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A WORLD BANK STUDY

Faith-Based Schools in Latin America

CASE STUDIES ON FE Y ALEGRÍA

Juan Carlos Parra Osorio and
Quentin Wodon
Editors

THE WORLD BANK

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Contents

Figures

Tables

Foreword

It is often argued that faith-based schools provide a substantial share of education services, especially in the poorest developing countries, and that the services provided by faith based schools tend to be better targeted to the poor and are possibly more cost effective and of better quality than is the case for other private and public providers. These assertions, if correct, could have implications for policy, since donors and governments might then be more inclined to support faith based schools in their service delivery activities. Unfortunately, good data to document such assertions are often missing.

This volume is devoted to an assessment of the performance and selected aspects of the management and pedagogical practices of Fe y Alegría schools. Fe y Alegría is a movement promoted by the Company of Jesus with more than 40,000 staff, lay and religious from more than 170 different congregations, serving more than one million people in 20 countries, 17 of them in Latin America. The Federation describes itself as a *"Movement for Integral Popular Education and Social Development whose activities are directed to the most impoverished and excluded sectors of the population, in order to empower them in their personal development and their participation in society."* And indeed, the evidence gathered in the case studies presented in this volume suggest that the federation often does reach the poor, and that it does empower them through the provision of a good quality education.

In República Bolivariana de Venezuela, and at least for some subjects in Colombia, empirical evidence based on test scores suggests that the performance of Fe y Alegría is strong once controls for the students who are served by the schools are introduced, and this performance assessment is also supported by the evidence gathered in the case of Peru, for example in terms of the internal efficiency of the schools. The other case studies presented in this volume suggest that the factors that lead to good performance are complex and related not only to the types of "inputs" or resources used by the schools in the education process, but also to the management of these resources, and the ability to implement and test innovative programs.

The contributions in this volume are a selection of 15 presentations at a training workshop funded and organized in Peru in October 2009 jointly by Fe y Alegría, the World Bank Institute, Magis Americas, and the Development Dialogue on Values and Ethics in the Human Development Network at the World Bank. I am delighted that this type of collaboration is taking place in order to provide policy oriented empirical evidence that can help in fostering progress towards better human development outcomes. The next step in the collaboration will consist in analyzing much more in depth the characteristics and functioning of a subset of Fe y Alegría schools in order to try to unpack some of the management and pedagogical practices that lead to such positive outcomes.

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Abstract

This volume is devoted to an assessment of the performance and selected aspects of the management and pedagogical practices of Fe y Alegría, a federation of Jesuit schools serving approximately one million children in 20 countries, mostly in Latin America. The available quantitative evidence suggests that the federation's schools often do reach the poor, and that students in Fe y Alegría schools tend to perform as well on test scores, if not slightly better than comparable students in other schools. Qualitative data and case studies suggest that the factors that lead to good performance are complex and related not only to the types of "inputs" or resources used by the schools in the education process, but also to the management of these resources, and the ability to implement and test innovative programs. Other factors that support this argument include the capacity and flexibility to implement and test innovative programs that take into account the local realities.

Acknowledgments

This volume is a product of the Development Dialogue on Values and Ethics, the unit in the Human Development Network at the World Bank that leads the Bank's work on values, faith, and development. The contributions in the volume grew out of a training workshop funded and organized in Peru in October 2009 jointly by Fe y Alegría (under the leadership of Lucía Rodríguez Donate), the World Bank Institute (under the leadership of Myriam Waiser), Magis Americas (under the leadership of Cecilia Barja), and the team at the Development Dialogue on Values and Ethics. Some 50 participants from 15 countries including government staff attended the workshop, which featured presentations by Fe y Alegría staff, World Bank staff, as well as international experts. A subset of the presentations were used and further developed and edited in order to produce this volume. The nine experiences presented by Fe y Alegría staff were published in Spanish by the Federation in three volumes titled "Fe y Alegría: expandiendo las oportunidades educativas de calidad en América Latina". The editors are especially thankful to Rakesh Nangia and Ignacio Suñol, S.J., for supporting this project and to Felipe Barrera-Osorio for serving as peer reviewer. We also thank Jorge Cela, S.J., Lucía Rodríguez Donate, Víctor Murillo, Elizabeth Riveros and Luis Carrasco from Fe y Alegría for their support and encouragement during this project. This version of the study in English was translated from Spanish by Andrea Ochoa under the supervision of Juan Carlos Parra Osorio.

List of Acronyms and Abbreviations

AECID	Spanish International Cooperation Agency for Development
APAFA	Parents Association
AUSJAL	Association of Jesuit Universities of Latin America
CAF	Corporación Andina de Fomento
CEM	Coarse Exact Matching
CEOs	Centers for Occupational Education
CONSAD	Associated Consulting for Development
CRECER	Educational Achievement Test in Peru
DDVE	Development Dialogue on Values and Ethics
FBOs	Faith-based Organizations
FIFYA	International Federation of Fe y Alegría
FLACSO	Latin American Faculty of Social Sciences
FYA	Fe y Alegría
GRADE	Analytic Group for Development
ICFES	Colombian Institute for the Promotion of Higher Education
ICT	Information and Communications Technology
IESA	Institute of Advanced Administration Studies (Instituto de Estudios Superiores de Administracion)
IIPE	International Institute for Education Planning
INEI	Peru National Statistical Office
JUNAEB	School Nutrition and Fellowship National Board of the MINEDUC
MED	Ministry of Education
MINEDU	Ministry of Education
MW	Minimum Wage
PAA	Test of Academic Aptitude
PGDFI	Global Plan of the International Federacion (Plan Global de la Federacíon Internacional)
PISA	Programme for International Student Assessment
PSM	Propensity Score Matching
SAT	Scholastic Aptitude Test
SEP	Preferential Grants Act
SIGRE	Management and Evaluation Results
SIMCE	Measurement System of the Quality of Education
SINAE	National System of Assigning Equity
SVI	School Vulnerability Index
UGEL	Management Local Education Units
UNESCO	United Nations Educational, Scientific and Cultural Organization

Fe y Alegría School Performance and Practices

A Brief Overview

JUAN CARLOS PARRA OSORIO AND QUENTIN WODON

This chapter presents a brief summary of the contributions in this volume devoted to an assessment of the performance and selected aspects of the management and pedagogical practices of Fe y Alegría, a federation of Jesuit schools serving approximately one million children in 20 countries, mostly in Latin America. The available quantitative evidence suggests that the federation's schools often do reach the poor, and that students in Fe y Alegría schools tend to perform as well on test scores, if not slightly better than comparable students in other schools. Qualitative data and case studies suggest that the factors that lead to good performance are complex and related not only to the types of "inputs" or resources used by the schools in the education process, but also to the management of these resources, and the ability to implement and test innovative programs. Other factors that support this argument include the capacity and flexibility to implement and test innovative programs that take into account the local realities.

1. Introduction

This volume is devoted to an assessment of the performance and selected aspects of the management and pedagogical practices of Fe y Alegría schools. Fe y Alegría (*Faith and Joy* in English) is a federation of Jesuit schools serving about one million children in 17 countries. The organization was created by José María Vélaz, S.J., in República Bolivariana de Venezuela in 1955 in order to federate educational services provided in Caracas's slums. The federation later expanded to Ecuador (1964), Panama (1965), Peru (1966), Bolivia (1966), El Salvador (1969), Colombia (1971), Nicaragua (1974), Guatemala (1976), Brazil (1980), Dominican Republic (1990), Paraguay (1992), Argentina (1995), Honduras (2000), and Chile (2005). The federation also operates a support platform in Spain.

While Fe y Alegría is a large and influential network, very little detailed work has been carried to-date on assessing the performance of the federation's schools and documenting its management and pedagogical practices. A handful of studies of various depths have been conducted over the last ten years, including Swope and Latorre (2000), Martiniello (2001), World Bank (2004), and Peters (2009). Very brief chapters on the federation are also included in Marshall and Keough (2004) and Marshall and Van Saanen (2007). But none of these studies provides an in-depth assessment of the quality of the education provided by Fe y Alegría schools, and these existing studies discuss only to a limited extent specific and at times innovative features of the management and pedagogical practices of the federation. In fact, the only study that we know of which provides robust data on the performance of Fe y Alegría schools was conducted on República Bolivariana de Venezuela by Alcott and Ortega (2009) and it is reproduced in this volume.

It is hoped that the various contributions in this volume, which were prepared for a multi-country seminar held for Fe y Alegría and government staff in Peru in October 2009, will help in bridging this knowledge gap and in generating a renewed appreciation for the contribution of the Fe y Alegría federation to the objective of a quality education for all.

Fe y Alegría describes itself as a *"Movement for Integral Popular Education and Social Development whose activities are directed to the most impoverished and excluded sectors of the population, in order to empower them in their personal development and their participation in society"* (see for example the description of the federation on the Fe y Alegría website at www.feyalegria.org). A number of features of this characterization are worth emphasizing.

First, Fe y Alegría aims to reach in priority those who have limited education opportunities due to their socio-economic, special educational needs, or other forms of disadvantage or discrimination. This means that in many countries, Fe y Alegría serves poor communities, or at least initially established its schools in poor neighborhoods. The evidence provided in this volume for República Bolivariana de Venezuela by Alcott and Ortega in chapter 2 suggests few differences in socio-economic status between Fe y Alegría and public school students in República Bolivariana de Venezuela, but in the case of Colombia, Parra Osorio and Wodon in chapter 3 show that indeed, students in Fe y Alegría schools are from poorer households than students in other schools.

Second, Fe y Alegría aims to promote "integral popular education" rather than simply formal primary and secondary schools. That is, beyond operating a large number of traditional schools, the federation also operates other types of programs, including specialized education programs, radio stations, adult education programs, labor training and school equivalency programs, and professional training programs at the secondary and tertiary levels. In addition, the federation is also active in a number of other areas, including the development of cooperatives and small businesses, and projects for community development and health care, among others. Still, formal education at the primary and secondary level remains at the core of the Fe y Alegría portfolio of activities. Table 1.1 suggests that out of 1.4 million students served in 2006, more than half a million attended formal education programs, and a number of those students are also involved in other programs run by the federation (the adjusted figures in table 1.1 take the participation of some students in multiple activities into account, so that the adjusted number of students served is just below one million for that year).

Third, Fe y Alegría places an emphasis on values in the education process. Fe y Alegría describes itself on its website as a movement which *"unites people in a process of growth, self-criticism and the search for answers to the challenges presented by human needs."* The movement is *"popular because it sees education as a part of a pedagogical and political proposal for social transformation rooted in the local communities. It is integral because it presupposes that education involves the whole person in all his/her dimensions. And it concerns social development because* [. . .] *it makes a commitment to* [. . .] *creating a society which is just, fraternal, democratic and participative."* The emphasis placed on values by Fe y Alegría is not unique in that it is a characteristic of many faith-based schools, and this characteristic has often been suggested to be one of the factors that have led to good performance by faith-based schools.

The case studies presented in this volume suggest that the performance and management of Fe y Alegría schools is strong. In the literature, several reasons have been advanced to explain the good performance of a majority of (albeit not all) private and faith-based schools (Epple and Romano 1998; LaRocque and Patrinos 2006; Nechyba 2000; Savas 2000). These schools often have more flexibility in the management of their resources than public schools. In addition the competitive pressure under which the

Table 1.1 Enrollment statistics for Fe y Alegría programs, 2009

Country	Total	Formal education	Semidistance and radio education	Alternative and nonformal education	Teacher training	Services, advocacy and community development	Adjusted total (minus participants in multiple activities)	Geographic points (distant physical bases)	Schools	Personnel
	Students and participants							**Centers**		
Argentina	10,065	4,842	—	2,913	575	1,735	7,730	37	30	528
Bolivia	336,735	157,046	12,664	166,159	866	—	250,245	240	424	9,780
Brazil	23,968	4,330	—	14,096	755	4,787	23,683	71	10	1,061
Chad	2,709	2,544	—	165	—	—	2,709	10	8	96
Chile	16,257	6,281	—	9,015	167	794	9,650	21	12	615
Colombia	259,036	75,179	350	115,523	2,581	65,403	143,951	104	63	4,261
Ecuador	77,827	25,151	19,582	6,801	1,279	25,014	56,793	164	88	2,643
El Salvador	17,918	9,452	—	6,329	332	1,805	17,918	19	14	425
Spain	8,398	—	—	8,154	244	—	8,398	—	—	675
Guatemala	13,611	12,381	—	806	424	—	13,611	50	47	746
Haiti	1,716	1,600	—	—	116	—	1,716	13	2	115
Honduras	3,067	558	—	2,169	340	—	3,067	32	3	61
Nicaragua	60,510	10,094	—	22,286	584	27,546	40,648	49	23	520
Panama	6,251	378	—	5,149	59	665	6,251	—	2	64
Paraguay	42,456	10,751	5,514	11,807	381	14,003	42,456	122	43	1,299
Peru	197,664	75,644	1,816	42,164	2,795	75,245	127,896	198	184	4,129
Dominican Republic	137,438	36,225	—	39,803	1,115	60,295	85,573	46	79	1,739
Uruguay	1,841	901	—	740	—	200	1,841	15	3	107
Venezuela, R.B.	290,998	117,913	16,976	109,133	8	8,624	38,352	185,244	690	519
Total	**1,508,465**	**551,270**	**56,902**	**563,212**	**21,237**	**315,844**	**1,029,380**	**1,720**	**1,206**	**42,705**

Source: www.feyalegria.org

schools are placed is more likely to lead to a selection process than is the case for public schools. By introducing competition in a sector that has often not been subjected to such pressures private and faith-based schools may also have a positive impact on quality for the overall school system, thus generating gains in public schools as well.

Yet beyond these arguments for the likely good performance of many private schools, there may also be a number of other reasons for the good performance of many faith-based schools. These schools tend to have a long-term commitment to their communities, and local religious leaders often have a moral authority that helps in mobilizing the community's resources around the schools (Belshaw 2005). Through links to sister organizations in other countries, the schools may also benefit from outside funding and expertise. In addition, as already noted, faith-based schools often emphasize values of respect and consideration for others which may contribute to an atmosphere conducive to higher performance on indicators such as test scores. Finally, faith-based schools may be more dedicated or altruistic than other providers. As noted by Reinikka and Svensson (2009) in the case of health care providers, faith-based providers do not seem to be motivated only or mostly by profit or perks maximization—they seem to be "working for God."

2. Contributions in This Volume

The contributions in this volume focus on the performance and selected other aspects of Fe y Alegría schools, and are part of an emerging body of empirical evidence suggesting that private and faith-based schools provide education services of good quality for their students, and thereby generate a valuable alternative or complement to the services provided by public sector (e.g., Altonji et al. 2005; Asadullah et al. 2009; Backiny-Yetna and Wodon 2009; Cox and Jiménez 1990; Evans and Schwab 1995; González and Arévalo 2005; Hoxby 1994; Hsieh and Urquiola 2006; Wodon and Ying 2009). There may however be a lot of heterogeneity among private faith-based schools not only in terms of performance, but also in terms of the students they cater to. It is clear that most for-profit private schools serve privileged segments of the population. For faith-based schools, the assumption that they aim to reach the poor is often warranted, but not necessarily always true, and the same holds for performance assessments. This heterogeneity is why detailed country-level assessments of the characteristics and performance of various types of schools are needed.

The first part of the volume consists of three case studies looking at the performance of Fe y Alegría schools in República Bolivariana de Venezuela, Colombia, and Peru. In chapter 2, Allcott and Ortega use econometric methods (propensity score matching) to estimate the effects on standardized test scores of graduating from the Fe y Alegría private school system in República Bolivariana de Venezuela and compare these schools with public schools. They find an average "treatment effect" or gain from being in a Fe y Alegría school on the order of 0.1 standard deviation in mathematics, which is small, but nevertheless statistically significant. They argue that the better performance of the Fe y Alegría system stems not only from its labor contract flexibility and decentralized administrative structure, but also from the peculiar "family culture" of the schools.

In chapter 3, Parra Osorio and Wodon assess the performance of Fe y Alegría secondary schools in Colombia using a rich multi-year data set with test scores on a wide range of subjects as well as detailed information on the characteristics of the household to which students belong. While Allcott and Ortega use data on test scores for one year

only, Parra and Osorio have five years of good data at their disposal, which enables them to test whether differences in performance are robust over time. In addition, they also have a larger number of subjects on which students are tested. Simple statistics on test scores suggest that Fe y Alegría schools perform worse than other schools for all years and all subjects in the sample. However, the schools also cater to poorer students. Once controls are included for student background, Fe y Alegría schools perform at least as well as other schools, at least for mathematics and Spanish.

In chapter 4, Alcázar and Valdivia use interviews of key stakeholders and focus groups to analyze the factors that explain the success of Fe y Alegría schools in Peru, where Fe y Alegría schools enjoy high degrees of autonomy regarding their curriculum and administrative decisions. The success is expressed in higher levels of internal efficiency and better performance when compared to similar public schools. These factors include the high degree of independence for generating and managing resources; a favorable institutional climate; the selection, tutoring, supervision, and training of teachers; more autonomy and authority for school principals; and the capacity to adapt to local realities.

