from 5.1 in 1996 to 7.0 in 2001 There were high schools in Quibd and Istmina, as well as other things that could influence the development of the children. *Escuela nueva,* along with other educational activities (to which the mothers contributed), improved the intellectual development of the children.

PROMESA	CINDE-PLAN
Education	
PROMESA demonstrated that illiterate or semiliterate mothers could be the teachers of their preschool children. None of CINDE s staff worked directly with the mothers or children, and the schools remained the same, so the gains we ve seen have to be the results of the work of the promoters and the other mothers.	
Health	
Availability of medical services was almost non-existent when the project started — now medical facilities are better and there are doctors who live in the two main communities of Bah a Solano and Nuqu . Malaria was extremely high.	There were doctors and hospitals in Quibd . Malaria was much less of a problem. The people in Quibd and Istmina had a much wider choice of foods.
Fulfillment	
There were almost no opportunities for feelings of self-satisfaction or self-fulfilment.	Although limited, there were opportunities for feelings of self-satisfaction or self-fulfilment in Quibd and Istmina.
Programme Size	
PROMESA was a small research and development project that could be carefully monitored and which received tender loving care.	CINDE-PLAN was a large operational programme in which research and development were not the main focus.

Chapter five

Lessons Learned

One of the great challenges in social development projects is to identify lessons that can contribute to the desired outcomes, as well as any adjustments that have to be made.

The lessons CINDE learned from the programmes described in this study are consistent with recent research on those aspects of early childhood programmes that are essential to reaching and sustaining their objectives. Here, we emphasise general lessons that can be used in social development and community-based projects that focus on the healthy development of young children, as well as other social development projects, regardless of their focus. These lessons have been divided into nine sections, related to the area to which they are most applicable.

Lessons learned about implementing projects aimed at the healthy development of young children

Lesson 1: An integral and integrated participatory project focused on children can serve as a model for social development.

An integrated contextual approach that targets the child's interaction within its family and the community can be extremely effective. Such an approach can promote synergistic dynamics that mutually reinforce developments in the child, the family, and the local community. And because it deals with the child's environment, a contextual approach can also be more sensitive to the cultural characteristics of the family and community. In both PROMESA and CINDE-PLAN, all the activities were introduced at the family level. The learning that took place in the parent-child meetings, in the child-to-child programmes, in the activities related to environmental sanitation, and in the production groups was integrated during daily family interactions. In addition, the effectiveness of the efforts to reduce malaria contributed to putting education at the centre of an integral approach involving preventive measures, early identification by trained local technicians, and biological control.

Lesson 2: An ecological model provides a foundation for integrating the development of young children within a human development perspective.

Even though PROMESA started before Bronfenbrenner (1979) published his book Ecology of Human Development, the project was designed to improve the physical and psychological environments of the family and the community where children were growing and, as part of that process, to broaden the set of relationships that both families and

Photo: Courtesy CINDE

communities had within the broader environment. The idea was to use strategies that would turn families and communities into positive forces whenever possible. Bronfenbrenner's work gave us more clarity about our approach. As a result, the programme leaders developed new skills and abilities to complement CINDE´s experience, along with inter-institutional relationships with local, regional, and national agencies and institutions as well as financial institutions.

Lesson 3: With appropriate training and follow-up, parents with low educational levels can become excellent educational agents of integrated, participatory early childhood programmes.

One of the main strategies used in PROMESA was to prepare local people to be the educational agents of the programme. Many of them had very low educational levels but all of them exhibited great leadership abilities. All of them started as assistants, then became promoters; many of them became multipliers and quite a few were programme coordinators or programme advisers.

Lesson 4: Family and community centres that promote intergenerational

The family and community centres that emerged from PROMESA and were extended by CINDE-PLAN had the following kinds of activities every week:

- •morning and afternoon meetings of mothers with children from birth to three years of age;
- •morning and afternoon meetings for mothers with children from three to six
- •morning and afternoon gatherings of children in the first three grades of elementary school;
- •morning and afternoon gatherings for children from 10 to 14 for a child-to-child programme with more emphasis on family values and values in general;
- •an adult education programme;
- •other opportunities for adults to meet.

On average, this kind of centre can serve 250 mothers and their children directly, per year. Up to 1,000 children (an average of four children per family) can benefit. In Colombia, the cost is approximately US$50,000 per year including research and evaluation. That is an average cost of $200 per year per family, $50 for each child.

interactions focused on the healthy development of young children become a powerful tool in the implementation of integrated ECCD programmes.

The family and community centres became the place for all the people in the communities to become involved in different aspects of the programme and to generate new activities. They generated a great sense of belonging to the programme. Gradually, all the people of the community became involved in the educational, health, productive and cultural activities. The centres that worked best had activities for pregnant women, mothers of children from birth to three years of age, three to six years, and child-to-child programmes.

Lesson 5: Very creative strategies are needed to involve fathers in activities related to the psychosocial development of their young children.

It was difficult at the beginning of the project to get the men to attend meetings to learn how to interact better with their children. However, as they saw the interest of the children at home in playing with their mothers and older brothers and sisters, they became interested too. Gradually some men attended the meetings and became involved in working towards the improvement of the physical environment.