The second part of this volume includes three case studies that highlight the adaptability of the pedagogical practice of Fe y Alegría to new realities. Nine case studies were presented in the workshop and were all published by Fe y Alegría (2010a, 2010b, 2010c) and three were expanded for this volume.[1] In chapter 5, Sprovera describes an innovative experience on how to teach literacy in elementary Fe y Alegría schools in Chile that serve students with high levels of social vulnerability. Investigating how to improve academic performance of students in one Fe y Alegría school, three findings motivated the design and implementation of a new literacy program: deficient reading; the basic literacy learning was not being completed in the first year of basic education; and there was a group of students who could not be taught how to read and write.

A customized program, based on an exhaustive diagnosis that took into account the specificities of the Fe y Alegría schools, and that included multiple revisions of new practices and materials, has achieved increases in reading speed and made possible to teach how to read and write to all students by the end of first grade. Despite some initial resistance to the program from the teachers, training sessions and the preparation of teaching materials gained approval for the program and made it more effective.

In chapter 6, Borjas and Soto describe the federation's "global plan" that aims to grow and strengthen the training programs for Fe y Alegría staff, to contribute to their personal development, to increase the identification with the federation's mission and vision, and to promote the application of the popular education model. The plan has served more than two thirds of the teachers and federation staff around the world. Based on a diagnosis of the training needs, the plan created a training proposal that is consistent with the federation principles, that analyzes the societies it intends to transform, and that is directed to the teachers who are needed to achieve that transformation. This chapter describes the articulation, implementation and funding of this "global plan", that provides an integral training for teachers along four dimensions: humane, socio-political and cultural, learn to learn, and pedagogical.

Finally in chapter 7, Rivera describes the incursion of Fe y Alegría in the rural areas in Peru, 30 years after starting operations in urban areas in the country. The main proposal for the rural areas is a school that adapts and responds to local realities, breaking the national model of urban schools that had been used everywhere. Using the network management model, Fe y Alegría designs programs of rural education that emphasize the development of skills for work and technical-productive education, and include

bilingual multicultural education in some networks. Some of the important outcomes of the implementation of a new proposal include an increase in the number of hours children spend at school; a decrease in the drop out and absenteeism rates; better performance of teachers; and the production of teaching materials adapted to the rural reality. Some other outcomes include the rebirth of teachers as promoters of development, more joy for students from going to school, nonexistence of corruption practices, the articulation of the curriculum into the local culture and productive system, and the strengthening of the social tissue of the communities where a network operates.

3. Conclusion

It is often argued that faith-based schools perform better than public schools. This volume devoted to Fe y Alegría suggests that this may be the case for that particular network of schools. For some subjects in República Bolivariana de Venezuela and Colombia, detailed quantitative empirical evidence and robust econometric techniques suggest that the performance of the schools is good once controls for the students served are introduced, and this is also supported by the evidence gathered in the case of Peru, for example in terms of the internal efficiency of the schools. The other case studies presented in this volume suggest that the factors that lead to good performance are likely to be complex and related not only to the types of "inputs" or resources used by the schools in the education process, but also to the management of these resources, and the ability to test innovative programs that can then be expanded if successful.

The next step in the collaboration between the World Bank and Fe y Alegría initiated with the multi-country training event that took place in Peru in October 2009 for Fe y Alegría and government staff and continued with this publication, will consist in analyzing much more in depth the characteristics and functioning of a subset of Fe y Alegría schools, precisely in order to try to unpack some of the management and pedagogical practices that lead to positive outcomes.

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Note

1. The differences in the number of case studies and the versions in this volume and the ones published by Fe y Alegría are explained by the different target audiences for both publications.

Evaluation of Fe y Alegría Programs in República Bolivariana de Venezuela, Colombia and Peru

The Performance of Decentralized School Systems

Evidence from Fe y Alegría in República Bolivariana de Venezuela

HUNT ALLCOTT AND DANIEL E. ORTEGA*

This evaluation estimates the impact on the performance in standardized test results of graduating from Fe y Alegría private schools in República Bolivariana de Venezuela. We find an average treatment effect of 0.1 standard deviations, using students from public schools as control group. We claim that the better results by Fe y Alegría students are due to Fe y Alegría's higher flexibility to select and hire teachers, and to a decentralized administrative structure.

1. Introduction

Public education in República Bolivariana de Venezuela has deteriorated steadily during the past 25 years. Although the average education attainment of the labor force increased from 6.1 years to 8.2 years and the literacy rate for people 15 and older went from 85 percent to 93 percent between 1981 and 2001, the government's expenditures on education dropped 36 percent in real terms between 1980 and 2003. Average aptitude test scores for high school seniors dropped from 21 to 6 in verbal and from 11 to 3 in math between 1987 and 2003. As a result of the deterioration in the quality of education and changes in the labor market, the Mincerian returns to education have dropped from 15 percent in 1975 to under 10 percent in 2003.

Working amid this disconcerting evidence is Fe y Alegría, a confederation of Jesuit schools targeting disadvantaged youth. The program's first primary school was established in Catia, a disadvantaged area of Caracas, in a home donated by a local bricklayer. Since then, it has expanded to serve 1.2 million students in 15 Latin American countries. The organization has a number of initiatives, including job training, teacher training, adult and radio education, and support for microbusinesses, but the bulk of its efforts are spent in primary and secondary education. Most observers, from community members to academic researchers, consider Fe y Alegría to be quite successful, but no econometrically satisfying program evaluation has been undertaken.

Through an econometric estimation of average treatment effect (ATE),[1] we compare Fe y Alegría graduates to a control group of Venezuelan public school students using the results of the Prueba de Aptitud Académica (PAA), a math and verbal test similar to the American SAT. Our results, which are consistent across different estimation methods, show that Fe y Alegría students perform slightly—but significantly in a statistical sense—better on both parts of the PAA. We conclude that this effect is due to the institution's organizational behavior: Fe y Alegría does not spend more money per pupil, but it does evidently have different management and cultural characteristics. Specifically, Fe y Alegría's management structure is much more decentralized, giving school principals budgetary authority and the ability to hire and fire teachers. Partially as a result of this decision-making process, the organization has succeeded in instilling a "family feeling" in teachers, staff, and students, which we believe contributes to the treatment effect.

Because Fe y Alegría is both private and decentralized, this research is related to the literature on decentralization of public services and the literature on school privatization. Fe y Alegría represents a scalable alternative to these policy options, as evidenced by its rapid expansion within República Bolivariana de Venezuela and to other countries in the region. As we show, Fe y Alegría merits imitation and greater scale.

2. Related Literature

Although we do not focus directly on the issue of decentralization of public services, this chapter is related to that literature insofar as it touches on the benefits and pitfalls of having decision rights closer to the individual. Galiani, Gertler, and Schargrodsky (2005) argue that decentralization of public schooling in Argentina in the early 1990s helped improve the quality of education, as measured by standardized test scores, in well-off regions, but had a negative effect in regions that were disadvantaged to begin with. Pães de Barros and Mendonça (1998) suggest that neither school financial autonomy nor local school boards in Brazil play a significant role in primary school performance, but that the principal's appointment power does have a positive and significant effect. Eskeland and Filmer (2002) find a positive correlation between performance and the autonomy of primary schools in Argentina, and King and Ozler (2000) also suggest a positive effect of decentralization on parent participation in school decision making in Nicaragua. Aedo (1998) presents evidence that Chilean schools that have significant decision rights also perform better than centralized schools. More recently, Sawada and Ragatz (2005), di Gropello and Marshall (2005), and Parker (2005), as part of a larger investigation on teacher incentives in Latin America (Vegas 2005), documented education reforms in El Salvador, Honduras, and Nicaragua, respectively, where either through spontaneous community organization or the government's initiative, some autonomy was transferred to local schools. The reported results are mixed, in part because central authorities still retained significant decision-making rights, although key indicators such as teacher absenteeism and the number of teacher strikes did seem to improve as a result of the reforms.

Other alternative school systems have been extensively studied. Private versus public schooling in general has been one topic of interest in both the United States (see, for example, Hanushek 1994; Hoenack 1994; Manski 1992, among others) and developing countries. Private school performance has been compared with that of public schools and has generally been shown to outperform the public system according to several measures. Cox and Jimenez (1990), after controlling for selection issues, show that private schools perform better on standardized tests than public schools in Colombia and in

Tanzania, Saavedra (1996) estimates a differential effect of private versus public schooling on the wages of Peruvian workers, and Contreras (2002) estimates a positive effect of the voucher system relative to public schools on test scores in Chile. Also related is the more narrow focus on Catholic schools, which has been undertaken mostly using data for the United States; in particular, Evans and Schwab (1995) show that being Catholic per se does not affect education outcomes, and then use Catholicism as an instrument for student participation in Catholic schools. They use the binary outcome of high school completion, claiming that it is a much more important predictor of future outcomes, and show that Catholic schools outperform public schools.

There is a basic agency problem in the provision of public schooling. The principals (society and parents) contract implicitly with centralized government administrators to provide quality education. The school administrators may have different incentives, and the effects of their actions on school quality are difficult to observe. By making the agents informationally closer to the parents, decentralization and privatization might help to ameliorate the information problem. Empirically, these effects are difficult to tease out because both privatization and decentralization are bundles of policies that combine solutions to some incentive problems but at the same time may cause several others. It is not easy to find instances in which policies are undertaken in a way that allows identification of the impact of each of its components, that is, to disentangle the effect of increased school principal authority from decreased central curriculum design. The articles in Savedoff (1998), although hampered by the natural limitations in the data, provide suggestive evidence as to the importance of these agency problems that may be resolved by means other than decentralization or privatization.

Despite the high regard for Fe y Alegría and the availability of extensive data, no econometric evaluation has been done of the system's effectiveness. Navarro and de la Cruz (1998) evaluate test scores and use student-level demographic controls, but their analysis is restricted to two Fe y Alegría schools in one Venezuelan state. Our analysis also does not provide direct evidence as to the importance of decentralization, but suggests based on anecdotal evidence that this factor plays an important role in explaining the relative success of the Fe y Alegría system. This chapter thus contributes to the discussion on decentralization and private schooling as ways of addressing incentive problems that arise in public administration.

3. Data

In República Bolivariana de Venezuela, every graduating high school student takes the Prueba de Aptitud Académica, which is in essence the Venezuelan SAT. Extensive background data on each student is also gathered, ranging from the basics of age and gender to the profession of the father and what transportation the student uses to go to school.

In total, there are 413,607 observations of graduating Venezuelan high school students who took the test in 2003. We include only students who are between the ages of 14 and 22, are not night-school students, and actually graduated that year instead of earlier. We then drop the 4,662 students from public schools that are not included in a separate school registry that allows us to identify municipalities. Controlling for other observable variables, this group scores 0.15 standard deviations lower on the verbal section and statistically the same in math, relative to other public school students. Because there is substantial intrastate variation at the municipality level, however, we chose to omit these observations in order to include municipality dummy variables. Because these 4,662 public school students perform relatively poorly, it is likely (depending on

which municipality the schools are actually in) that their omission biases downward the estimated treatment effect of Fe y Alegría.

Our final data set includes 46,460 public school students and 2,237 Fe y Alegría students. Table 2.1 shows the mean of each variable for the treated (Fe y Alegría) and nontreated (public schools) cohorts. Test scores are normalized to mean 0, standard

Table 2.1 Variable means for treated and nontreated

Variable	Fe y Alegría	Public school
Verbal score	0.09	0.00
Math score	0.20	−0.01
Male dummy	0.47	0.40
Married dummy	0.00	0.00
Age	16.96	16.73
Student works	0.03	0.03
Father's prof: Professor or exec	0.06	0.07
Father's prof: Technician	0.09	0.09
Father's prof: Employee	0.29	0.30
Father's prof: Skilled worker	0.37	0.39
Father's prof: Unskilled worker	0.17	0.14
Mother's ed: University	0.08	0.09
Mother's ed: High school	0.21	0.20
Mother's ed: Some high school	0.27	0.28
Mother's ed: Primary	0.39	0.37
Mother's ed: Illiterate	0.04	0.04
House: Luxurious	0.01	0.01
House: Spacious	0.19	0.20
House: Normal	0.51	0.47
House: Deficient	0.24	0.25
House: Very deficient	0.03	0.03
Highest income bracket	0.01	0.01
2nd-highest income bracket	0.01	0.02
3rd-highest income bracket	0.04	0.05
4th-highest income bracket	0.18	0.19
5th-highest income bracket	0.74	0.70
<3 siblings	0.29	0.26
3 siblings	0.24	0.24
4 siblings	0.19	0.18
5 siblings	0.12	0.13
6 siblings	0.15	0.17
Pay: Parents	0.90	0.90
Pay: Family	0.00	0.01
Pay: Scholarship	0.01	0.01
Pay: Education credit	0.03	0.03

Table 2.1 Continued

Variable	Fe y Alegría	Public school
Pay: Student's work	0.05	0.03
Trans: Own auto	0.35	0.32
Trans: Parents' auto	0.24	0.27
Trans: Friends	0.17	0.19
Trans: School bus	0.10	0.10
Trans: Public transit	0.10	0.08
Social class: Highest	0.01	0.01
Social class: 2nd	0.18	0.17
Social class: 3rd	0.50	0.51
Social class: 4th	0.29	0.28
Social class: Lowest	0.02	0.01
Socioeconomic status (calculated)	0.01	0.00

Source: Authors calculations.

deviation 1. Family income, mother's education, house quality, and social class are reported in five classes, with 1 being the "best." Although we could parameterize these variables, we instead use dummy variables for each bucket to retain the maximum flexibility. As we discuss in the results section, this nonparametric form is important because test scores will be nonlinear—and even nonmonotonic—in some of these variables.

Ideally, our program evaluation would compare students who were either selected into Fe y Alegría randomly or selected purely on observable variables with a control group of students who applied and were not selected, and there would be zero or random attrition through dropouts. Such application records are not available, however, and dropouts during primary and secondary school clearly are not random. Our econometric strategy, discussed in the following section, depends on the assumption that there is no unobservable factor correlated with both graduation from Fe y Alegría and test scores. This is often improbable, but in conversations with Venezuelan researchers and Fe y Alegría staff, we have realized that several factors conspire to form a plausible natural experiment.

The key factor behind the natural experiment is that Fe y Alegría schools are oversubscribed. Applications to Fe y Alegría at the primary and secondary school levels vastly outnumber the available spots: central administrators estimate that admit rates are about 35 percent. Each school then admits the poorest children from local neighborhoods in a nonstandardized process. As a result, conditional on having the motivation to apply for Fe y Alegría, which many students do, the selection of students into schools is on wealth and geographic location. Our observed variables capturing income and house quality proxy very nicely for the wealth aspect of schools' admission decisions. However, if the unobservable characteristics causing a student to apply for Fe y Alegría are not widespread among public school students and are positively correlated with test scores, our estimated treatment effect will be biased upward.

Ideally, we would also observe the second implicit selection factor in admissions, proximity of each student's residence to each school. We argue, however, that any differences are independent or weakly correlated with test scores. As part of the program's

mission to serve underprivileged children in poor neighborhoods, Fe y Alegría schools were indeed often placed in the poorest neighborhoods. During the life of the program, however, some of these neighborhoods have changed and experienced relative economic growth. In addition, many of the program's schools were once public schools that were transferred to Fe y Alegría at the community's request, and it is not obvious whether these schools would tend to be in "better" or "worse" neighborhoods. We thus assume that the areas near Fe y Alegría schools are econometrically identical to public school districts within the same municipality. If this assumption fails and Fe y Alegría districts are actually "worse," it will bias our treatment effect downward.

Using factor analysis we generate a variable that summarizes socioeconomic status (SES) (see table 2.1). Regressing SES on Fe y Alegría participation and a dummy variable for each municipality indicates that Fe y Alegría students are statistically of the same socioeconomic status as the public school students within their municipality. On the whole, the similarity on observable variables and the reality of the Venezuelan natural experiment suggest that it is reasonable to assume that unobservables do not substantially affect both Fe y Alegría enrollment and test scores.

4. Econometric Framework

Our fundamental goal will be to calculate the average treatment effect (ATE) typical of the program evaluation literature. The ATE measures the difference between the test score of each unit in both a treated and an untreated state, that is, how a student would have performed in Fe y Alegría versus how the student would have performed in public school. Given the potential two-way causality between test scores and treatment, we use the instrumental variables method. We had initially planned to use program intensity at the municipal level as an instrument for participation. This identification is comparable with other program evaluation papers such as Duflo's (2001) evaluation of a school construction program or the previous literature on Catholic schools. This strategy requires that the placement of schools not be correlated with unobservables that affect test scores, which we claim above. Unfortunately, there is not enough variation in program intensity at the municipal level to obtain meaningful estimates in the first stage. The highest program intensity is under 25 percent, and even limiting the sample to the 31 municipalities in which there is at least one Fe y Alegría high school, the average is under 5 percent. This makes the estimated ATEs unstable and implausibly high.

As described above, however, this data set and the natural experiment that created the data lend themselves to estimation of the ATE through ordinary least squares (OLS) and propensity score matching.[2] OLS can provide an estimate of propensity score matching if there is no omitted variables bias. We control for a vector of dummy variables for Venezuelan, male, married, age, student works, father's profession, mother's education, house quality, income, number of siblings, how school fees are paid, transportation to school, and social class.