Lesson 6: As the first and most important teachers of their children, with the appropriate stimulus, parents can do a very good job at stimulating the psychosocial development of their children.

One of the great lessons we learned in this project is that parents of children from birth to six years can do a very good job at stimulating the integral development of the child. And if they have the time and their life style permits, they can implement early education at home and obtain the same or better results than an institutionalised programme. No one from CINDE ever worked directly with the children in this programme.

Lesson 7: Starting with the psychosocial component, an integrated development programme focused on the healthy development of young children brings in the other aspects of child development in a very natural way.

The initial meetings with groups of mothers to work on the psychosocial development of their children became the basis for defining the needs, interests and activities related to the other components. The participants learned to identify priorities and define actions depending on the resources at hand.

Lesson 8: Improving the ability of the family and community to attend to their children's physical and psychological needs should be one of the main goals of early childhood development programmes.

This is crucial for several reasons. There is strong evidence that the most important human development begins at the moment of conception and continues through the first years of life. There is also a great deal of evidence that programmes that focus on children from birth to six years of age, with strong family and community participation, influence their future development and performance in school.

Lesson 9: To be effective, parents' programmes have to be culturally relevant and based on the experience and knowledge base of the people involved.

Parent programmes can play a significant role in strengthening the culture and identity of the people and developing an attitude of respect and care for children – gradually achieving the dream of Gabriel Garcia Marquez (the Colombian Nobel Prize recipient): 'to have a country at the reach of children.' Getting parents involved requires strategies that deal with 'tangible' elements that lead them to personal growth as well as to learning ways to improve the physical and psychological environment at home and in the neighbourhood and community. In our programme, the use of toys and games and the identification and solution of family and community problems using local resources were the tangible elements that stimulated and sustained the parents' participation.

Lesson 10: Parents and families should not be perceived or seen as instruments, but as central in ECCD programmes.

Parents and families are central to the implementation process because they provide the most important environment for children's development during the first years of their lives. It is critical to promote the development and living conditions of both parents and children.

Lessons learned about planning and implementing social development projects

Lesson 11: A social development project that responds to the participants cannot be linear.

A project's original ideas lead to new actions, which quite often produce unexpected results. These results turn into feedback, providing a basis for reflection and a guide to the next phases of the project. If this feedback flow is inhibited or blocked, it is more difficult for a project to achieve and maintain effectiveness and for people to develop feelings of ownership and commitment to it. It is essential to include evaluation and reflection as integral parts of the project – along with an attitude of flexibility on the part of the project implementers.

A very important lesson from Chocó is that such a programme cannot be planned and carried out in a linear way.

The plan must be flexible enough to encompass several things that respond to the community's needs and priorities at the same time. It is also important to recognise that the implementation of social projects can be very messy at times because of the process itself and because of external factors.

Lesson 12: An educational model that responds to the learner's needs and characteristics is critical in promoting human development.

The educational model developed in PROMESA was designed to meet the needs of learners at different levels (children, parents, community leaders, institutional leaders) simultaneously. The aim was to enhance the self-concept of individuals and their ability to identify and solve their own problems. Education was conceived as a process of social and human transformation, closely related to participation and evaluation and surpassing the conventional idea of instruction and schooling. Putting people at the centre meant thinking about education, not only as a means, but also as an end.

Lesson 13: Participation is an essential element in human development.

Participation was a very important issue in PROMESA. We understood that self-concept and the ability to identify and solve problems could not be developed if people didn't have the opportunity to make important decisions for themselves. But participation is also critical for learning management and leadership skills and developing self-confidence. In other words, participation was at the heart of our pedagogical model. In PROMESA we fostered the type of participation that led to new actions defined by the people themselves and to more complex kinds of participation.

An example of this comes from the first three years of PROMESA, during which the mothers gained confidence from their initial success using educational toys and games and seeing the children enjoy the experience and learn from it. Each new success encouraged new attempts and the whole process gained strength. In Panguí, the mothers' success convinced them that their children were bright and could learn easily. When the first grade teacher was failing half of the children, the mothers organised themselves and opened a kindergarten. The kindergarten was so successful that they organised additional experiences for the first graders.

Lesson 14: Organise processes and strategies that lead to self-reliance and build community support.

Several organisational and management strategies used in the PROMESA project helped build self-reliance and community support. Among the most important of these were the following:

- Community leaders, especially

women, were the main educational agents, organisers, and managers of the programme.
- CINDE acted as an external agent and did not work directly with parents, communities, or children. Its main role was to prepare community leaders for their new roles, to serve as a facilitator in the development process, and to act as a link with other institutions.
- Inter-institutional coordination and complementarity at both the local and regional level was an important dimension from the beginning of the project.
- Because PROMESA was a community-based organisation and support network, it first emerged within the community and then, as a community movement, became the planner, evaluator, and implementer of the programme.
- CIDEAL, a local NGO, was formed to provide technical assistance and take over CINDE's role.
- At the beginning of the project, attention was primarily directed towards educational and organisational processes within families and communities. Later, as the community identified health, sanitation, and other needs, strategies were developed to secure resources to address those needs.
- Family and community centres, built and administered by the people, became a very tangible way of supporting the people's organised actions. These centres also became a vehicle to help strengthen the autonomy and cultural identity of the communities.
- The use of radiophones in the most isolated communities was key to stimulating people to widen their relationships and their communication and support on a long-term basis.

Lesson 15: Building mutual credibility between community members and those seeking to help from outside is essential to a project's effectiveness.

A participatory project aimed at fostering human development by putting people at the centre must develop mutual credibility. This means that those seeking to help from outside can trust the capacity of insiders, recognising that it is the lack of knowledge, support, and opportunity that keeps them from improving their situation. This understanding, which is a principle for developing horizontal relations, is a key element in promoting productive relationships and overcoming paternalistic attitudes. It underlies the feelings of many people from the community who said, 'PROMESA didn't give fish; they taught us to fish.'

Lesson 16: In implementing a programme that leads to human and social development and change, a community base is fundamental.

From the beginning, PROMESA worked principally within the community to

develop a new kind of leadership. At the beginning of the programme, there were a few leaders who were the traditional links between programmes and the community, but they had not been successful in achieving wide community development – and many of them acted as barriers to knowledge and opportunity. Because we were committed to promoting traditionally excluded groups, we worked at the community base, from which the most representative leaders emerged. We recognised that community people with little formal preparation could be involved and trained in a process that would allow them to become promoters and community leaders.

Lesson 17: Enhance local development.

Early childcare and development programmes can be an extremely effective way to mobilise individuals for local development for two reasons: first, they contribute to the conditions necessary for the development of children as healthy, active, and responsible citizens; second, when these programmes are based on strengthening the capacities of families, institutions, and communities, they also contribute more generally to the strengthening of local social capital and support the basis for building democratic values and practices.

Lesson 18: To implement a process of social change, a single small project aimed at a few people is not enough; there must be a critical mass of people and a strategy that integrates the learning derived from all the different experiences.

In PROMESA and CINDE-PLAN, we started with a small group of families and activities and gradually increased the number of both, using the family as the integrating factor. We also worked with families from the same neighbourhood, so they could start developing support networks and strategies to learn from each other and could influence the neighbours who were not participating in the programmes.

When the initial environment has as many negative factors affecting children's development as PROMESA had, one single element, such as building latrines, is not likely to have a huge impact. It is important to have activities organised for different members of the family, along with some integrating activities where everyone can share their learning and their experiences in applying this learning to their daily lives.

Lesson 19: Local resources should be looked at from the perspective of human and social development.

Resources are needed if excluded people are to improve their lives. In our programme, where there was a wide range of personal and community needs, we first emphasised identifying the local resources that could help solve the problems. After that, different

procedures and strategies were used to identify outside resources when necessary, along with ways for people to have access to them. The participatory planning and design of activities started from recognising what people had in the community – in terms of both human talent and other types of resources, including local institutions. Community participation helped to identify what was available and what could be obtained through community participation and organisation. In this way, external resources were understood as complementing what people had – activities were centred around not what they lacked, but what they had. The important issue with resources is to use them in a way that avoids a paternalistic perspective.

Lesson 20: Project goals and the means of achieving them are often the same (for example, participation, human development, education).

As stated above, education and participation are necessary for giving people the opportunity to develop a better way of living. We can see education and participation as 'entitlements' for development, but education and participation can also provide the opportunity for developing knowledge, skills, and confidence, which are necessary if people are to improve their self-concept and strengthen their ability to identify and solve problems.

Lesson 21: A ludic approach contributes to the effectiveness of a project, especially when it emphasises cultural relevance and strengthens cultural identity and cognitive abilities.

Most cultures teach basic life and problem-solving skills through games and play. For this reason, a fundamental part of CINDE´s philosophy has been the use of games and play-related activities as an integral part of its programmes. In fact, CINDE has developed a set of toys and games for both children and adults, as well as simulation games for adults that encourage people to develop their own games and to recover games indigenous to their culture.

Lesson 22: To achieve coherence among principles, actions, and results, it is necessary to have clear values and a conceptual framework from the beginning of the project.

From the beginning, there must be a clear conceptual base that can be translated into pedagogical and methodological principles and communicated in appropriate ways to the different actors in a project. This base provides the foundation for the project's sustainability, leading, in turn, to the participants' ownership of the project and their commitment to keep it going in difficult times. In PROMESA, we started with a clear conceptual base that was expanded and enriched as the project advanced and new research findings and theoretical

developments emerged. We explicitly presented this conceptual base in each level of the project: at the community level, at the implementation level, at the planning level, and for financial purposes. We also developed different strategies to make this knowledge available to people of different cultural and educational backgrounds, which was one of the reasons for the coherence we had between theory and practice.

Lesson 23: To be effective, a project requires consistency between the funding bodies and its objectives and philosophy.

It is easier to achieve consistency when the bodies funding the project share its objectives and philosophical orientation, and when important decisions are made jointly by the funders, the implementing organisations, and the communities – when there is a partnership. Donors can be either constructive or destructive, depending on their ability to work as partners, adjusting to the rhythm, culture, and roles of the people in the project they are financing. When different actors have different views about project goals or do not view themselves as partners, there can be trouble.

Lesson 24: External influences play a very important role in project implementation.