After calculating the OLS benchmark, we use propensity score matching to estimate the ATE. As discussed in Heckman, Ichimura, and Todd (1997), our data set lends itself to low bias in propensity score matching for two reasons. First, only a few members of the public school control group are outside the range for observed characteristics of the treatment group.[3] Indeed, as the factor analysis and descriptive statistics above show, Fe y Alegría participation appears similar to a natural experiment in that the distributions of many of the observed characteristics are similar, although not statistically identical. Previous studies using propensity score matching with job training programs often struggled with this, specifically that the observed employment rate or wages of the

treated were lower than any controls in the pretreatment period. We have eliminated private school students from consideration here precisely because their distribution of observables (and unobservables) is so different in República Bolivariana de Venezuela. Public school students, however, form an excellent control group.

Second, the same questionnaire is administered to both treatment and control, and the two groups are in a "common economic environment." These issues, of course, relate primarily to problems encountered with evaluation of job training programs. All our data come from the same administration of the same test, with the same demographic questions asked of each student. Furthermore, unlike the case of the American SAT, all graduating Venezuelan high school students take the PAA. Therefore, although the interpretation of the ATE is limited to those students who have not dropped out of school beforehand, there is no selection bias into the test itself.

Although the Fe y Alegría natural experiment described above forms the basis of our assumption of selection on observables, we cannot fully rule out bias due to unobservables. However, the Heckman, Ichimura, and Todd (1997) job training data indicate that this bias is actually less important than the two potential sources of bias above, from which we do not suffer.

The propensity score is the probability that a student with certain observed characteristics will enter Fe y Alegría and graduate from high school versus graduate from a public high school. In the application to school choice, the clear complaint would be that unobservable attributes of students or their families, such as motivation, initiative, or valuation of education, would cause the same types of students who select into Fe y Alegría to also do better in public schools. If these decisions were made in a statistically random way, or through an observable nationally uniform admissions process, this would lend itself to a different estimation strategy. As we discussed in the data section, this is a decentralized admission process that in an unobservable way uses primarily observable variables. As a result, we can consider the propensity score matching results to be unbiased.[4]

Although all graduating students take the test, the ATE is conditional on students actually graduating from high school. Although the range of the observable variables of Fe y Alegría and public school students is effectively the same,[5] there is substantial selection through the years of schooling. Specifically, Fe y Alegría as a policy tries to maintain low dropout rates, and its average promotion rate is 10 percent higher than that in the public sector (González and Arévalo 2005). Thus it is possible that some of the treatment group have unobservables that would have caused them to drop out of public schools; these unobservables would cause the test scores of the treatment group to be lower. This effect will bias the ATE downward.

In our application to Fe y Alegría, while requiring at least some Fe y Alegría students in each municipality, we have observations from municipalities or states in which there are no Fe y Alegría schools, and thus students have effectively zero probability of enrollment in a Fe y Alegría school. If we believed that there were no state- or municipality-level effects on test scores, we would omit the geographic area dummies from the probit estimation, and observations in nonprogram municipalities would have a nonzero propensity score. Because there quite plausibly are geographic-level fixed effects, however, we must include the geographic area dummies. This substantially reduces sample size but still leaves 50,000 observations.

We estimate the probability of being a Fe y Alegría graduate in a traditional fashion, using a probit equation. Heckman, Ichimura, and Todd (1997) and other propensity score matching applications construct higher-order terms and interactions of their

observed variables. Because we use only binary variables, we gain nothing from using higher-order terms.

5. Results

Using the data above and econometric technique, we estimate the ATE in test scores of being a Fe y Alegría student versus being in the public schools. It should be reemphasized that Fe y Alegría is essentially a technical high school, not a college prep, and many of its effects on students are of course not measurable in test scores for college admission.

The OLS results, shown in table A.2.1 in the annex, show that Fe y Alegría students perform 0.05 and 0.06 standard deviations higher in verbal score and math score, after correcting for observable characteristics. Especially interesting in these regressions are the coefficients on several of the control variables. As might be expected, younger students tend to do better, as do students with fewer siblings. Instead of linear influences, however, the effects of family income and house quality seem to be in an inverted-U shape. Wealthier students living in "luxurious" houses actually tend to do worse on the exams than poor students. This may be because they have secured university admission through other university-specific tests and thus do not take the PAA as seriously.

Propensity score matching gives similar results. The probit regression used to generate the propensity scores (not shown) confirms anecdotal evidence that well-educated mothers, smaller families, and poorer students tend to be selected for (graduation from) Fe y Alegría. Table 2.2 shows that the ATE for verbal score is 0.1 standard deviations and for math score is 0.08 standard deviations.

One potential explanation for the difference between the estimates using OLS and propensity score matching is heterogeneous treatment effects across individuals.[6] If this heterogeneity is present, propensity score matching is the consistent estimator.

6. Reasons for Fe y Alegría's Improved Performance

We have shown that Fe y Alegría offers a better education than the public schools, as measured by test scores, accounting for population heterogeneity and selection bias. We now suggest potential reasons for the effect. As González and Arévalo (2005) calculate, Fe y Alegría does not spend more money per pupil than public schools. Indeed, teachers do not receive retirement benefits and are thus often forced to view work at Fe y Alegría as a "side job." Thus, differences in financial inputs are not the cause of the improved performance of the program. On the basis of our conversations with school officials and researchers, we suggest key reasons for the program's success.

As a result of its institutional history, Fe y Alegría's structure is different from that of the public schools on several dimensions, as discussed in Navarro and de la Cruz (1998) and González and Arévalo (2005). From the outset, the public school system was

Table 2.2 Results of propensity score matching

	Verbal score	Math score
ATE	0.107	0.08
Standard error	0.07	0.03
Obs	46,287	46,287

not viewed as an effective organizational model, and the initial spirit of volunteerism has morphed into a more established structure. Although religiosity was initially important, individual schools now vary substantially on that measure, with some schools run by nuns and others exhibiting little sign of Catholic influence. The initial growth in the number of schools was financed mainly by local community involvement and private donations, a process that led to significant autonomy at the school level underneath a national umbrella organization led by Father Vélaz. This organically developed structure was eventually formally adopted, with the principal and the school council at the center of local decision making and the national leadership dealing with strategic issues such as growth plans and fund-raising. Three specific organizational and cultural factors stand out: decentralized decision making, labor flexibility, and the potentially resultant feeling of a "family environment."

School-Level Autonomy. Although there exists a central authority at the national level as in the public system that determines general guidelines and principles for the organization as a whole, each Fe y Alegría school retains substantial administrative autonomy. Each principal can hire and fire teachers, purchase supplies, and sign maintenance contracts, among other things. Each school has the autonomy to plan, budget, procure funding for, and execute infrastructure investments. Although most fund-raising activities for large projects are centrally coordinated, the initiative almost always comes from school-level administrators, whose ideas tend to be encouraged and well-received by the national administration. Furthermore, the schools, through the regional offices, play an active role in the national-level budgetary decision making. This contrasts with the public school administration, which is much more highly centralized.

Labor Flexibility. Fe y Alegría teachers are not unionized, and their labor contracts are much more flexible than those of the public school system. Teachers in the public school system are appointed by state-level committees that are often controlled by politically motivated labor unions. In Fe y Alegría, they are hired by the school principal directly and given a one-year trial period before being offered more permanent positions. During this trial period, teachers are not only evaluated on formalities such as meeting the school's schedule of activities (showing up on time to class, grading exams and papers in a timely fashion, attending faculty meetings, etc.), they are monitored in the classroom every quarter and are coached by their more experienced peers. This flexibility relative to the public schools most likely results in a selection process that produces higher teacher quality. Any differences in teacher quality, however, are not the result of higher pay: although its wages for teachers and staff are comparable with outside wages, Fe y Alegría does not offer a retirement plan. As a result, many Fe y Alegría teachers also work in the public schools simply to gain retirement benefits. It seems that Fe y Alegría's compensating differentials are principally the improved teacher training and the esprit de corps.

"Family Feeling." In visits to two Fe y Alegría schools in Catia and to the central administration offices in Caracas, we were struck by what teachers, students, and administrative personnel termed a "family feeling": a sense of belonging to the organization of Fe y Alegría and agreement with the organization's objectives. As described above, this feeling reduces input costs by inducing teachers to work or volunteer longer hours for lower wages. It also likely increases efficiency of school input use, potentially by inducing students to respect school property more and pay better attention in class. As suggested by the literature in sociological economics such as Akerlof and Kranton (2005), it is possible that Fe y Alegría has succeeded in modifying students'

utility functions to value education or discipline more highly. Even without this sort of "indoctrination effect," Fe y Alegría may have simply arrived at a high-performance equilibrium that attracts better teachers and induces continual good performance. Our impression is that this "family feeling" has been instilled in the organization's culture as a matter of policy and is substantially aided by the empowerment associated with school-level autonomy.

7. Conclusion

Using a large, rich data set, we have shown that graduation from Fe y Alegría increases scores on the Venezuelan college entrance examination relative to counterfactual graduation from public school. The effects are on the order of one-tenth of a standard deviation, statistically significant, and robust to the use of OLS or propensity score matching. Because Fe y Alegría schools are oversubscribed and admit students based on observable poverty and also because the data set is rich and with uniform outcomes, the propensity score matching estimator should be unbiased. These results suggest several further lines of research and policy recommendations.

To strengthen the evaluation of Fe y Alegría, it would certainly be most convincing to randomly select or encourage a cohort to enter the program, creating a true econometric experiment. This would be the most satisfying way to deal with questions about strong ignorability and the exogeneity of participation in the program. In addition, a richer set of outcome variables characterizing the family and economic lives of Fe y Alegría graduates would most likely give a full perspective on the effects of the program. This is not, however, the most interesting line of future research. If we believe that Fe y Alegría offers a better education, it is important to know why, and whether the program can be expanded or whether its successes can be translated to public schools.

If decentralized decision making is indeed a factor in the organization's improved performance, it would suggest that the program of decentralization pursued in Venezuelan schools in the 1990s should be continued more aggressively. On a more basic level, the fact that there is variance in school system quality suggests that policy makers should encourage school variety and choice.

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Annex. Regression Results

Table A.2.1. OLS regression results

Outcome variable:	Verbal score	Math score
Explanatory variables		
Fe y Alegría student	0.05** (0.03)	0.06** (0.01)
Venezuelan citizen	−0.26** (0.01)	−0.4** (0)
Male dummy	0.09** (0)	0.17** (0)
Married dummy	−0.03 (0.77)	−0.18** (0.03)
14 years old	Dropped	Dropped
15 years old	−0.05 (0.59)	−0.11 (0.17)
16 years old	−0.14 (0.11)	−0.21** (0.01)
17 years old	−0.3** (0)	−0.34** (0)
18 years old	−0.46** (0)	−0.47** (0)
19 years old	−0.55** (0)	−0.55** (0)
20 years old	−0.62** (0)	−0.62** (0)
21 years old	−0.6** (0)	−0.54** (0)
22 years old	−0.48** (0)	−0.61** (0)
Student works	−0.06** (0.02)	−0.03 (0.29)
Father's prof: Professor or exec	0.12** (0)	0.1** (0.01)
Father's prof: Technician	0.06 (0.1)	0.03 (0.47)
Father's prof: Employee	0.07** (0.04)	0.07** (0.05)
Father's prof: Skilled worker	0.03 (0.38)	0.02 (0.57)
Father's prof: Unskilled worker	0.04 (0.29)	0.03 (0.39)
Mother's ed: University	0.22** (0)	0.18** (0)
Mother's ed: High school	0.16** (0)	0.13** (0)
Mother's ed: Some high school	0.04 (0.34)	0.06 (0.16)
Mother's ed: Primary	0.04 (0.39)	0.06 (0.16)
Mother's ed: Illiterate	0.05 (0.3)	0.06 (0.19)
House: Luxurious	−0.14** (0.01)	−0.13** (0.02)
House: Spacious	0.14** (0)	0.08** (0.04)
House: Normal	0.22** (0)	0.1** (0.01)
House: Deficient	0.12** (0)	0.05 (0.21)
House: Very deficient	0.06 (0.19)	0.03 (0.52)
Highest income bracket	0.03 (0.57)	−0.05 (0.38)
2nd-highest income bracket	0.06 (0.19)	−0.08* (0.08)
3rd-highest income bracket	0.13** (0)	0.02 (0.61)
4th-highest income bracket	0.21** (0)	0.08** (0.01)
5th-highest income bracket	0.19** (0)	0.06* (0.08)
<3 siblings	0.2** (0)	0.14** (0)
3 siblings	0.15** (0)	0.13** (0)
4 siblings	0.09** (0.04)	0.12** (0)
5 siblings	0.09* (0.06)	0.07* (0.08)

Table A.2.1. Continued

Outcome variable:	Verbal score	Math score
6 siblings	0.03 (0.45)	0.05 (0.27)
Pay: Parents	0.03 (0.43)	0.05 (0.2)
Pay: Family	−0.13* (0.07)	−0.04 (0.53)
Pay: Scholarship	0.07 (0.26)	0.01 (0.87)
Pay: Education credit	0.14** (0.01)	0.11** (0.02)
Pay: Student's work	0.16** (0)	0.15** (0)
Trans: Own auto	−0.06** (0.03)	0 (0.89)
Trans: Parents' auto	0.05** (0.05)	0.09** (0)
Trans: Friends	0.03 (0.21)	0.05** (0.04)
Trans: School bus	0.04 (0.17)	0.05* (0.06)
Trans: Public transit	0.03 (0.31)	0.04 (0.13)
Social class: Highest	−0.07 (0.45)	0.02 (0.79)
Social class: 2nd	−0.32** (0)	−0.15* (0.06)
Social class: 3rd	−0.43** (0)	−0.24** (0)
Social class: 4th	−0.46** (0)	−0.25** (0)
Social class: Lowest	−0.5** (0)	−0.21** (0.02)

Source: Authors calculations.
*Denotes statistical significance at 10%
**Denotes statistical significance at 5%

Notes

1. The treatment is enrollment in a Fe y Alegría school.
2. Instead of matching (and comparing) observations based on observable characteristics, the propensity score method matches observations based on the probability of participation in the program.
3. This can be rephrased in a more technical way saying that only a few public school students are not on the support of the distribution of the treatment group's observed characteristics.
4. The conditional mean independence assumption is reasonable in this case.
5. We are referring here to the condition of common support.
6. The underlying treatment effects are weighted differently by the two methods: Weights applied in matching estimators are proportional to the probability of treatment, whereas the weights applied in OLS are proportional to the variance of treatment (see Angrist 1998).

Performance of Fe y Alegría High School Students in Colombia
Is It a Matter of Fe (Faith) or Alegría (Joy)?

JUAN CARLOS PARRA OSORIO AND QUENTIN WODON*

Fe y Alegría is a catholic network of schools that started operations in Colombia in 1971, and in 2009 served more than 72,000 students in 61 schools. This chapter assesses the performance of Fe y Alegría secondary schools in Colombia using test scores for Spanish and mathematics, as well as detailed information on the characteristics of the household to which students belong. Simple statistics suggest that Fe y Alegría schools perform worse than other schools for all years in the sample. However, Fe y Alegría schools also cater to poorer students who come from disadvantaged backgrounds. Once controls are included for student background, Fe y Alegría schools actually often perform as well and in some cases better than other schools for mathematics and Spanish, thus partially reversing the previous finding.

1. Introduction

An emerging body of evidence suggests that private schools, including faith-based schools, may provide better education services than public schools (e.g., Allcott and Ortega 2009; Altonji et al. 2005; Asadullah et al. 2009; Backiny-Yetna and Wodon, 2009; Barrera-Osorio, 2009; Chakrabarti and Peterson, 2009; Cox and Jimenez 1990; Evans and Schwab 1995; González and Arévalo 2005; Hoxby 1994; Hsieh and Urquiola 2006; Wodon and Ying, 2009).

In the economic literature, several reasons have been advanced to explain the gains in performance associated with private schools (Epple and Romano 1998; LaRocque and Patrinos 2006; Nechyba 2000; Savas 2000). First, private schools may introduce competition in the education sector and thereby raise overall quality. Second, private providers may have more flexibility than public providers in the management of the schools. Third, to the extent that private providers of education are competitively selected, better providers would emerge in the private as opposed to the public sphere. Fourth, risk-sharing between the government and the private sector may also lead to better provision.

Beyond these economic arguments for a role to be played by faith-based providers, there may also be a number of other potential advantages in having faith-based organizations providing education services. As noted by Belshaw (2005), FBOs have a long-term commitment to their communities and they often reach out to the poorest

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members of the community. Through links to sister organizations in other countries, they may benefit from outside funding and expertise. Faith-based schools often emphasize values of respect and consideration for others. In addition, religious leaders often have a moral authority that helps in mobilizing the community's resources around the schools. Finally, faith-based providers may be more dedicated or altruistic than other providers. As argued by Reinikka and Svensson (2010) in the case of health service provision in Uganda, faith-based providers may not be motivated only or mostly by profit or perks maximization—they seem to be "working for God." At the same time however faith-based schools may also suffer from weaknesses, especially if they place the pursuit of their religious mandate ahead of the needs of students in regard to what they need to learn to be successful in today's world.