There are many external forces that influence the outcome of a project, many that cannot be controlled by project implementers. These can be seen as obstacles or they can have a positive effect by getting people organised to solve problems in creative ways, turning adversity into an advantage and contributing to the process of empowerment. In PROMESA, there were all kinds of external influences that affected project implementation, such as floods, earthquakes, guerrillas and paramilitary groups, but people came up with creative solutions that strengthened their self-reliance as well as the programme's philosophy.

Lesson 25: To be consistent and effective, the human development perspective of putting people at the centre should be applied to all participants in a project, including the implementers.

Putting people at the centre implies providing growth opportunities to all participants – including the implementers, who are people first and actors within a process second. An effective project is one in which all those involved continue to experience personal growth. This approach helps those involved to see their work as personally fulfilling. It helps build a 'mystique' and a feeling of personal dedication to a project rather than just a contractual commitment. Human development must be seen as both an end and a means.

Lesson 26: The most effective field workers in a people-centred project derive satisfaction from seeing others grow and can guide them to learn from their mistakes.

In selecting people to work in social development projects, it is important to involve those who derive satisfaction from seeing others work and grow in the process. CINDE´s experience was that only those programme advisors who had already been successful doing the work themselves had the capacity to let others work and to help them learn from their own mistakes.

Lesson 27: Respect the pace of the communities.

A real challenge in project implementation is to create coherence between (1) implementing the project and using available resources and (2) the pace of the community – their concept of time and their ability to implement specific actions. The demands of some funders regarding objectives and goals can hinder the empowering process. Too little money limits the possibility of success; too much money limits people's creativity and the creative use of existing resources. Resources from outside must be added to the available resources without generating paternalistic or dependent relationships. This implies a participatory perspective in planning, implementing, and evaluating activities, which respect the communities' pace.

Lesson 28: Crises can lead to creative solutions and can strengthen the philosophy of the programme.

Crises and problems often contributed to PROMESA's effectiveness. It's the way in which crises and problems are handled that determines whether they can be made into something positive. For example, funds to continue the programme in the mid-1980s were limited, and some components were going to be closed because there was not enough money to pay the stipend for the promoters. The promoters decided to keep all the activities running by splitting their stipend. This strengthened the organisational structure of the communities and made the programme a central issue that united communities that had not previously had many common issues and activities. This crisis helped the community organisation achieve a broader scope, involving the entire municipality. It was also an important issue for fostering identity and giving the people the confidence to solve their own problems.

Lesson 29: Avoid political pressure.

It is crucial to the survival and development of a project like PROMESA to remain independent from political pressure at all levels. At election time, local politicians are always ready to get votes on the merits of programmes that are doing good things for the people, and they promise everything people need or want. After they are elected, they tend to forget about their promises. Part of PROMESA's success was because CINDE, in its local work, remained clearly independent of partisan politics.

Lesson 30: The learning and educational processes involved in project implementation should be accompanied by follow-up, evaluation, self-evaluation, and mentoring.

A programme like PROMESA is a process of personal and social change, based on learning and education, which needs to be monitored on a continuous basis. Evaluation should be seen as part of this process. This can help people recognise the importance of learning from the programme. This perspective helped PROMESA to develop a participatory monitoring and evaluation system, with continued follow-up and a process of mentoring, which helped people grow. Monitoring and evaluation gave people a feeling of being cared for and accompanied through the process of change, so it was possible to promote self-evaluation and monitoring at all levels.

Lesson 31: A participatory perspective in planning, implementing, and evaluating a programme contributes to better communication, transparency, and mutual confidence.

In PROMESA, people at all levels agreed that the participatory perspective for developing the programme was one of the most important things that contributed to the programme's effectiveness. Participating in different parts of the programme cycle gave people confidence in their own abilities. It also allowed the community in general to see what was going on, how resources were allocated, how activities were implemented, and how their own efforts contributed to the process. Having people from all levels directly involved in the programme became a very powerful instrument of communication that gave the programme managerial and organisational transparency. This was essential to obtaining people's trust and it shifted the idea of evaluation from 'validity' to 'legitimacy' – not rejecting the importance of 'validity' but understanding that evaluation is much more than that and that it is an inherent part of learning, negotiation, and communication.

Lesson 32: Work in isolated areas requires the creative use of technologies that facilitate communication, participation, interaction, project monitoring, and mutual learning.

In PROMESA, the use of radiotelephones was an extremely effective, relatively low-cost means of monitoring from a distance, solving problems, aiding training, and stimulating local participation as people networked and prepared for the telephone sessions. We developed the 'community thermometer' where indicators were identified to monitor community development. Similar strategies were used to monitor malaria control and sanitation at the community level.

Lesson 33: To expand a project successfully, certain organisational and

contextual conditions need to be met.

Changing the scale of a project is difficult and is influenced a great deal by the project's origins. The more divergent a pilot or small project is and the more independent it is, the more difficult it is to expand, even when the results show that it could be beneficial for the region or the country. With PROMESA, we learned that to go from a pilot project, with strong community-based support for families and their children, to a larger project or to a national programme supported by public policy, it is necessary to have responsive organisations with a supportive administrative environment and well-developed components to facilitate the expansion. These include systems for training (with supporting materials) and for monitoring, evaluation, supervision, and follow-up; a process involving people in planning and decision making (where the role of NGOs can be crucial, especially in isolated areas – where the presence of the government is very weak or nonexistent, NGOs can become the glue that holds all the pieces of the puzzle together); and an appropriate socio-political environment.

Lesson 34: To transfer a project from the external implementing organisation to a local one, mentoring and support need to be provided over a period of time, gradually decreasing, to create conditions where people can develop their skills and abilities.

The difficulty in successfully transferring the management of the CINDE-PLAN programme to the NGO created to take over was in part a reflection of the difficulties that the local team had in defending themselves from external pressures and circumstances, as well as the lack of some support systems during the transition. The proposed transfer included a plan to create a consultative and oversight board, a technical committee, and a three-year overlap between CINDE and the new organisation in order to provide training in the creation, presentation, and management of international projects along with an administrative and quality-control system. The fact that this plan was not followed created a vacuum, which weakened the institution and its potential for fostering local development.

Lessons learned about empowerment and sustainable development

Empowerment and sustainability are fundamental issues in early childhood development programmes. It is important to understand the concept of people-centred technical sustainability, not just economic sustainability, and to view it as related to empowerment. Excluded communities need external resources precisely because they are excluded from them. But it is important to understand these resources as opportunities to foster human and community development. The lessons we

learned about sustainability and empowerment provide an integrated picture of some of the experiences described above. Some of these relate specifically to overcoming negative attitudes about education and changing attitudes about gender. One important lesson we learned is that enabling parents to attend to the physical and psychological needs of their children can be the most effective strategy to break the vicious cycle of gender discrimination.

Lesson 35: Changing an unhealthy educational environment for women and girls to a healthy one requires involving people from all sectors of the community in an educational process that strengthens their self-esteem and changes their attitudes towards education and gender.

Since the mother is crucial in shaping the attitudes of her children – including their gender concepts – changing the mother's attitudes is essential to improving the education of girls and breaking the inter-generational cycle that perpetuates existing conditions. If women believe that they are inferior to men and behave like their servants, they will pass this attitude to their daughters and sons. These are the kinds of attitudes that many women who are poor and illiterate, and who lack the minimal access to power, have, and they reinforce men's attitudes and behaviour with their own. The improvement of girls' education should start with the mothers even before the children are born.

Lesson 36: No single educational action, aimed at only a small group of women, will change an educational environment – there must be a critical number of actions, involving different people in the community, if there is to be a cumulative positive effect.

In many impoverished areas, there is a negative learning environment for both children and adults. When parents have fewer than five years of school and they do not need to read – and are either illiterate or just barely literate – there is often an anti-education attitude in the home and the community. Given this negative attitude, a single programme for one member of the household is not enough to create a positive attitude in a short period of time. To turn the psychological and educational environment around, there needs to be a variety of educational activities for families and communities. A programme that offers opportunities for collective reflection, interaction, and the planning of activities for different members of the community can produce the necessary cumulative effects to make a real difference. When the mother comes home from a meeting where she is learning how to stimulate the intellectual development of her preschool child, and the father comes from learning how to use a chainsaw to cut trees and block wood, and the first or second grade child comes home with an educational game to develop logical thinking, then there is a cumulative effect that can change

attitudes in the home. When this happens in enough homes, the critical mass to change attitudes in the community can be reached.

Lesson 37: It is not possible to make rapid advances in education or to create healthy educational environments for children, especially for girls, in a semi-literate society without focusing innovative educational programmes on the mothers.

The formal educational system often discourages mothers from becoming involved in a meaningful educational process. Professional teachers, because they have 'more education' than the mothers, tend to feel that parents cannot contribute to the education of their children. If the process is to work, the mothers and teachers, alike, need to believe that the mother is the first and most important teacher of her children. Important aspects of the self-concept of poor illiterate women, such as level of aspiration, self-image, and locus of control, can be changed with appropriate strategies. But the mother needs to start with small successes like helping her child learn something or getting good water to drink. Then she can work on community problems like building an aqueduct.

Lesson 38: In focusing on the mothers to improve the education of young girls, three things are needed: the mother needs to know what to do and how to do it, and she needs to have the interest and will to do it.

Some women have such a low self-concept that they cannot be reached at the start of a project, while others living in the same conditions have the basic sense of worth to be able to respond. This is the group to start with, and the results will spread. Working with mothers of young children can accomplish two things: (1) it can open the doors for the education of their daughters and (2) it can be the beginning of community change. The mother needs to know that she can teach her children and she needs to feel confident about doing so, a notion that involves strengthening her self-concept. If a woman believes that no one listens to her, or that she cannot influence people, she cannot do much to help her family or community – she will feel that things that affect her life are beyond her control and she will pass these attitudes on to her children.

Lesson 39: Empowerment and sustainability are difficult to accomplish and require long-term commitment.