In this chapter, we assess the performance of Fe y Alegría secondary schools in Colombia using a rich multi-year data set with test scores on a wide range of subjects as well as detailed information on the characteristics of the household to which students belong. Fe y Alegría is a catholic education network founded in 1955, serving almost one million students in 17 countries[1]. It targets excluded population and its work program, according to the organization's mission, is based on the Christian values of justice, participation, and solidarity. The network started operating in Colombia in 1971, and in 2006 it served more than 72,000 students in 61 schools[2]. Even though academic excellence is not explicitly mentioned in its mission or vision, it is one of the variables Fe y Alegría principals and leaders use for their internal evaluations.

Most observers consider Fe y Alegría to be successful, but few rigorous evaluations have been undertaken until now. This chapter was inspired by previous research on the performance of Fe y Alegría in República Bolivariana de Venezuela conducted by Allcott and Ortega (2009) who use propensity score matching methods to estimate the effects on standardized test scores of graduating from Fe y Alegría in comparison with public schools. They find an average treatment effect on the order of 0.1 standard deviation, which is small, but nevertheless statistically significant. They argue that the better performance of Fe y Alegría stems not only from its labor contract flexibility and decentralized administrative structure, but also from the peculiar "family culture" of the schools.

Building on Allcott and Ortega's (2009) work, the data set and methodology that we use in this chapter enables us to test in a more robust way for the performance of Fe y Alegría schools than previous work for three main reasons. First, while Allcott and Ortega (2009) use data on test scores for one year only, we have five years of good data at our disposal, which enables us to test whether differences in performance are robust over time. Second, we have a larger number of subjects on which students are tested. Beyond test scores for mathematics and Spanish, we also look at data on test scores for scientific topics. Third, we have an especially good set of controls regarding the socio-economic characteristics of the families to which the children belong. Finally, we use alternative matching methods (propensity score matching as well as coarse exact matching) to ensure that the results obtained are robust to the choice of method.

Our results confirm previous work suggesting that faith-based schools perform relatively well. Simple statistics on test scores suggest that Fe y Alegría schools perform worse than other schools for all years in the sample. However, Fe y Alegría schools also cater to poorer students. Once controls are included for student background, Fe y Alegría schools actually perform at least as well as, and in several cases better than other schools. Section 2 of the chapter describes our data and methodology. Section 3 presents our empirical results. A conclusion follows.

2. Data and Methodology

The ICFES (Colombian Institute for the Promotion of Higher Education) test is a standardized test administered by the Ministry of Education that every student has to take during the last year of high school[3]. The test score is used mainly by colleges for admission purposes, and had no implications for high school graduation for the years used in this study[4]. The database provided by ICFES has test scores for every single student taking the test from 1998 to 2006. Scores for five subjects are analyzed: Spanish, mathematics, biology, chemistry, and physics. Socioeconomic variables at the student level are included in the database from 1998 to 2003[5]. These variables include birth date, gender, level of education of parents, their occupation, number of people in the family, number of siblings, household income, dwelling ownership, and whether the students works. Information on tuition paid is available from 2000 to 2006.

Because our analysis relies on controls and matching techniques to assess the performance of Fe y Alegría schools, we use the data from 1998 to 2003. We restrict the sample using the following criteria: (1) Schools in cities where Fe y Alegría has at least one school in the current year; (2) Students who graduate from high school in the current year or the year before; (3) Students between 15 and 20 years of age; and (4) Students who attended both morning and afternoon sessions of the test.

The data for 2001 seems to be problematic because the number of observations is much smaller than in other years. This then gives us five years of data to work with, for 1998–2000 and 2002–2003. Table 3.1 contains the total number of observations for Fe y Alegría and other schools for each year in the sample, after imposing the four constraints above. We would have liked to explore different control groups, but there is not enough information in the database to identify, for example, public or private schools, or other school level variables like number of students, number of teachers, and qualification of teachers, among others. That is the reason why our control group includes all non Fe y Alegría schools. The percentage of students in the sample attending Fe y Alegría schools increases from 1.1 in 1998 to 1.5 in 2003; the share of Fe y Alegría schools grows from 1.8 percent in 1998 to 2.5 percent in 2003.

We rely on both traditional propensity score matching and CEM (coarse exact matching) techniques for the estimations (Iacus et al., 2009; King and Stuart, 2007). CEM is a recent method to form a better control group. It works by defining strata in which all observations have the same values for the observables X. Consider a sample of $n \leq N$ units drawn from a population of N. Let T_i denote as an indicator variable for unit i that takes on value 1 if unit i is a member of the treated group (Fe y Alegría in our case) and 0 if i is a member of the control group (other schools). The observed outcome (test scores in our case) variable is $Y_i = T_i Y_i(1) + (1 - T_i) Y_i(0)$, where $Y_i(0)$ is the potential outcome for

Table 3.1. Total number of students and schools in the sample

	1998	1999	2000	2001	2002	2003
Number of students						
Fe y Alegría	1,052	1,317	1,581	849	1,735	1,967
Other	98,368	109,576	113,374	77,054	121,589	127,572
Number of schools						
Fe y Alegría	23	24	30	29	37	41
Other	1,283	1,244	1,568	1,629	1,703	1,631

Source: Authors calculations using the ICFES database.

observation i if the unit does not receive treatment and $Y_i(1)$ is the potential outcome if the (same) unit receives treatment. For each observed unit, $Y_i(0)$ is unobserved if i receives treatment and $Y_i(1)$ is unobserved if i does not receive treatment; this is known as the "missing observation problem" in the evaluation literature.

To compensate for the fact that treated and control groups are not necessarily identical before treatment, matching estimators aim to control for pre-treatment covariates. Denote $X = (X_1, X_2, \ldots, X_k)$ as a k-dimensional data set, where each X_j is a column vector of observed values of pre-treatment variable j for the n sample observations. That is, $X = [X_{ij}, i = 1, \ldots, n, j = 1, \ldots, k]$. Let $\mathcal{T} = \{i: T_i = 1\}$ be the set of indexes for the treated units and $n_T = \#\mathcal{T}$ be a count of the elements of this set; similarly $\mathcal{C} = \{i: T_i = 0\}$, $n_C = \#\mathcal{C}$ for the control units, with $n_T + n_C = n$. Denote by m_T and m_C the number of treated and control units matched by CEM. Let $M_\mathcal{T} \subseteq \mathcal{T}$ and $M_\mathcal{C} \subseteq \mathcal{C}$ be the sets of indexes of the matched units in the two groups.

After coarsening, the CEM algorithm creates a set of strata (cells), say $s \in S$, each with the same values of X. Observations in strata that contain at least one treated and one control unit are retained; all other observations are dropped from the sample. We denote by $\mathcal{T}^s$ the treated units in stratum s, and by $m_T^s = \#\mathcal{T}^s$ the number of treated units in the stratum, similarly for the control units, i.e. $\mathcal{C}^s$ and $m_C^s = \#\mathcal{C}^s$. The number of matched units is, respectively for treated and controls, $m_T = U_{s \in S} m_T^s$ and $m_C = U_{s \in S} m_C^s$. To each matched unit i in stratum s, CEM assigns the following weights:

$$w_i = \begin{cases} 1, i \in \mathcal{T}^s \\ \dfrac{m_C}{m_T} \dfrac{m_T^s}{m_C^s}, i \in \mathcal{C}^s \end{cases}$$

Unmatched units receive weight $w_i = 0$. After the final sample is constructed using CEM, we just compare, within each stratum, the test scores for treated observations with the average test score for the control observations.

3. Results

Tables 3.2 and 3.3 provide basic statistics on the characteristics of students in both Fe y Alegría and other schools. On average, students in Fe y Alegría schools live in house-

Table 3.2 Mean value of control variables: Fe y Alegría schools

	1998	1999	2000	2002	2003
Education of the father and mother					
Father completed primary or less	0.05	0.07	0.07	0.07	0.07
Father completed secondary	0.85	0.75	0.74	0.75	0.74
Father completed college	0.06	0.08	0.09	0.08	0.09
Father post-graduate education	0.04	0.10	0.09	0.10	0.09
Mother completed primary or less	0.04	0.04	0.07	0.04	0.07
Mother completed secondary	0.87	0.79	0.77	0.79	0.77
Mother completed college	0.06	0.09	0.10	0.09	0.10
Mother post-graduate education	0.03	0.08	0.07	0.08	0.07
Occupation of the father and mother					
Father manager/owner	0.06	0.09	0.07	0.09	0.07
Father employee	0.52	0.52	0.52	0.52	0.52

(*continued*)

Table 3.2 Continued

	1998	1999	2000	2002	2003
Father construction worker/other	0.39	0.34	0.34	0.34	0.34
Father homemaker, retiree, student	0.04	0.05	0.07	0.05	0.07
Mother manager/owner	0.01	0.03	0.02	0.03	0.02
Mother employee	0.18	0.26	0.25	0.26	0.25
Mother construction worker/other	0.11	0.10	0.11	0.10	0.11
Mother homemaker, retiree, student	0.70	0.61	0.61	0.61	0.61
Other household characteristics					
Household size: 1 to 3	0.08	0.10	0.10	0.10	0.10
Household size: 4 or 5	0.53	0.53	0.54	0.53	0.54
Household size: 6 or 7	0.32	0.28	0.28	0.28	0.28
Household size: More than 7	0.07	0.09	0.08	0.09	0.08
Per capita income: Less than 0.5 MW	0.85	0.82	0.84	0.82	0.84
Per capita income: 0.5 to 1 MW	0.12	0.10	0.09	0.10	0.09
Per capita income: 1 to 1.5 MW	0.02	0.04	0.04	0.04	0.04
Per capita income: 1.5 to 2 MW	0.00	0.02	0.02	0.02	0.02
Per capita income: More than 2 MW	0.00	0.02	0.01	0.02	0.01
Characteristics of the student					
Student works	0.05	0.04	0.05	0.04	0.05
Family owns dwelling	0.83	0.77	0.76	0.77	0.76
Female student	0.43	0.49	0.50	0.49	0.50
Student aged 15	0.01	0.01	0.02	0.01	0.02
Student aged 16	0.16	0.17	0.20	0.17	0.20
Student aged 17	0.37	0.42	0.46	0.42	0.46
Student aged 18	0.27	0.25	0.21	0.25	0.21
Student aged 19	0.13	0.11	0.09	0.11	0.09
Student aged 20	0.06	0.04	0.02	0.04	0.02
Geographic Location					
Armero	0.00	0.00	0.00	0.00	0.00
Barrancabermeja	0.00	0.00	0.00	0.00	0.00
Barranquilla	0.00	0.02	0.04	0.02	0.04
Bello	0.16	0.13	0.11	0.13	0.11
Bogotá	0.27	0.27	0.28	0.27	0.28
Cali	0.18	0.08	0.08	0.08	0.08
Cartagena	0.04	0.06	0.07	0.06	0.07
Ciénaga	0.00	0.00	0.00	0.00	0.00
Cúcuta	0.00	0.04	0.03	0.04	0.03
Dos Quebradas	0.03	0.01	0.01	0.01	0.01
Ibagué	0.02	0.02	0.02	0.02	0.02
Lérida	0.02	0.01	0.02	0.01	0.02
Los Patios	0.05	0.05	0.03	0.05	0.03
Manizales	0.00	0.03	0.05	0.03	0.05
Tierralta	0.06	0.03	0.04	0.03	0.04
Medellín	0.19	0.25	0.21	0.25	0.21

Source: Authors' estimation using ICFES data.

Table 3.3 Mean value of control variables: other schools

	1998	1999	2000	2002	2003
Education of the father and mother					
Father completed primary or less	0.02	0.03	0.03	0.03	0.03
Father completed secondary	0.68	0.64	0.62	0.64	0.62
Father completed college	0.15	0.15	0.16	0.15	0.16
Father post-graduate education	0.15	0.18	0.20	0.18	0.20
Mother completed primary or less	0.02	0.03	0.02	0.03	0.02
Mother completed secondary	0.74	0.69	0.66	0.69	0.66
Mother completed college	0.14	0.15	0.17	0.15	0.17
Mother post-graduate education	0.09	0.13	0.15	0.13	0.15
Occupation of the father and mother					
Father manager/owner	0.12	0.13	0.13	0.13	0.13
Father employee	0.62	0.58	0.59	0.58	0.59
Father construction worker/other	0.24	0.25	0.23	0.25	0.23
Father homemaker, retiree, student	0.03	0.05	0.05	0.05	0.05
Mother manager/owner	0.04	0.05	0.06	0.05	0.06
Mother employee	0.32	0.32	0.35	0.32	0.35
Mother construction worker/other	0.07	0.07	0.07	0.07	0.07
Mother homemaker, retiree, student	0.57	0.55	0.52	0.55	0.52
Other household characteristics					
Household size: 1 to 3	0.14	0.13	0.14	0.13	0.14
Household size: 4 or 5	0.57	0.55	0.58	0.55	0.58
Household size: 6 or 7	0.24	0.26	0.22	0.26	0.22
Household size: More than 7	0.05	0.06	0.05	0.06	0.05
Per capita income: Less than 0.5 MW	0.63	0.66	0.65	0.66	0.65
Per capita income: 0.5 to 1 MW	0.30	0.22	0.22	0.22	0.22
Per capita income: 1 to 1.5 MW	0.06	0.08	0.08	0.08	0.08
Per capita income: 1.5 to 2 MW	0.00	0.03	0.03	0.03	0.03
Per capita income: More than 2 MW	0.00	0.02	0.02	0.02	0.02
Characteristics of the student					
Student works	0.06	0.06	0.05	0.06	0.05
Family owns dwelling	0.74	0.72	0.71	0.72	0.71
Female student	0.45	0.46	0.46	0.46	0.46
Student aged 15	0.01	0.02	0.02	0.02	0.02
Student aged 16	0.17	0.21	0.22	0.21	0.22
Student aged 17	0.35	0.37	0.39	0.37	0.39
Student aged 18	0.26	0.23	0.22	0.23	0.22
Student aged 19	0.14	0.12	0.10	0.12	0.10
Student aged 20	0.06	0.05	0.04	0.05	0.04

(*continued*)

Table 3.3 Continued

	1998	1999	2000	2002	2003
Geographic Location					
Armero	0.00	0.00	0.00	0.00	0.00
Barrancabermeja	0.00	0.00	0.00	0.00	0.00
Barranquilla	0.00	0.11	0.10	0.11	0.10
Bello	0.03	0.02	0.02	0.02	0.02
Bogotá	0.52	0.44	0.46	0.44	0.46
Cali	0.17	0.10	0.12	0.10	0.12
Cartagena	0.07	0.07	0.06	0.07	0.06
Ciénaga	0.00	0.00	0.00	0.00	0.00
Cúcuta	0.00	0.04	0.04	0.04	0.04
Dos Quebradas	0.01	0.01	0.01	0.01	0.01
Ibagué	0.05	0.04	0.04	0.04	0.04
Lérida	0.00	0.00	0.00	0.00	0.00
Los Patios	0.00	0.00	0.00	0.00	0.00
Manizales	0.00	0.03	0.03	0.03	0.03
Tierralta	0.00	0.00	0.00	0.00	0.00
Medellín	0.15	0.13	0.12	0.13	0.12

Source: Authors' estimation using ICFES data.

holds with a lower income per capita, whose parents have lower education levels, have higher propensity to own their dwelling that is inhabited by slightly bigger households. All variables used in the estimations have been transformed into categorical variables.

Several studies have found negative correlations between students' performance and lower per capita income, parents' education level, and higher household size. This is likely then to lead to lower average test scores for students in Fe y Alegría schools, and it is indeed what is observed for every subject and every year. Table 3.4 presents the aver-

Table 3.4 Average test scores

	1998	1999	2000	2002	2003
Fe y Alegría schools					
Spanish	48.7	52.2	47.5	48.5	49.2
Mathematics	49.5	50.1	43.0	42.9	41.5
Biology	46.5	48.1	45.3	45.4	45.2
Chemistry	45.2	51.1	45.3	44.0	43.3
Physics	47.3	46.9	45.6	44.9	45.8
Other schools					
Spanish	51.1	54.7	48.3	50.0	51.2
Mathematics	51.3	52.5	43.4	43.9	42.5
Biology	50.2	51.0	46.4	46.6	46.8
Chemistry	47.6	54.1	46.3	45.5	45.0
Physics	49.6	49.8	45.9	46.1	47.3

Source: Authors' estimation using ICFES data.

Figure 3.1 Percentage difference between average test scores (Fe y Alegría minus other schools)—before matching
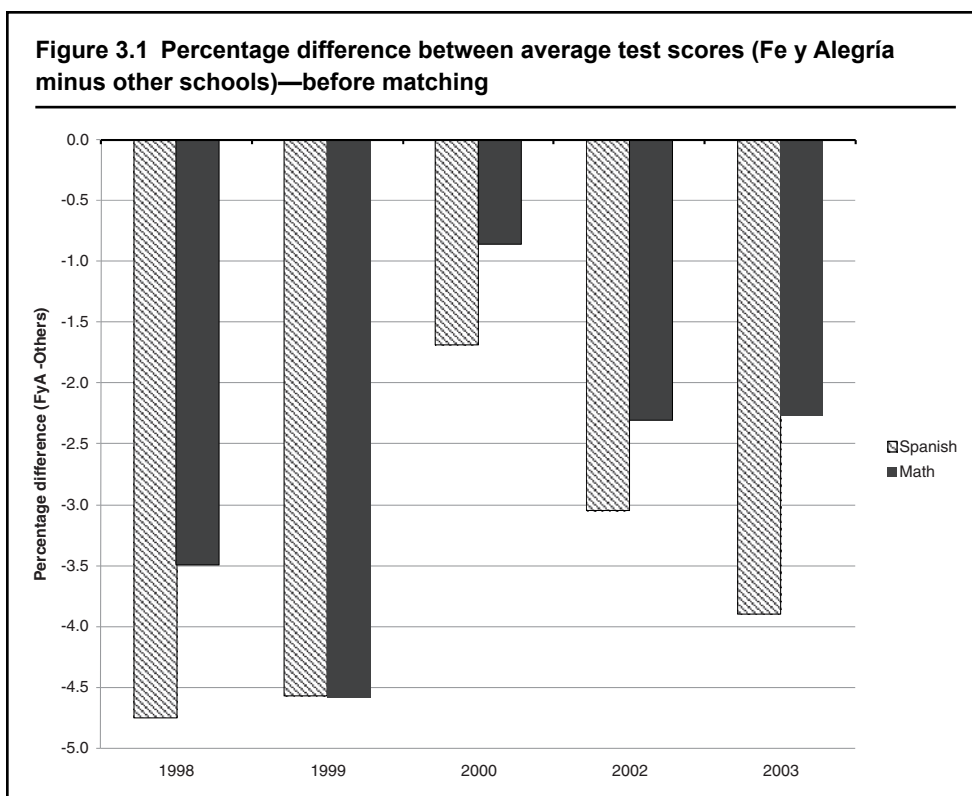
Source: Authors' estimation using ICFES data.

age scores in Fe y Alegría schools and other schools. The results indicate that students in other schools do better than students in Fe y Alegría schools in every subject and for every year in the sample. The gap in Spanish and mathematics is at 1.0 to 4.5 percentage points, and the gaps for biology, chemistry, and physics are between 2.0 and 7.0 percentage points (see Figure 3.1).

In order to control for student characteristics, we rely on matching techniques[6]. If test scores are independent of the decision of whether to attend a Fe y Alegría school given the observables, comparing scores between Fe y Alegría students and other schools using matching techniques will give an unbiased estimate of the difference in test scores attributable to the type of school attended. However, including all observations in the sample might make the results highly model-dependent if the control and the treatment groups are not similar enough. The ideal situation is to have both groups with identical distributions for all observable (and unobservable) characteristics. In order to improve the balance of our sample, that is to have a control group that is more similar to the treated group, we select the final sample used for our estimations using coarse exact matching or CEM (see Section 2; Iacus et al., 2009; King and Stuart, 2007). In order to run the CEM model, we include as control variables the parents' education level, the parents' occupation, household size, per capita income, whether the student works, dwelling ownership, student gender, student age, and location (city) dummies[7]. The CEM algorithm defines strata, each with the same value of the observables. Only strata with at least one observation from the treated group and one from the control group are used. All other observations are discarded[8]. As a test of robustness, we also use propensity score matching, with a probit regression model whose estimates are provided in annex.

Table 3.5. Percentage difference in test scores after matching (Fe y Alegría minus other schools)—CEM and PSM

	1998	1999	2000	2002	2003
CEM					
Spanish	0.540	1.345**	0.199	−0.328	−0.747**
Mathematics	1.548***	0.083	−0.174	−0.093	−0.578**
Biology	−1.437**	0.239	−0.797***	0.080	−0.877***
Chemistry	−0.412	0.596	−0.354	−0.809***	−0.856***
Physics	1.362**	−0.386	−0.130	−0.682**	−1.308***
PSM					
Spanish	−0.080	0.703	0.301	−0.399	−0.922***
Mathematics	1.023**	−0.288	−0.104	−0.167	−0.701**
Biology	−1.969***	−0.370	−0.682**	−0.121	−1.153***
Chemistry	−0.668	0.013	−0.179	−0.925***	−0.936***
Physics	0.834	−0.999**	0.261	−1.068***	−1.352***

Source: Authors' estimation using ICFES data.
*significant at 10%
**significant at 5%
***significant at 1%

Key results are presented in table 3.5 for all subjects, as well as for mathematics and Spanish in Figures 3.2 and 3.3. Figure 3.2 provides the percentage difference in test scores based on CEM. The hollow bars represent differences that are not statistically different from zero. In Figure 3.3, the same is done with the results from propensity score matching. We tend to favor the results based on CEM, since the matching is more precise in that case, but the results are fairly similar using both methods. Consider first mathematics and Spanish, which are more commonly used for measuring performance (both in the literature and in Colombia) than scientific subjects. It appears that except in 2003, Fe y Alegría schools do as well or better than other schools. However, for physics, chemistry and biology, the performance of Fe y Alegría schools tends to be lower (the only exception is for physics in 1998 using the CEM method).

Looking at the Figures and estimates, one may wonder whether there is a trend in the results for mathematics and Spanish, with better performance for Fe y Alegría schools in earlier years in comparison to other schools, no statistical difference in performance in the middle years, and lower performance in the last year of data. Because the sample of schools differs from year to year, with a larger number of Fe y Alegría schools over time, this could potentially be explained by the fact that perhaps new Fe y Alegría schools could perform less well than older schools, thereby pulling overall results for the network down over time. The data however does not confirm this hypothesis. We redid the estimations by restricting the school sample to remain the same in 2003 as per the 2000 sample (given that the number of schools in 1998 and 1999 is smaller), and this did not affect the results for 2003 in that they remained essentially unchanged, as well as statistically significant in terms of the difference between Fe y Alegría and other schools for that year. Thus we cannot explain the apparently lower performance for Fe y Alegría in 2003 by the change in the sample of schools covered over time, but given that we have only one year of data where Fe y Alegría schools perform at a lower level than other schools,

Figure 3.2. Percentage difference between average test scores (Fe y Alegría minus other schools)—propensity score matching

Source: Authors' estimation using ICFES data.

Figure 3.3. Percentage difference between average test scores (Fe y Alegría minus other schools)—CEM matching
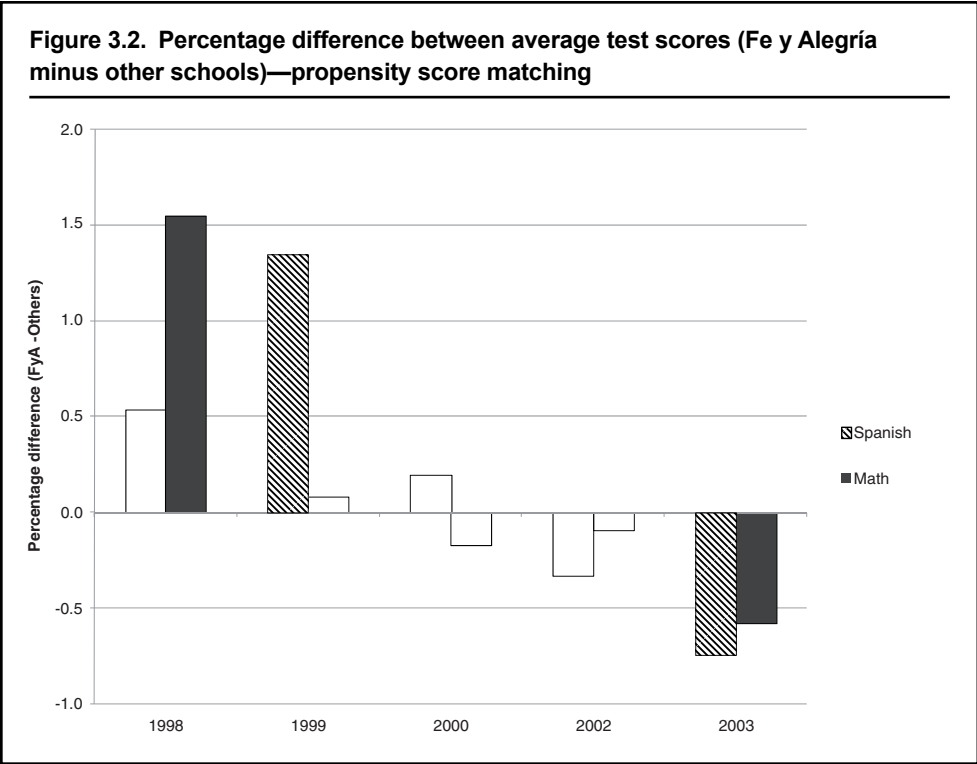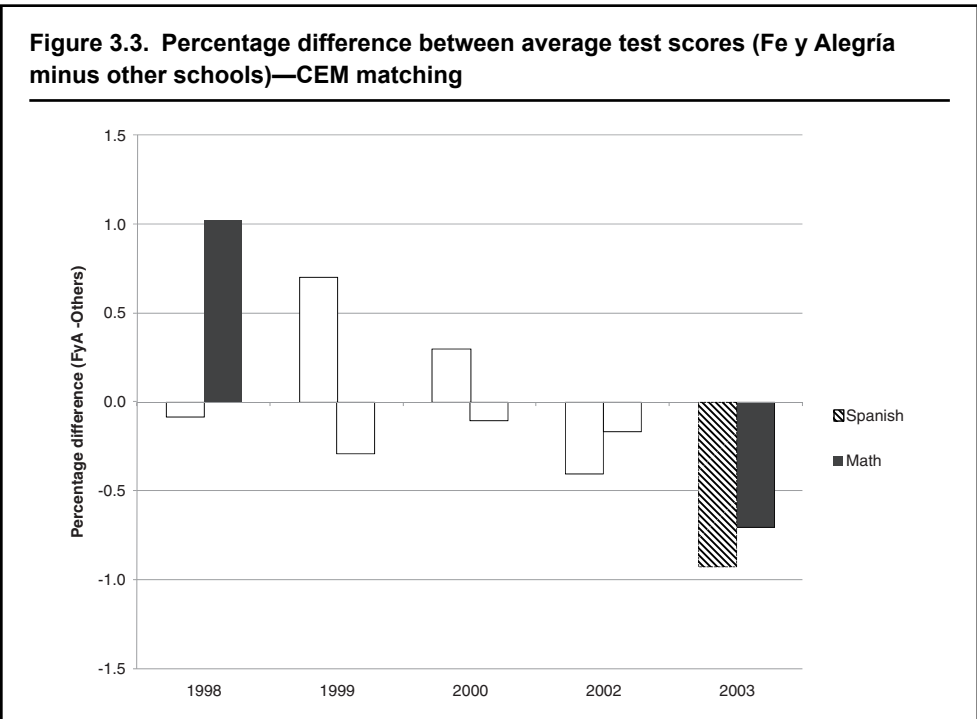
Source: Authors' estimation using ICFES data.

we think that it would be premature to assert that there is indeed solid evidence for a trend towards a lower level of performance among Fe y Alegría schools over time.

4. Conclusion

This chapter quantified the differences in high school test scores between students in Fe y Alegría schools and other schools in Colombia between 1998 and 2003. We find that since Fe y Alegría caters, on average, to poorer students and students with lower-educated parents, simply comparing average test scores might lead to wrong conclusions regarding the performance of the schools. We used a recent method (coarse exact matching) to form a better control group (balancing) and found that for mathematics and Spanish, most negative gaps for Fe y Alegría students that were found across the years and subjects when comparing averages, either vanish or become gains after balancing in 4 out of 5 years. For robustness purposes, we also estimated performance using propensity score matching, and the results were similar. On the other hand, Fe y Alegría students tend to do less well in physics, chemistry and biology, although the difference after matching with other schools is significantly smaller than the difference before matching.

5. References

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Annex: Probit Regression for PSM

Table A.3.1. Probit regression for participation in Fe y Alegría (PSM)

	1998	1999	2000	2002	2003
Owns dwelling	0.233***	0.141***	0.157***	0.155***	0.195***
Father completed primary or less (ref.)					
Father completed secondary	−0.084	−0.142**	−0.264***	−0.209***	−0.130***
Father completed college	−0.340***	−0.321***	−0.456***	−0.372***	−0.322***
Father post-graduate education	−0.399***	−0.313***	−0.444***	−0.372***	−0.286***
Mother completed primary or less (ref.)					
Mother completed secondary	−0.040	−0.151**	0.006	−0.251***	−0.040
Mother completed college	−0.162*	−0.263***	−0.068	−0.339***	−0.201***

Table A.3.1. Continued

	1998	1999	2000	2002	2003
Mother post-graduate education	−0.090	−0.202**	0.027	−0.345***	−0.184***
Father manager/owner (ref.)					
Father employee	−0.048	−0.029	−0.041	−0.023	−0.038
Father construction worker/other	0.017	0.064	−0.044	0.030	0.077*
Father homemaker, retiree, student	−0.047	0.031	−0.131**	0.004	0.002
Mother manager/owner (ref.)					
Mother employee	0.152	0.225***	0.106	0.062	0.069
Mother construction worker/other	0.362***	0.331***	0.184**	0.213***	0.150**
Mother homemaker, retiree, student	0.255**	0.225***	0.069	0.074	0.040
Household size: 1 to 3	−0.065	−0.262***	−0.131**	−0.169***	−0.048
Household size: 4 or 5	0.051	−0.126***	−0.056	−0.103**	−0.029
Household size: 6 or 7	0.079	−0.075	−0.055	−0.052	−0.013
Household size: More than 7 (ref.)					
Per capita income: Less than 0.5 MW (ref.)					
Per capita income: 0.5 to 1 MW	−0.298***	−0.228***	−0.295***	−0.321***	−0.292***
Per capita income: 1 to 1.5 MW	−0.182**	−0.010	−0.174***	−0.172***	−0.295***
Per capita income: 1.5 to 2 MW	0.010	0.278***	−0.005	0.015	−0.567***
Per capita income: More than 2 MW	#N/A	0.102	0.038	−0.091	−0.574**
Gender: female	−0.015	0.039*	0.056***	0.082***	0.019
Age 15 (ref.)					
Age 16	−0.155	0.168***	−0.179*	−0.056	0.544***
Age 17	−0.136	0.215***	−0.111	0.057	0.527**
Age 18	−0.154	0.164***	−0.062	0.019	0.832***
Age 19	−0.238**	0.037***	−0.191*	−0.059	0.536***
Age 20	−0.252**	0.037***	−0.343***	−0.125	0.222***
Student works	−0.100*	−0.110**	−0.124**	−0.065	−0.014
Armero	0.368	0.641***	0.357	0.532**	1.005***
Barranquilla	#N/A	#N/A	−1.000***	−0.595***	−0.629***
Bello	0.620***	0.583***	0.525***	0.523***	0.430***
Bogotá	−0.306***	−0.572***	−0.438***	−0.370***	−0.392***
Cali	−0.061	−0.163***	−0.337***	−0.326***	−0.126***
Cartagena	−0.339***	−0.119***	−0.368***	−0.174***	0.006
Ciénaga	#N/A	#N/A	#N/A	#N/A	0.294**
Cúcuta	#N/A	#N/A	−0.319***	−0.382***	−0.362***
Dos Quebradas	0.284***	−0.001	−0.165*	−0.003	0.129
Ibagué	−0.439***	−0.374***	−0.574***	−0.368***	−0.524***
Lérida	0.955***	0.969***	0.562***	1.059***	1.114***
Los Patios	1.065***	1.037***	1.088***	0.868***	0.759***
Manizales	#N/A	#N/A	−0.332***	0.096*	0.178***
Tierralta	1.412***	1.243***	1.011***	1.391***	1.064***
Medellin (ref.)					
Constant	−2.219***	−1.785***	−1.700***	−1.443***	−1.734***

Source: Authors' estimation using ICFES data.
*significant at 10%
**significant at 5%
***significant at 1%

Notes

1. In chronological order of the start of operations: República Bolivariana de Venezuela, Ecuador, Panama, Peru, Bolivia, El Salvador, Colombia, Nicaragua, Guatemala, Brazil, Dominican Republic, Paraguay, Argentina, Honduras, Chile, Haiti, Spain, and Chad. There are no Fe y Alegría schools in Spain.

2. Only formal education is included.

3. The test can be retaken after graduation from high school.

4. It became a requirement for high school graduation in 2009.

5. Socioeconomic information was not collected from 2004 to 2006.

6. One way to control for observable variables like income, parents' education, household size, gender, among others, would be to include them in a simple regression model, such as OLS, with the regression including a dummy for Fe y Alegría as one of the explanatory variables. This however would assume that treatment effects are similar for the sample as a whole, which may not be appropriate. Using matching techniques relaxes that assumption.