Bringing about sustained change is very difficult, even when there are many kinds of community-based support systems, community and institutional resilience, a participatory model, and the replacement of 'outsiders' by local staff and managers. The key is empowerment, and the key to empowerment is participation. However, the type of participation that leads to empowerment involves people in decision making and generates new, more complex forms of

participation. It focuses on developing the capacity to identify and solve problems and to organise in order to achieve objectives. This requires (1) flexible planning and financing that can respond to the people's and communities' needs and interests, (2) a cumulative effect, building on success, expanding the project base, and accelerating the rate of change, and (3) a critical mass of people to bolster each other's successes and develop support systems.

At the local level, it is essential to have diverse strategies and people at the centre of the activities who can build leadership and human and institutional capacity. But in itself, this is not sufficient to achieving empowerment and sustainability, which require innovative, flexible, participatory, and diversified approaches that respond to the changing needs of the people and the project; a good, ongoing monitoring, follow-up, and mentoring system; systematisation of experiences so that lessons can be derived; and participatory planning strategies based on the strengths of the people and their culture and on their vision of the future, centred on their children.

Lesson 40: It is necessary to work toward sustainability and empowerment, putting people and human development at the centre of activities.

To achieve sustainability in its most comprehensive sense, community leaders must be prepared (1) to play a meaningful role in both the programmatic and organisational dimensions of the programme and (2) to empower their own people. To accomplish this, the programme requires a continuous, flexible, and participatory educational process that leads to self-learning and learning from each other. This process should be present in all project activities and integrated into participatory processes of planning and evaluation. To that end, the best strategies for self-learning and mutual learning are those that lead to a process analogous to a virus or an epidemic: those who are contaminated spread it to others in the community. It is equally important to promote a new type of leadership in all programme participants to empower them to prepare the families and mobilise the communities in favour of children in an organised fashion. The old style of leadership reproduces social mechanisms of control that do not let people grow and develop individually or collectively.

Lesson 41: A flexible learning system supported by process-oriented learning materials and a reflective process of systematisation of experiences is a good foundation for programme participants to acquire skills and abilities and to identify lessons learned and incorporate them into the programme.

To be sustainable, a programme needs to foster and maintain a dynamic learning process that uses different strategies and

responds to the needs of educational agents and programme participants at different stages of implementation. There should be a combination of workshops, study groups, self-evaluation, and reflection supported by learning materials. The materials that support the learning process should be process-oriented and fit into a matrix so that different components can be used separately or in different combinations.

It is important to generate a clear link between learning and action, between developing skills and making specific social and personal changes. In this way, a participatory perspective, which looks at monitoring and evaluation as processes of learning and negotiation, can provide opportunities for improving the programme and for making changes in people and social conditions.

Lesson 42: Building community-support systems and support networks contributes to sustainable development and empowerment.

Community-support systems and support networks are essential to sustainable development. In PROMESA and CINDE-PLAN, these support systems emerged gradually. The participatory building of family and community centres gave people a greater sense of belonging to the programme, as well as a place to meet, to plan activities, and to interact on a permanent basis. The organisation of PROMESA as a community-based legal entity opened many doors and developed a permanent support network.

Lesson 43: To sustain change, there must be a cumulative effect that accelerates the rate of change.

This is crucial, because as people start to experience success, their expectations exceed the ability of one project to satisfy their needs. Here, the concept of having a critical mass of programmes and of people involved in the project becomes important to ensure a constantly accelerating rate of change.

Lesson 44: An external organisation should not do what the people can do themselves.

The programme methodology should include strategies that strengthen people's ability to identify and solve problems themselves. In PROMESA and CINDE-PLAN, CINDE's programme staff did not work directly with the people in the community. Great efforts were made to train people to do the work themselves and to strengthen their ability to manage the programme.

Lesson 45: It is essential to believe in the capacity of local people.

One very important premise of a programme that works toward empowerment and sustainability is believing in the ability of the local people

to solve their own problems. The strengths of the people and their culture need to be identified and new abilities need to be built and developed using the positive aspects of the people's experience and cultural frame of reference. It is critical to have a pedagogical model with clear principles and strategies that respond to people's needs and interests and strengthen their self-concept and ability to solve problems at both the individual and collective level, so that they develop the strength to identify their errors and learn from them.

Lesson 46: It is important to take risks.

Risk-taking at crucial moments of a project's implementation can be very important to its sustainability because it increases the community's commitment to the programme's success and their sense of pride and ownership of the project. One factor that contributed to the effectiveness and continuity of our programme was the ability of the implementing institution and the educational agents to run risks when financial or other conditions were not favorable. A good example is the decision made when financing ran out in 1983 and alternatives were found by the community to continue the programme.

Lessons learned about implementing research and development programmes on a long-term basis

As a research and development institution, CINDE drew valuable lessons about the design, implementation, and evaluation of the programme from their efforts to bring together the different conceptual, financial, and programmatic pressures and interests that arose from the implementation process.

Lesson 47: When research is at the service of human and social development, it generates knowledge that can improve the programme and guide the implementation of similar programmes.

In PROMESA, we tried to create a balance between the roles of research and development, and in the process, we used the research results as a means of improving the programme. In other words, research was understood as a way to obtain knowledge for development.

Lesson 48: The process of implementing a research and development programme is a learning experience for both the implementing institution and participating staff.