7. We use level dummies for all variables to capture potential nonlinearities in the model.

8. On average, 40 percent of the observations in the control group (other schools) are dropped after CEM.

Fe y Alegría Schools in Peru

Analysis of the Institutional Management and Pedagogy Model and Lessons for Public Education

LORENA ALCÁZAR AND NÉSTOR VALDIVIA*

Fe y Alegría constitutes an example of a privately managed education system funded on a shared basis. In Peru, schools enjoy high levels of autonomy to set their guidelines and make decisions. Two studies show that Fe y Alegría schools have better internal efficiency and performance indicators than comparable public schools. By using interviews with key stakeholders and focus groups, this chapter analyzes the factors behind the success of Fe y Alegría schools. Such factors include higher levels of independence to generate and manage resources; a favorable institutional environment; the selection, tutoring, supervision, and training of teachers; greater autonomy and authority for school principals; and adaptability to local realities.

1. Introduction

Frequently, Fe y Alegría is referred to as an illustrative case of good governance in the education sector. Fe y Alegría schools have the reputation of offering better quality of education than their peers in the public sector and at a reasonable cost for both the State and the parents. Therefore, it is relevant to analyze the case and identify lessons that may be useful for the improvement of public education.

The purpose of this chapter is to analyze the characteristics of Fe y Alegría's management both at the institutional and school level, and identify success factors and lessons that can be applied to the rest of the education sector. It analyzes the institutional and pedagogical management and, within each of these, the role of key stakeholders and the relationships between them.

The analysis is based on a literature review mainly referring to the Peruvian case—both to identify management features, as well as results indicators—a review of documents prepared by Fe y Alegría, and interviews and focus groups with key stakeholders. Specifically, visits were made to three schools[1] and in each one of them the Principal and the elementary Assistant Principal were interviewed; a focus group was also conducted with at least five elementary school teachers (the list of schools and interviews can be found in the Annex). In addition, interviews were conducted with officials from the Central Office ("Oficina Central"), with experts in the field of education and people knowledgeable about the experience of Fe y Alegría.

This chapter is organized as follows. The second section presents some general aspects of the organization of Fe y Alegría. Section 3 describes the system characteristics in Peru and reviews the findings of previous studies that evaluated the results of Fe y Alegría schools in this country. Sections 4 and 5 analyze the main features of institutional management and pedagogy in Fe y Alegría schools, and the role of the Central Office ("Oficina Central") on these mainly based on visits and interviews conducted within this study's framework. The final section presents conclusions that aim to identify success factors and analyze to what extent these are replicable or not in the public sector.

2. The Institution of Fe y Alegría

Fe y Alegría (FYA) is a religiously inspired Non-Governmental Organization (NGO), founded in República Bolivariana de Venezuela in 1955 by the initiative of Jesuit Father José María Vélaz. FYA's objective is to provide quality education services to children and adults in underprivileged areas where public schools are non-existent or dysfunctional, and where parents are willing to actively cooperate with the school (Constance 2003). Its work started progressively expanding to other Latin American countries, currently operating in 17 Latin American countries, as well as in Africa and Spain, the latter established as a support platform[2].

It is likely that the current characteristics of the FYA system are a reflection of an influence of the Jesuit ideology of its Founders, which is based on a marked emphasis on reflection and evaluation as a paradigm of educational work carried out by the Society of Jesus throughout history. According to these pedagogical principles, education oriented towards excellence and leadership training involves developing various forms of self-assessment (defined as a repetitive discernment) in order to "make visible" the potential of a person (Haworth, Delli and Hafner 2001). In general, the pedagogical model and the achievement of educational objectives are guided by an interactive principle based on the relationship between five elements: context, experience, reflection, action, and evaluation. This paradigm defines the curricular and pedagogical orientation and supports the teaching-learning relationship in Jesuit education centers (International Centre for Jesuit Education 1993; Kolvenbach 1986).

As an international organization, FYA is characterized by the functional autonomy of countries, regions and centers, within a communication and solidarity of principles, objectives, concerns, and projects[3]. Typically, the FYA organization in each country consists of a Central Office and education centers in the network. The headquarters, or Central Office, supports schools in the network both in pedagogical aspects and transfer of resources. In terms of pedagogy, the Central Office supervises, tutors and trains teachers, Principals and Assistant Principals in a systematic and consistent way. The Central Office organizes national fundraising events (lotteries, etc.) and negotiates with international organizations and private companies to raise funds, which are transferred to schools for its use in workshops, cafeterias, construction, and maintenance of infrastructure.

While schools should comply with current official regulations in each country, they enjoy higher levels of autonomy with respect to intermediate instances of ministries of education than conventional schools in the public education network. In the FYA organization, schools are conceived as active agents in the provision of education, enjoying independence and initiative in their work. In every country where its educational work is carried out, FYA takes into account the national or regional curriculum proposal as a

framework, and develops its own curriculum that meets the needs and interests of students. Likewise, schools in the network follow the rules, standards, and norms of the respective national ministries of education (Martiniello 2001). FYA schools follow the national or regional curriculum proposal, although it develops local curricula as needed. Therefore, FYA is an interesting case for concerted public and private action and also of mobilization of a complete spectrum of resources, constituting an example of a privately managed education system financed on a shared basis (Swope and Latorre 1998).

Each FYA Central Office subscribes an agreement with the government of each country that stipulates that teachers' salaries will be provided by the State. Commonly, including the Peruvian case, teachers' salaries are paid directly by the state and they are subject to the laws of public teaching career, even though the teachers are selected by FYA. On the other hand, FYA is required to generate or raise funds (local and international donations), specifically to cover the costs of infrastructure, equipment and the implementation of innovative educational programs. Local communities participate in the infrastructure and building construction, by giving their labor and time (Reimers 1993)[4]. These agreements have allowed FYA to enjoy a certain autonomy, e.g. for the selection of school principals, for the selection of teachers in the case of Peru, or to have complete freedom to hire and fire teachers in República Bolivariana de Venezuela and Ecuador (Swope and Latorre 1998; Martiniello 2001).

3. Fe y Alegría in Peru

In Peru, the movement began operations in 1966 with the creation of five educational centers located in peripheral zones of Metropolitan Lima and over the years its work has expanded in scope and educational methods. Currently, FYA in Peru has 81,500 students, 3,900 teachers, 78 educational institutions, 5 rural schools networks with a total of 123 schools and diverse technical training education programs (Centers for Occupational Education—CEOs-, employment generation programs, entrepreneurship schools), and special education. The 78 educational institutions from the FYA network are distributed in 19 departments in the country, and 32 of them are located in the department of Lima.

Presently, FYA in Peru has an agreement with the Ministry of Education (MINEDU) signed in 2001, which recognizes the educational activities carried out by this association at the national level as activities of primary interest to the educational sector. Additionally, it defines FYA schools characteristics: right to elect management teams and teachers, Tuition-Free status in the same conditions as public schools, support from parents, and integrity of the educational proposal. That same year an addendum was signed in which it was agreed to extend the previous agreement for 10 additional years and give official recognition to the teacher-training activities provided by FYA (Alcázar and Cieza 2002).

The opening of a FYA school occurs by an express request of a community living in a poor area. The intervention mechanism of the movement for the opening of schools strongly rests on the participation of the community and conceives education as a response to a problem in the community. The movement receives the request and in most cases contacts a religious congregation to be responsible for managing the school[5], counting at this stage with active community participation for the provision of infrastructure and land.

State management of FYA schools is restricted to "administrative matters". Educators in these schools are subject to the same labor and pension system that applies to public teachers. Administrative tasks and supervision of their work are responsibilities of

the intermediate bodies of the sector ministry (Local Management Units). However, since the action of these agencies is weak and bureaucratic, in practice, the pedagogical and curricular management—dimensions related to the quality of education provided—are subject to private management by FYA. Each FYA school in Peru develops its own curriculum proposal, which is based on the educational proposal from the movement in Peru.

The proposal of FYA is based on three pillars that guide the work of the entire network nationwide: popular education, education on values, and education on and for work. The concept of popular education makes reference to the fact that FYA recognizes that it acts with and from dispossessed areas, for them to be the principal agents of their personal development and social transformation. The education on values approach is a response to the problems besetting society, such as violence, marginalization, poverty, individualism, and corruption. It is a response from the movement that starts from the recognition that there are values in society (solidarity, respect, honesty, hard work) which are necessary to make the experience of values the accepted and obeyed moral. Finally, education on and for work means, in practical terms, that schools implement various technical workshops. In these, it is foreseen not only the learning of a specific technique, but mainly the development of cognitive, motor and socio-affective abilities that strengthen the processes of social interaction[6].

By considering each of these pillars, the movement designed its own pedagogical approach, which also complements the proposal developed by the MINEDU. The movement's proposal serves as a framework of reference for every school to start the construction of its own pedagogical proposal, which must show at all times the perspective of education that guides the work of FYA.

FYA schools serve poor children in marginal areas where public education provision is insufficient, deficient, or in some cases, nonexistent. This fact, added to the good reputation that schools in the network have built over the years, has brought up FYA schools in Peru often facing an excess demand for vacancies[7]. To address this situation, schools generally select candidates first through a positive discrimination criteria (with siblings studying in the school, living close to the school, coming from families in poverty, etc.), and then by order of arrival or lottery (FYA representatives interviewed said that they do not apply knowledge tests as criteria for selecting candidates)[8]. In some cases, the willingness of the family to commit to the school and its educational project is also evaluated through interviews with parents (Navarro 2002). As a result, one could argue that this generates an auto-selection of children, depending on the characteristics of their families, since the more concerned and cooperative families will be the ones approaching FYA schools and the ones that actively engage in efforts to achieve admission of their children to these schools. However, it should be noted that the highest incidence of FYA schools is in high-marginality urban sectors and this could be a disadvantage when comparing these to public schools, e.g. in terms of internal efficiency indicators (Morales and Romero 1998; Alcázar and Cieza 2002).

Previous studies find that the results obtained by FYA schools are significantly better than public schools. Alcázar and Cieza (2002) compared the annual internal efficiency indicators and school performance between schools (23 FYA schools in the departments of Lima and Callao from a total of 24) and control groups formed with public schools (all public schools in which the Ministry of Education implemented performance tests in 2001 located in districts where there are FYA schools in Lima and Callao) with the results in all cases favoring FYA schools. In the case of the annual internal efficiency indicators used (over-age attendance rate, completion rate, pass rate and overall rate of schooling),

Table 4.1. Overall enrollment rate[†]

School grade	FYA schools			Public schools		
	Men	**Women**	**Total**	**Men**	**Women**	**Total**
6th-grade of Elementary School	56	56	56	47	47	47
5th Year of High School	52	54	53	41	42	42

[†](Number of students who are 11 years old and are in 6 grade/number of enrolled in 6 grade) * 100
(Number of students who are 16 years old and are in 5 year of HS/number of enrolled in 5 year) * 100
Source: School Census 1999. Ministry of Education. Taken from Alcázar and Cieza (2002).

the results clearly showed better results in FYA schools in relation to public schools. As shown in Table 4.1, the overall enrollment rate that represents the percentage of students that completed their studies in the minimum time having started at the appropriate age shows that there is a higher percentage of students from FYA schools who finish both their elementary and high school studies in the minimum time required.

In the case of the performance indicators discussed in Alcázar and Cieza (2002), comparisons are made on the basis of CRECER 98 performance tests results applied to a sample of 4th and 6th-grade students from elementary school[9]. The results show that private schools obtain better results, followed by FYA schools, and in third place public schools, although it should be noted that the difference between private schools and FYA is much smaller than the gap between FYA and public schools. These results are observed in the areas of language and mathematics for both 4th and 6th-grade in elementary school (see tables 4.2 and 4.3).

The Peruvian case was also included in the study of Swope and Latorre (1998). In this case, the study is based on information collected in 28 FYA schools and 28 comparable public schools[11] for several years. The study finds that for FYA Peru the timely progress rate is 64.7 percent (from 1,034 students who enrolled in 1991, 669 completed the 4th-grade in a timely manner in 1994) while in public schools timely progress rates for the same period was only 46 percent. The study also finds higher rates of promotion and repetition rates and lower dropouts in FYA schools than those of comparable public schools. Also, it found overall retention rates of students (those whose progress in the system has been appropriate and those who have repeated) higher than in public schools (90 versus 74 percent respectively). This would respond to strategies driven (though not formally) by FYA schools to reduce dropout rates during the early years of schooling.

Table 4.2. CRECER 1998 results: 4th-grade students

Statistics	Integral communication			Logic Mathematic		
	Fe y Alegría schools	**Public schools**	**Private schools**	**Fe y Alegría schools**	**Public schools**	**Private schools**
Average	19.42	16.21	19.22	19.04	16.37	20.94
Standard Deviation	5.12	5.28	5.20	4.36	5.13	4.45
Observations	429	153	72	422	192	98
Number of EC[10]	23	53	34	23	53	33

The maximum possible score for a 4th-grade student in the area of Integral Communications is 30 points while in the area of Logic Mathematics is 32 points.
Source: Results from the CRECER 1998 performance tests applied to 4th-grade students from FYA schools by the *Instituto Apoyo* and for public and private schools located in Lima and Callao (Quality Measurement Unit—MINEDU-, 2001). Taken from Alcázar and Cieza (2002).

Table 4.3. CRECER 1998 results: 6th-grade students

Statistics	Language			Mathematics		
	Fe y Alegría schools	Public schools	Private schools	Fe y Alegría schools	Public schools	Private schools
Average	21.61	17.93	22.91	18.5	15.54	20.54
Standard Deviation	5.27	6.5	5.16	5.97	5.89	5.64
Observations	394	147	70	411	151	71
Number of EC	23	53	32	23	53	32

The maximum possible score for a 6th-grade student in the areas of Language and Mathematics is 32 points. *Source:* Results from the CRECER 1998 performance tests applied to 6th-grade students from FYA schools by the *Instituto Apoyo* and for public and private schools located in Lima and Callao (Quality Measurement Unit—MINEDU-, 2001). Taken from Alcázar and Cieza (2002).

4. Institutional Management Model: Evidence from a Qualitative Study

The management of FYA schools relies on a set of actors and features that go beyond the learning processes inside the classroom and that act in harmony creating a favorable institutional environment for the education of children.

The FYA organization in Peru consists of two levels: the Central Office and the schools. The relationship between the Central Office and the schools is very close although maintaining a high degree of autonomy, especially in pedagogical and resource transfer aspects.

The National Office acts more like an organization that provides services to schools, where each School Principal leads the center financially, administratively and pedagogically (Swope and Latorre 1998). This organization allows teams from the centers to realize their leadership and creativity in responding to the challenges of local communities (Romero and Cáceres 2001).

At the school level, FYA schools in Peru present some traits in their administration that clearly distinguish them from public schools' management. FYA has been a decentralized system since its inception, where schools enjoy a high level of autonomy to set its guidelines and take decisions. In each school, the ideology of FYA is transformed into a local project. Furthermore, inside the schools there is a clear division of labor between the Principal and the Assistant Principal. The first one is in charge of the general management of the school, while the second one is in charge of the pedagogical management.

Schools from the FYA network additionally count with management tools (school's curriculum plan, Institutional development plan, Internal regulations) developed by committees, approved by consensus of teachers, evaluated, and improved annually, as indicated by teachers and Principals interviewed. Its content is known to all members of the school.

4.1 The Central Office

The Central Office in Peru has its headquarters in Metropolitan Lima and it is organized by the Office of the Director and the Office of the Sub-Director, which supervise the Department of educational proposal, the Department of value formation or pastoral and the Department of technical training. Also, as support agencies they rely on the areas of Administration, Projects, and Institutional Image. There is also a space specially designed for teachers (*Casa del Maestro,* which means House of the Teacher),

which provides spaces for reflection and dialogue, study groups, library with study rooms, internet access, books and videos rentals, besides the ongoing professional counsel from the pedagogical team.

One of the Office's most important functions refers to the pedagogical aspect which, through the Department of educational proposal, provides tutoring, supervision and training to the network's teachers, Principals and Assistant Principals, as well as develops FYA's pedagogical proposal.

Trainings are offered in the form of workshops, courses and seminars mainly during the months of school vacations. The contents of the trainings are not decided by the Central Office unilaterally, but they are consulted with the teachers. As mentioned by the Assistant Principal of FYA32, the evaluations that take place at the end of each year in FYA schools, ask teachers to report issues where they consider they need some training; this information is used to schedule the following year's training. Training is funded by the Central Office with funds from donations and fundraising activities they carry out. If a teacher wants to receive external training, he or she receives a subsidy from FYA that at some point reached 50 percent of the total cost of the course (according to FYA32 Assistant Principal), even though currently the percentage is smaller.

The Central Office organizes annual meetings with all FYA Principals from Peru, where they work for a week defining issues related to the orientation of the movement, its pedagogy, FYA principles, etc. This allows Principals to update and refresh the movement's values, which is then transmitted to the teachers.[12] Likewise, according to the FYA17 Principal, monthly lectures are given to teachers.

Teacher Training Team members conduct a supervision and advising task mainly through periodic and unannounced visits to all sites, organized by sector (1 or 2 days of monitoring at each site depending on their specific needs). Teachers and Principals visited mentioned that they don't see these visits as audits, but as an aid.

The Central Office also conducts periodic evaluations (every two years) to a sample of students from schools in the network. The results are then shared with schools (each school knows only its own results) to identify strengths and weaknesses from each school. The Assistant Principal and the teachers interviewed at school FYA32 mentioned that these results were very helpful for them to emphasize on the problematic aspects of the school and design a special pedagogical strategy.[13]

For fundraising, in addition to donations received from National and International institutions, the Central Office carries out National campaigns (of which the best known is the annual lottery) several times a year, where it raises funds. According to authorities at the Central Office, the resources collected from different sources are invested in training for teachers, the operation of school maintenance, to increase the pay of Principals (they work double shifts and are only paid one salary), to pay for basic services (some of which are borne by the MINEDU), for furniture, and for educational and training materials for the library (Alcázar and Cieza 2002). The guidance and supervision received, as well as the contribution of resources from headquarters to schools, professionally stimulate teachers and allow schools to have a greater range of management possibilities.

4.2 The Principals

In FYA schools the Principal chairs the organization of the school, assuming responsibilities that go beyond the organization of the curriculum and pedagogy. They don't simply limit themselves to apply the rules of the FYA "system"; they are also proactive and have

leadership abilities and creativity. Principals establish a sense of responsibility and authority inside the educational institution and lead, in coordination with teachers and parents, the management of the school (Navarro 2002; Swope and Latorre 1998).

The role of the Principal in FYA schools marks a clear difference with most public schools, where, as pointed out by school teachers from FYA33, the figure of the Principal is perceived as passive and unconcerned. However, many teachers and some Principals interviewed acknowledged that there are public schools with secular Principals that function properly due to the Principal's effort and dedication.

Visits to FYA schools suggest that the fact that Principals are religious, and to some extent the fact they are foreigners, generate greater trust, commitment and motivation from parents, teachers and school officials, as was indicated by FYA32 Assistant Principal, FYA17 and FYA33 Principals[14] and the majority of the teachers. Belonging to a religious congregation also gives them access to personnel and equipment support services and projects, as expressed by FYA17 school teachers and FYA32 Principal. Principals interviewed had no other directly observable characteristics that distinguish them from other FYA teachers or Principals from the public system (e.g. in terms of training or experience), beyond being foreigners and having studied abroad. However, their great capacity for work, motivation and leadership did draw the attention.

Another factor which greatly facilitates the work of FYA Principals and contributes to their good performance is the support they receive from the Central Office. The Central Office provides them with training for them and for their teachers and, above all, it provides them with support before public authorities in administrative matters and general problems that may arise with the school. This gives Principals more confidence to carry out their administration, as indicated by the school Principals from FYA33 and FYA17 schools. The majority of Principals receive a small subsidy for the school's operation.

Principals are concerned with generating an institutional environment that engages teachers, students, and parents. They develop an environment similar to the organization of a family, with very fluid and solid relations between the various actors involved in the educational process (Swope and Latorre 1998); this was also mentioned by Principals and teachers visited. In this regard, FYA33 Principal indicated that there must be a direct relationship with other levels from the school for its adequate operation. This concern in personal relationships is highly valued by teachers, as mentioned by the teachers interviewed at FYA32. In the model of FYA schools, the exercise of harmonious leadership from the Principal is vital because it promotes both school autonomy and leadership at various levels. This implies that they must have not only good technical abilities, but also social communication abilities.

Principals display a strict and efficient management by making full use of the budget they work with (Reimers 1993). The administration from FYA schools is very careful in the use of resources in festive or non-productive activities. As indicated by FYA33 Principal, the school's resources are not allocated to the implementation of an escort, marching band, parties, or promotion trips. It is preferred to use the resources in teaching materials or equipment.

The Principal's responsibilities also include the supervision, monitoring and evaluation of teachers, as well as the participation in the draft process of the school's educational proposal. However, in these tasks the Principal receives the support of the Assistant Principal, who is in charge of organizing the school's pedagogy area, and is also guided and complemented by the Central Office.

4.3 The Assistant Principals

In FYA schools, the Assistant Principal is responsible for the management of pedagogy. He or she supports the work of the Principal even though the division of labor is very clear and they receive guidelines by the Central Office to devote their time exclusively to the pedagogical work, as stated by FYA17 Assistant Principal.

Assistant Principals play an important role and are usually teachers who have worked several years in the school. They are nominated by the head of FYA's Department of Pedagogy, after a previous dialogue and agreement with the Principal, thus becoming responsible for the guidance and implementation of the pedagogical proposal in the schools.

As part of the work of supervision, the Principal and Assistant Principal go through the classrooms and elaborate an informational form that shows, amongst other things, the classroom environment, treatment of students, quality of teaching, students' apprenticeship, etc.[15] After the visits, they meet with the teacher to discuss the observed data, clarify the situations that require explanation and revise the programming for units and learning activities. As noted by the FYA32 Assistant Principal, teachers value the evaluations made, which are broadly shared with them. Assessments serve as feedback and also serve to improve the work of teachers, rather than to punish or sanction them.

4.4 The Teachers

Unlike the public network of schools, FYA schools are able to select their teachers because of MINEDU's agreement. FYA's selection starts with an initial enrollment at the Central Office and then the final selection is done by the Principal or school team. However, although FYA schools select their teachers, when comparing FYA teachers with Public school teachers there are no significant differences in terms of observable variables in their profile; except that many of FYA teachers are younger (Alcázar and Cieza 2002). This feature is explained by the preference of FYA schools for teachers willing to learn, to receive training and with the potential to engage with the school project they will be part of (Navarro 2002).

As noted by Principals, Assistant Principals and Central Office representatives who were interviewed, in the teachers' selection processes their attitude and motivation toward work is highly valued (unobservable characteristics) to determine whether or not they are hired, rather than the knowledge they may have acquired. Similarly, Swope and Latorre (1998), found in the case study of Peru that the criteria for teacher recruitment, prioritized by interviewed Principals, is "attitudes/values", compared to public school Principals who prioritize "professional preparation" as their main criteria. The differences in unobserved variables that result in more teachers committed to their work and more excited about learning, were highlighted by interviewed experts who have had the opportunity to observe in workshops and other work areas FYA teachers next to public school teachers[16]. Interviewed teachers recalled that during the selection process they were asked if they were willing to work anywhere and at any school grade (FYA33). In some cases, the Principal expressed a preference for teachers in the area (FYA32). Most teachers (FYA17 and FYA32) live near the school (in the neighborhood or district), which makes it feasible for them to stay working longer hours in the school and to meet the local community and integrate with it. However, this is not always possible, as is the case for FYA33 which has few teachers living in the area.

Teachers entering FYA sign the movement's ideology, which constitutes a commitment to the objectives of the organization, as pointed out by FYA32 Assistant Principal and FYA33 teachers. In general, teachers feel they were not different from the rest of the teachers when they started working at a FYA school, and that once in the school "the dynamics and working attitude stick to them." As stated by FYA17 Assistant Principal and FYA33 Principal, when teachers are not engaged and at ease with the working dynamics at ease, they end up requesting their transfer because they feel pressured. For instance, FYA17 teachers highlighted that " . . . it is a commitment to work here and whoever starts working and is not convinced, leaves." FYA teachers typically have strong ethics and a clear sense of mission; they are willing to participate in extra-curricular activities after school hours and during weekends and are willing to collaborate with colleagues (Swope and Latorre 1998).

With regards to training, FYA33 Principal mentioned that it helps to homogenize the teachers, since in many cases they arrive with certain gaps and flaws in their background. By receiving training, teachers complement and expand their professional background, allowing them to be at a more experienced and trained level. As mentioned by FYA33 Principal, training is what largely explains the good performance of the school. In fact, the same teachers (FYA32) stated that in FYA they had learned more than in college.

FYA teachers receive the same pay as other teachers in the public sector and receive no monetary incentives. However, non-monetary incentives are very important, particularly training and updates, values, teamwork, recognition for their work, support for their work, and sense of belonging to the institution. These issues were mentioned by the teachers in this study as very important for their work in school.

Even though FYA schools are governed by the rules of the public system in what concerns the imposition of sanctions, they are making a significant effort to correct the faults that are detected in the performance of their teachers. The sanction applied to teachers who neglect their duties is more a moral sanction through letters of intent, conversations between the teacher and the Principal and pressure from all members of the school as it was expressed by Principals of the visited schools and as indicated by Alcázar and Cieza (2002). Very few fail or reject the school project they are involved in and, in the exceptional cases they do, most end up leaving the center voluntarily (Navarro 2002). If all efforts of the members of the school fail and teacher penalties persist, the FYA Central Office intervenes. Thus, even the possibility of dismissal exists when the teacher commits penalties repeatedly, after an intensive work of the Central Office with intermediate organisms from MINEDU (Alcázar and Cieza 2002).

4.5 Institutional Environment and Educational Mystique

A strong sense of mission and the clarity of the school's and FYA's objectives as a whole, attract participants with qualities that match FYA's mission and influence positively the performance of the schools in the network (McMeekin et ál. 2001; Lazcano 2003, Reimers 1993). For example, interviewed teachers declared that, since there is a clear goal to pursue, it makes sense to devote oneself to work. Nonetheless, this is usually rare in public schools, leading teachers to lose motivation and do their work in an automated and careless way, as was mentioned by FYA33 Principal and teachers.

The relationship between teachers and the Principal is good and horizontal, as well as between teachers and students. Principals feel it is extremely important and part of their mission to create a positive institutional environment. In fact, FYA17 Principal explained that there is a human relations commission in her school whose mission is

to generate or maintain a good environment among the school staff. As FYA33 Principal said, "There are no groups. We are one big family. There is an environment in which we are all worthy, in which we all have a voice and in which we are all treated equally."

Among teachers there are also strong links of communication that go beyond formal meetings. As indicated by FYA33 teachers, there is a lot of support and sharing of knowledge among colleagues. Relationships between them are horizontal and teamwork is preferred. This helps to maintain the motivation of the team, so that in moments of discouragement, teachers will always find other colleagues that will motivate and encourage them, as noted by FYA33 Assistant Principal. In many FYA schools, the Principal has reorganized the teachers' schedules for them to have a few available hours in which they can coordinate, program, plan future work, or meet with parents, as expressed FYA32 Principal. In other cases, teachers, by their initiative, seek to match their free time to meet and coordinate aspects of the materials at least once a week, as indicated by FYA32 Assistant Principal and FYA17 teachers.

The coordination among teachers in FYA schools marks a clear difference with those in the public system, as indicated by the interviewed teachers. They added that in public schools, the formation of factions or opposing groups of teachers who either support or not the Principal are often common, which is detrimental to the school's performance. In FYA schools there are no such problems since there is a strong communication at all levels. Moreover, this trait is not confined only to the faculty, but extends to other agents in the school such as parents and students.

4.6 The Parents

The role of parents is another key element of the FYA system. In fact, one of the main characteristics of the FYA experience in Peru is the commitment and participation of parents in their children's school, which conveys their volunteer help, their economic contributions and other ways of involvement with their children's education.

From the beginning, there is a request from the organized community that supports the request for the creation of a FYA school. Land preparation, as well as the construction of the first classrooms and their maintenance, has been done with the voluntary manpower of the parents. Subsequently, guided by the school's management team, they participate actively in their children's education and care of the school. The support and willingness of parents is vital for children's academic success and that is why parents try to get involved in the education process of their children, according to FYA17 Principal.

Parents have the obligation to attend workdays, meetings and assemblies. There are usually around four workdays per year or, at some schools maintenance workdays or cleaning days on Sundays are scheduled and executed by shifts (FYA33); attendance is mandatory. In some schools there are even sanctions and fines for parents who do not participate, as is the case of the three visited schools. FYA32 Assistant Principal also indicated that in some cases when parents do not participate, the case is taken to the Social Services office at the school to assess the situation and look for a solution to the problem. Also, in all institutions there is a School for Parents, to which the assistance may or may not be required depending on the school. In general, although with a lot of effort, the school's mystique is conveyed to a large majority of parents.

In most academic centers, when enrolling their children, the Principal informs parents about the school's educational proposal and has them sign a document of commitment, as pointed out by FYA33 Principal. In the document, parents agree mainly to:

a. Accept and support the school's ideals
b. Comply with internal regulations
c. Collaborate with school staff
d. Attend meetings and activities of the Parents Association (APAFA) and of the school management team
e. Support the child's formation in values, ethic and religion.

In addition to APAFA, field work allowed to confirm that parents also participate in Classroom Committees, in a Dining Committee and other groups formed for specific purposes within the school (e.g. surveillance at FYA32). They were also asked to attend meetings of the School for Parents, attendance being in some cases mandatory (under sanction of fines), as is the case at FYA32 according to its Principal.

Classroom Committees manage resources for materials to be used by students in each classroom during the year, under the supervision of the Parents' Association and the school management team. In schools where there is a cafeteria, it works with the voluntary work of mothers and donations from private companies or government institutions, largely raised by the school management team. For other working groups and for the maintenance of school infrastructure, the main contribution from parents is often voluntary work, as noted by FYA33 teachers.

4.7 The Students

Students in FYA schools are also active and committed individuals with their education. Their relationship with teachers is close, trusting and horizontal, as pointed out by interviewed Principals and Assistant Principals. This proximity allows students to feel comfortable when talking to their teachers, even about personal issues, as noted by the teachers interviewed at school FYA33.

Students generally have high participation in classroom management responsibilities and identify themselves with the school. However, many Principals, Assistant Principals and teachers indicated that they also face disciplinary problems with some students, even alcoholism, drugs and gangs. Therefore, it is a policy of FYA schools to try to keep schools open every day (including Saturdays and Sundays) and offer a range of extracurricular activities to engage students (dance, sports, music, and pastoral). The school represents for the students an alternative to the street, and they identify themselves a lot with it, as indicated by the Principal of FYA33.

4.8 Resources

FYA schools enjoy a high degree of independence regarding the generation and management of resources. In addition to the resources they receive from the Central Office (trainings, workshops and educational support) and MINEDU (mainly as teachers' salaries), each school develops its own resource fund on the basis of membership fees, national and international donations and a share of FYA's National Annual Grand Lottery Fund. Generation and management processes of these resources are some of the most important mechanisms to involve parents and the school community (Swope and Latorre 1998). Besides having the opportunity to receive funds, grants or projects, FYA

schools are able to adapt and improve everything they receive—tangible or intangible—which does not happen in public schools.

FYA schools rarely receive on time materials distributed to all public schools (books, workbooks, notebooks, etc.), as indicated by FYA32 Assistant Principal and FYA32 and FYA33 teachers. Sometimes they arrive with a delay of more than four months after classes start and some are incomplete. In general, FYA schools receive fewer resources from the Government than public schools. In terms of remuneration, FYA does not have administrative positions and has few service personnel (usually covered by APAFA and in some cases by the Central Office). As for educational materials and other resources that are distributed by the Management Local Education Units (UGEL), they must compete to obtain them.

The staff management team actively seeks more resources for schools. In this search it often has the support of congregations and the Central Office, although the main effort is done by the Principal. As a result of these procedures, several schools receive donations from private schools, businesses, NGOs, etc., mainly consisting of teaching materials and equipment for the school. This is the case for FYA33 and FYA32, which received donations of reading materials and computers from a private company, as highlighted by Principals and teachers of both schools. In general, visited schools reported a series of projects that support them in different aspects: "Matemáticas para Todos" (Mathematics for All) from Instituto Apoyo-Banco de Crédito, "Proyecto" (Project) from Discovery Channel, "Aprendamos Juntos" (Let's Learn Together), from the Fundación Custer, TECSUP, among others.

Also, some schools from the network have the support of volunteers, both from the religious congregations in charge of the institution, as well as from developed countries that spend weeks or months working with the students, like the case of FYA33 according to its Principal. In fact, in some cases (e.g. FYA17) they have "sisterhood" with foreign schools that provide them with resources for specific projects (currently FYA17 has a project of psychological support to students with problems).

Parents also provide resources that are normally used for either maintenance or enhancement of the infrastructure, acquisition of supplies and educational materials (cardboard, paper, inks, etc.), and in some cases, to cover the salary of teachers. For example, in FYA17, parents pay 40 *soles*[17] as a fee for the Parents Association, 20 *soles* for materials once a year and a special quota of 30 *soles* at the end of the year for maintenance of infrastructure during summer. In FYA33, 18 *soles* are charged at the beginning of the year and, by agreement of the parents, they are required to sell five tickets for the bingo (10 *soles* in total), besides the payment to APAFA. It is a common policy, however, to prohibit other charges to parents, which clearly differentiates them from many public schools where nonsystematic or improper collections from parents are common throughout the school year.

5. Pedagogical Management Model: Evidence from a Qualitative Study

Pedagogical Management of FYA schools is based on the work performed by the Central Office's Department of educational proposal, which is shared with teachers under the leadership of the Assistant Principal from each school (Elementary and High School respectively). This work is synthesized in FYA's pedagogical proposal which is summarized in a guidance document that every school works with and is complemented with methodological strategies provided by the Central Office team and with management tools from each school.

The proposal was developed aiming to complement MINEDU's curriculum proposal and to overcome difficulties that are faced in its implementation due to its frequent changes, its generality and its lack of guidance documents. According to the staff of the visited schools, one of the main challenges they faced was the frequent changes made to MINEDU's curriculum proposal, which prevented them to implement medium-term planning and generated confusion among teachers in relation to the approaches, concepts and definitions.

The proposal of FYA, which has been implemented since 2001, is based on the experience of schools and teachers in the network[18]. Improvement was pursued through the observation of working habits. In this sense, the FYA pedagogical proposal was never something new, as FYA33 Assistant Principal said. Besides, teachers identify with it because they could see in it situations that they usually had to face while carrying out their work.