If the importance of learning from the programme is a priority for the implementing institution and the community, then monitoring, evaluation, and systematisation are critical. Evaluation must be recognised as an integral part of the implementation process and as an enterprise for the whole institution – not just field personnel or a special division of the

institution. If the institution is to profit from the experience, monitoring, evaluation, and systematisation should be integrated into the regular activities of the programme and the institution – there should be a commitment at all levels.

Lesson 49: The concerns of research and development are the concerns of people.

In a perspective in which research is an instrument for human and social development, it becomes a means for people to have a better understanding of the programme and its context. This underlines the importance of promoting a participatory process in which people can influence the way research is done, the interests it should fulfil, and the way the findings are used. It is very important to recognise the different actors in the research process, especially the different meanings they derive from the same findings. Programmes must do as much as possible to democratise research, which also means finding alternative ways of understanding it and going beyond traditional methods, perspectives, and epistemological stances.

Lesson 50: In a research and development project, it is very important to have strategies that deal with conflicts between the research priorities and those of development.

There must be a balance between research and the implementation of the programme. If research activities consume too much time and resources, the implementation of the programme can be affected and research can become a restrictive, rather than a helping, component. On the other hand, very big, complex programmes can demand so much administration that the institution's ability to carry out research, evaluation, and reflection is limited.

Lessons learned about relationships with foundations and funding bodies

Lesson 51: Relationships with funding bodies are most productive when viewed as partnerships where different objectives can be met.

There must be a strong correlation between a well-conceived programme (from its conceptual and philosophical perspectives) and its actions – what we have called coherence. Relationships with funders must be constructed in such a way that they contribute to consolidation of the programme's conceptual and philosophical base, as well as to coherence with its actions. It is best to build relationships with funders that share the objectives and philosophies of the programme or institution receiving the funding. With this approach, relationships with funders can be a way for each partner to help the other obtain its own objectives. The price of getting money without carefully considering these issues can be very high.

Lesson 52: To deal with funding bodies without prostituting your institution or programme, it is essential to have clear objectives and principles – do not let money guide your actions.

Along the same lines as lesson 51, the institution that is asking for funding must have clear objectives and principles. This is essential to the conceptual and philosophical orientations needed to give guidance in ambivalent situations, and to overcome crises when they appear.

Lesson 53: View the process of getting funding as an educational and learning experience for the funding body – be patient and persistent – it is a slow process, but it works.

Building relationships between institutions is a great opportunity to learn from each other and can lead to learning experiences for everyone involved. The implementation of policies and actions should be negotiated in a participatory educational environment. The institution that is running the programme knows the field and the context in which actions are going to be implemented, and can guide the funder's planning. In PROMESA, we had long discussions with funders, trying to agree on how to go beyond paternalistic, short-term actions; some were able to change their traditional orientation.

Lesson 54: Strategic alliances are necessary to develop an integrated early childhood development programme.

Since funding bodies tend to have a specific focus, integrated early childhood development programmes that require interventions in a variety of fields, like health, education, and nutrition, are not very likely to be financed by only one agency. Nor can these programmes be implemented by one institution alone. For that reason, it is extremely important to identify partner institutions at the level of both financing and implementation, and to develop strategies and mechanisms to sustain those relationships over the medium to long term.

Implications of the lessons learned for different actors: Policy makers

Lesson 55: Parents should be involved in educational activities with their children, as a component of all programmes for children from birth to six years of age.

As a basic policy in regard to early childhood development programmes, there should be a variety of ways to involve parents in the education and development of their children from birth to six years of age.

Lesson 56: Policies related to childcare and development should be integrated into national social development plans.

For early childhood development programmes to become a strategy for

social development in a country, they need to be incorporated in national social development policies and programmes and to include strategies for family and community participation.

Lesson 57: The sustainability of early childhood development programmes requires the development and operationalisation of creative financial strategies to guarantee that the programmes function on a continuous, long-term basis.

Even though there is wide recognition of the importance of providing good care and development opportunities for children from birth to the age of six as a national strategy for human and social development, national budgets continue to provide insufficient funding for quality care and development opportunities for everyone.

Implications of the lessons learned for different actors: Funding bodies

Lesson 58: To have an impact, social development programmes focused on the healthy development of young children should be financed over the medium to long term.

As we have mentioned several times, social development is a medium- to long-term task. If there is to be any impact on children's development, it is better to support fewer programmes and projects for longer periods, than to support many for a limited time.

Lesson 59: Do not see yourselves as providers of money, but as partners in the project.

Developing a relationship with implementing institutions, where you are partners in a project, can result in an educational and learning process in which both institutions can grow and learn from each other. This type of relationship needs a flexible approach, as discussed in the next lesson.

Lesson 60: Finance social development projects with flexible guidelines.

If funding bodies are willing to form partnerships with institutions involved in promoting the healthy development of young children, they must assume a flexible approach. Such an approach is needed for several reasons: (1) the social and political conditions under which social development projects are implemented change often, and it is impossible to make plans several years in advance, (2) it is important to recognise that the implementation of a productive programme relies on the participation of institutions and communities, which implies a process of negotiation in which the knowledge and experience of all participants is important. Rigid attitudes and procedures can interfere with this process.

Lesson 61: Train your programme officers to understand social development, to be culturally sensitive, and to play their role not as traditional supervisors but as mentors and partners.

A partnership implies a change in the way people relate to each other. Traditionally, the officers of funding bodies interact with local institutions as supervisors and comptrollers. When the relationship between the funders and implementing institutions is a partnership, the officers should work as mentors, advisors, and colleagues of the staff of the implementing agency, working together toward a common goal. This type of attitude, which is not the traditional one, needs to be encouraged. However, this is not only a managerial issue; it also has a socio-cultural dimension. Ways to construct horizontal, partnership relations involve cultural diversity that must be recognised and accepted.

Implications of the lessons learned for different actors: Training institutions

Lesson 62: Use the lessons learned to prepare people to implement new programmes.

The lessons learned in other programme experiences should be systematised and used for training new personnel. They should also be shared with others interested in designing and implementing similar programmes. The knowledge acquired by institutions through years of experience often remains in the memories of people, without being built into an institutional asset. Using the systematisation of experiences as a strategy for learning can meet two goals: (1) as a very dynamic and productive way of training new personal and (2) as a way of improving the process of systematising the lessons learned by the institution.

Lesson 63: Interact with the people implementing projects; it is a great learning experience.

New staff, senior officers, politicians, and planners can benefit from interacting with people from other programmes and projects and sharing their visions and experiences, their successes and their mistakes.

Implications of the lessons learned for different actors: Implementers and community leaders

Lesson 64: Translate the findings of social development programmes into a language and style that can be used by implementers and community leaders.

Quite often the results of social development programmes are shared with the funders but not with people who are in the field.

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NOTES:
An extensive bibliography and additional information on the programmes can be consulted at **www.cinde.org.co**

For further information on *escuelas nuevas* please see **www.volvamos.org**

Appendix

Testing

There is no standardized test for elementary schools in Colombia, so CINDE developed its own to use in PROMESA. The questions for mathematics and language were taken from the official curriculum at the time the tests were developed.

As far as we know, the test of problem-solving abilities or logical thinking is unique. The questions asked in this test included the following:

- Identify an unknown object by eliminating known objects. An example of this involved showing the child a drawing of a table, chair, bed, and pouf and asking the child to point to the pouf.
- What does not belong in the group? Selections included three large triangles and a small one or three red squares and a green one or three squares and a circle. The child was asked to point to the one that did not belong.
- What does not belong in the category? An example of this would be three animals and a bird.
- Extend a pattern or fill in a missing part.
- Complete the matrix. In this, the child was given an incomplete matrix and asked to complete it.

These questions formed the core of the test, which remained the same from 1981 to 1985. Other questions were added on an experimental basis and some became part of the test. Questions added to the test before 1996 include the following:

- The child was first shown letters made out of dots. Then the child was shown the same letters in reverse (that is, each letter was outlined with dots) and asked to name them.
- The child was shown two overlapping circles. One circle held a variety of triangles of different sizes and colours; the other circle held a variety of shapes of different sizes, all of which were white. The child was asked what went in the space where the circles overlapped.
- A question on scale showed four shapes in a box and the child was asked to draw the same shapes in a smaller box.
- The child was asked to identify letters embedded in a free-form design.

The first tests were used from 1980 to 1985. They had a good, somewhat bell-shaped distribution of scores. CINDE did not have the money to standardise the test, but we used them in other CINDE projects, and eventually, had comparative groups from four cities and from both public and private schools.

In 1996 CINDE produced a second edition of the tests called, *Pruebas de CINDE,* made up of more than 90 percent of the questions in the old set. Some questions were added to make the language and mathematics questions for the fourth and fifth grade more difficult, and we added four questions on logical thinking. This second edition has remained unchanged since 1996.

Further information

Information about the Foundation, its grantmaking policy and its work, as well as a list of publications are available from the Foundation through the contact details given on the back cover. All our publications can be downloaded from our website.

Titles in the *Following Footsteps* series:

A new door opened: a tracer study of the Teenage Mothers Project, Jamaica, Roli Degazon-Johnson, 2001, Practice & Reflections No. 13

In the web of cultural transition: a tracer study of children in Embu District, Kenya, Ann Njenga & Margaret Kabiru, 2001, Practice & Reflections No 14

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A beautiful location and extreme poverty may seem an unlikely combination but that was the lot of the people living on the Pacific coast of Chocó in 1976. And it was the setting for the PROMESA project that aimed to influence the physical and emotional health as well as the intellectual development of the children.

Twenty years on describes the development of PROMESA and the way in which it has influenced the children, their families and the whole community. It also covers an extension to the inland areas of Chocó province and is an object lesson in how programmes must change to fit local circumstances.

All activities flowed from three basic assumptions about social change: that there needs to be a critical mass; that there must be a cumulative effect that accelerates the rate of change; and that to achieve sustainable development there is a need to empower people at all levels. One essential feature of the programme is that outsiders never worked directly with the children, instead they trained local people (mostly women) to implement the programme.

There were improvements at all levels: in health, nutrition, sanitation, general health, infant mortality, rates of malaria, housing, employment opportunities, income levels, community cooperation and activities. But the most striking changes were in the children and in the women who implemented the programme.

As for sustainability, PROMESA still exists and is run entirely by the local population.