The pedagogical proposal of FYA includes the cognitive psychological and constructivist focuses of learning through a curriculum structure organized by competencies. The educational process prioritizes the development of abilities and attitudes, and uses a didactic model that requires leaving behind the traditional teaching methods in the classroom in order to take the development of activities and group work as a methodology.

However, after an evaluation through monitoring visits, interviews, workshops and meetings with teachers and the staff management team, programming revision, classroom observations, and ability tests applied to the students, it was possible to come up with some conclusions about reform. Among the positive aspects, there was a higher student participation in class, an increment in team work, the student-teacher relationship had become closer, and learning contents were becoming more contextualized with reality. Nevertheless, clear deficiencies were identified, such as not producing significant improvements in the development of students' basic abilities, process management and solving strategies in the cognitive and motor fields. Likewise, teachers were still focusing the curriculum development in the application of conceptual content and there was a great difficulty in formulating indicators of learning achievement.

The FYA evaluation team identified that problems in the implementation of the new curriculum proposal could be explained by: the lack of clarity about what are and how to develop abilities; unclear concepts in the curriculum frameworks on what is a competency and the differences between its components; the lack of clarity and guidance for the curriculum design; and an evaluation system not very consistent with the curriculum proposal, among others. MINEDU's proposal also required a demanding job of content organization, planning and development by teachers and Principals. That is to say, the success of implementation laid largely on the school's ability to develop their own educational proposals commensurate with their abilities and surroundings, but they lacked guidance in order to achieve it. With these problems identified, FYA began building a new proposal that, while sharing many concepts and definitions with MINEDU's proposal, facilitated the work of teachers and Principals in the development of the school's curriculum.

Both curriculum proposals are organized from a person's development approach rather than the traditional disciplinary approach (see tables 4.4 and 4.5). The focus is the tutoring of the process of maturation in all dimensions, and this is organized based on the areas of formation and competencies. Each area addresses a different and important aspect of the person and puts greater emphasis on the development of competencies, in comparison

Table 4.4. Development areas defined in curriculum proposals

MINEDU	FYA
• Social Person	• Communication
• Integral Communication	• Logical and Mathematical Thinking
• Mathematical Logic	• Personal and Social Development
• Science and Environment	• Scientific and Technological Thinking
• Religious Formation	• Religious Formation
	• Formation for Work
	• Formation and Physical Culture
	• Education through art

Source: National Pedagogical Team of Fe y Alegría (2003); MINEDU (2000).

to the accumulation of information. FYA distinguishes a higher number of development areas than the Public curriculum proposal for elementary education.

Both proposals present the curriculum design using as a starting point these learning needs, and not a selection of sciences or disciplines to teach. It is possible to adopt in the curriculum areas as disciplines or to disaggregate them.

For each Development Area, MINEDU's proposal considers abilities that have to be developed by students in each of the areas. Also, MINEDU's proposal specifies that competencies can be achieved through the development of capacities and attitudes, which are detailed in the curriculum proposal of the Ministry.

Nevertheless, for the teacher and for the definition of the competencies, this outline is very general. FYA identified that it is necessary to determine which specific capaci-

Table 4.5. Development area: integral communication competencies from the first cycle: written communication (reading)

Competencies	Capacities and attitudes
Written Communication: Reading	• Builds the comprehension of the text that is read through the following process:
	• Makes anticipations about the type of text and its purpose through the context (situation, reason, circumstance, through which the text comes to their hands.)
	• Reads individually and silently; identifies signals like: title, subtitle, shape, familiar words, illustrations, etc.
	• Formulates hypotheses about the meaning of the text.
	• Confronts these hypotheses with those of his or her peers and them all draw conclusions.
Reads various types of texts to get informed, to enrich his or her knowledge about reality and to enjoy them.	• Elaborates a synthesis of the meaning of the text.
	• Confronts the constructed meaning with the oral reading of the text, made by his or her teacher.
	• Enjoys reading texts of his or her choice: stories, poems, jokes, tongue twisters, riddles, cartoons, and comics.
	• Reads various types of texts: tales, legends, poems, letters, recipes, cards, signs, news, etc.
	• Recognizes and classifies through shape and function, various types of texts: letters, recipes, signs, poems, short stories, notices, etc.
	• Reads and uses organized data in double-entry tables related to school life (self-control of attendance, table of responsibilities, evaluation tables, etc.).

Source: MINEDU (2000).

ties involve the development of competencies, especially when all the grades share these as evaluation criteria. FYA's proposal considers that the best way of organizing the development work of abilities is to determine each area's Basic Abilities, in order for these to become the axis of the curriculum across all grades. Each dimension of the personal development involves abilities, which although are not unique or exclusive to that dimension, can be identified as related to it. Therefore, each Curriculum Area can determine "its" competencies. For example, reading, writing and speaking are abilities that are easily identified as related to the Communications Area; operating with numbers, solving problems, calculating, and estimating in symbolic language, are related to the area of Mathematics.

Abilities are disaggregated into more specific components, called sub-abilities, which are also disaggregated even more into detailed components called sub-sub-abilities. FYA's proposal states that the defined sub-sub-abilities must be arranged by teachers in the grade in which they have to be achieved. Although the time set for the development of each sub-sub-ability is flexible, these should be considered as the minimum learning to be accomplished. As an example, they present a model of allocations by grade of sub-sub-abilities correspondent to the ability of reading comprehension and sub-ability of oral reading.

The resulting structure is very detailed and useful for directing the actions of teachers (see table 4.6). The outline allows addressing, in a careful and planned way, every aspect and the process involved in the development of abilities, in order to give sequencing and continuity to the process of achieving increasingly more complex performances. Teachers in the network recognize their greatest usefulness when planning yearly tasks, given their disaggregation, as indicated by the teachers of the visited schools. In the experience of FYA, each educational center has selected its abilities, sub-abilities and sub-sub-abilities for each area, and has organized them by grade at its discretion.

In practice, the educational proposal for each educational center (public and FYA) should be contextualized to the environment in which it is being developed. The characteristics of FYA's pedagogical proposal and the frequent trainings from the Central Office, allow a better adaptation to the environment in FYA schools, i.e. the creation of an "own" proposal at every center. In this regard, FYA32 Assistant Principal highlighted the constant concern of the Central Office to assess how the curricula are being implemented and to carry out constant supervisions, accompanied by trainings in the areas

Table 4.6. Development area: communication abilities: reading comprehension sub-abilities: oral reading sub-sub-abilities: for 1st and 2nd grades

1st grade	2nd grade
• Reads with audible voice. • Reads with proper pronunciation. • Reads individually and in groups. • Reads in group following models of intonation and rhythm. • Respects intonation of question and exclamation. • Does not syllable. • Reads short texts fluently: sentences, paragraphs and texts (3 paragraphs).	• Adapts the tone of voice to the audience and the type of text. • Gives intonation according to the text. • Respect commas and periods. • Does not syllable. • Does not change letters or words. • Does not omit or add words. • Does not skip lines. • Reads easily up to four-syllable words. • Reads short texts with fluency: paragraphs and texts (3 to 5 paragraphs).

Source: FYA National Pedagogical Team (2003).

that are not being well implemented or have not been well understood (feedback). When asked, the Principal of this educational center recognized that to develop the curriculum program at the school, they received a lot of help from the Central Office in the form of consultancies and trainings. The Central Office has a department of pedagogy which may be consulted at any time.

Programming is developed at the beginning of each year before the start of classes. Prior to programming, a diagnostic of the students' needs and the problems they face is performed, as indicated by FYA17 Assistant Principal. At the beginning of each year, they prepare signs based on what is contained in the proposal, selecting the transverse contents to be developed according to the diagnosis made. The signs are outlines that specify the contents to be developed by each area throughout the year, including the time in which evaluation indicators (sub-sub-abilities) and indicators of achievement (sub-abilities) should be addressed, as FYA33 and FYA17 Assistant Principals pointed out. FYA17 Assistant Principal explained that a sign with the sequence of contents is also developed, which includes the topics that are going to be addressed every year (e.g. reading), as well as sign of values, that incorporates two values to be developed on a yearly basis.

During the days for programming, teachers gather by area and coordinate designing the signs from Beginners to 5th grade. Each teacher can see the sequence of topics and set the design for their grade, by working the monthly programming. At the elementary level, since there are usually four teachers per grade, each one of them is responsible for programming a development area. Every year, they seek to improve the programming, for which they review and evaluate the signs, as pointed out by interviewed teachers.

FYA's proposal considers sub-abilities as the evaluation criteria to be used and sub-sub-abilities as indicators of achievement for each grade. As mentioned by FYA32 Principal on the subject of evaluation, ". . . progress has been made in setting indicators (of learning) which conditions the evaluation process . . . it's not about a score going into the record, it's about another thing. It is evaluated in another way, based on what is what I would like to get from the student." Thus, evaluations are directly linked with the teaching, which allows having adequate feedback and a thorough idea of the status of the children's learning process, according to the curriculum plan used. The evaluation criteria and indicators of achievement are designed by the teacher with the Assistant Principal's advice, and in accordance with the reality and the level at which they see students are in, as FYA17 teachers and Assistant Principal explained. For this it is important that teachers know their students well enough and track those who may have problems, explained FYA32 Assistant Principal. The evaluations are conducted on a permanent basis through group projects, work presentations, student participation, behavior, order, and cleanliness.

However, the adoption of a different curriculum from the official raises problems of compatibility between MINEDU's and FYA's grade records. To overcome this issue, FYA schools created equivalence tables of subjects that they evaluated, with subjects included in official records. According to FYA32 Assistant Principal and teachers who were interviewed, these tables may be submitted as official grade records.

The materials used in class are generally the ones they have available. The use of several texts or the elaboration of cards in the classroom is preferred to guide the learning

process, since it allows greater freedom for the selection of content, as teachers mentioned in their interviews. However, all materials to be used should, whenever possible, be reviewed and approved by the Assistant Principal of each school.

A distinguishing feature of FYA's proposal is that schools in the network have a significant impact on job training, one of the pillars of the movement's proposal. Therefore, it is common for schools to hold workshops and technical trainings that allow students (mainly from high school) to have a preparation that will help them to get a job upon graduation. In the first grades there is a great influence on comprehension and abilities, rather than high levels of content which are required by MINEDU, since it is considered more important for a child to write and be able to speak in public than to knowledge.

6. Conclusions

Although FYA schools must abide current official regulations, they enjoy a certain autonomy with respect to intermediate levels of the Ministry of Education. Government management of FYA education centers is restricted to "administrative matters" while the dimensions of the centers related to the quality of education are subject to private management by FYA. FYA is an example of a privately managed education system financed on a shared basis. Furthermore, schools enjoy higher levels of autonomy from the Central Office to establish their guidelines and make decisions. In each school FYA's ideology is transformed into a local project.

The education provided by FYA schools has the reputation of being of better quality than that provided by public schools. This has been proven true in studies by Alcázar and Cieza (2002) and Swope and Latorre (1998) for the case of Peru. In both studies, better indicators of internal efficiency and performance were found in FYA schools in comparison to comparable public schools.

What factors explain the success?

First, FYA schools, as opposed to public ones, enjoy a high degree of independence to generate and manage resources. They receive funds from the Central Office (mainly in the form of trainings, workshops and educational support) and MINEDU (mainly as teachers' salaries). Moreover, each school develops its own resource fund which collects parents' fees, a share of FYA's National Annual Grand Lottery and national and international donations. Besides having the opportunity of receiving funds, donations and projects, FYA schools are characterized by their ability to maintain and make good use of everything they receive, both tangible and intangible, whereas in public schools this does not happen.

Management of FYA schools depends on a set of players and characteristics that go beyond the learning processes in the classrooms and that work in harmony creating a favorable institutional environment for the children's education, which is clearly distinguished from public schools.

The Central Office, through its Department of educational proposal, provides tutoring, supervision and training to teachers, Principals and Assistant Principals of the network and develops FYA's pedagogical proposal. Its role of support to principals before public authorities is also important and, mainly, its guiding role through the movement's

principles and mystic, which are continuously transmitted and shared with all school principals and teachers.

In FYA schools the Principal chairs the organization through leadership and creativity, and establishes a sense of responsibility and authority within the school. Principals are concerned about creating an institutional environment that engages teachers, students and parents.

Apparently, FYA schools exercise more effectively the right to select teachers. In the selection processes for new teachers, their attitude and motivation to work are highly valued (unobservable characteristics) even before evaluating the knowledge they may have acquired.

Teachers feel that they are not different from other teachers when they start working at a FYA school, and that once inside "they were inspired by the dynamics and working attitude". Similarly, through the trainings offered by the Central Office, teachers complemented and expanded their professional training and, in many cases, fill gaps or weaknesses in their backgrounds.

Teachers receive the same salaries as other teachers in the public sector and receive no extra monetary incentives. However, non-monetary incentives are very important, particularly the trainings and updates, value, group projects, recognition and support for their work, and sense of belonging to the institution.

The role of parents is another key element. Starting with the establishment of the school in which they take an active role, parents, guided by the school's management team, are actively engaged in their children's education and maintenance of the school.

Pedagogical management is based on the work performed by the Department of educational proposal of the Central Office and is summarized in FYA's pedagogical proposal. This proposal is presented in a guiding document that each school works with, and that is complemented by methodological strategies provided by the Central Office and management tools from each school. The proposal is based on the own experience of the network schools and teachers, and considers that the best way to organize the work of abilities development is to identify basic abilities in each area. Abilities are then disaggregated into specific performance components, called sub-abilities, which are also disaggregated into more detailed components called sub-sub-abilities. The proposal considers sub-abilities as the evaluation criteria to be used and sub-sub-abilities as indicators of achievement for each grade.

Are success factors replicable for public schools?

On one hand, as was explained by several interviewees outside and inside the institution, the experience is not replicable because the problem of public education is not about its methods, but about its value, commitment and people. Nevertheless, one wonders what is what allows to achieve that mystic and to have teachers and other educational community members more engaged.

Although there are many factors that intervene in FYA's success, it clearly stands out the fact that they have Principals and teachers with a sense of belonging, clear objectives and common goals, as well as more committed and concerned about the student's education. This will all be dependent on the work of the core team and the institution's own principles. However, public schools could get similar results if they form networks belonging to an intermediate transformed public body (new UGEL) that can support them, point them to the right direction and give them a sense of

belonging. This could also be achieved if they sign agreements with other private or semi-private institutions through management agreements similar to the current agreement with FYA. Around these public or private networks there should also be trainings for teachers and Principals, as well as other exchange opportunities. The leaders of these networks would also have to provide more tutoring to Principals and teachers for the implementation and application of the pedagogical proposal and other management tools.

Another aspect mentioned as a key element for success, but not easily replicable, is the third party support received by FYA schools: donations, projects, volunteer work, etc. Even though they actually receive a lot of support, it is not only about how much they receive, but about how much they are able to maintain and make good use of. The stability and sense of belonging allows them to accumulate tangible and intangible resources.

Nevertheless, several interviewees considered that belonging to FYA and having the support of a religious congregation are two of the main strengths of their schools (*vis-à-vis* other schools in their area). This, in addition to providing continuity and direction, allows the schools to obtain resources to carry out various projects for the benefit of students and develop training for their teachers.

As for teachers, they are distinguished from their peers in public schools only after entering the system and through unobservable characteristics related to value, desire and commitment to the job. Although difficult to attain, this would indicate that it would be possible to "convert" public schools teachers, even under the current rules and remunerations, since FYA teachers work under the same rules as the public sector.

Another key aspect of success is related to Principals. In FYA schools, unlike public schools, the Principal really manages and leads the school, creates an institutional climate suitable for learning and has the support and respect of other members of the educational community. For this to happen in the public sector, it would be essential to have a change in the regulations so that Principals can enjoy greater autonomy and have access to management tools, with a prior strengthening of the Principals' training and career. In FYA schools, respect and trust embodied in the Principal, as well as a good working environment in general, could be related to the religious figure that represents the Principal who belongs to a congregation (as was mentioned by many interviewees). Nevertheless, it was mentioned that there are public schools that perform better and have good reputation in their communities because they have a "good" Principal.

The review of the case of FYA schools also showed the importance of having a pedagogical proposal that guides them in a good direction, that is based on the experience of teachers, that includes lessons and weaknesses of the education system, and, above all, that is specific and detailed enough to guide the work of teachers in the classroom. The FYA's pedagogical proposal considers sub-abilities as evaluation criteria to be used, and sub-sub-abilities as indicators of achievement at each grade, linking evaluations with teaching; this allows an adequate feedback and a thorough idea of the children's learning process status. All this would be replicable in the public school system where, despite the fact that standards and the pedagogical proposal are very important, they only succeed if there is a better management and improved institutional environment.

Finally, a replicable success factor is the role of parents. In this regard, it is important to engage them not only in aspects of resource management and infrastructure, but also make them more participatory and responsible of more educational aspects, control and relationships with teachers. This could be achieved by using and strengthening the existing figure in the public ruling of the Institutional Education Council.

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Annex

FYA Education Centers Visited

Interviews were conducted with Principals and Assistant Principals and there were focus groups of elementary teachers from the following schools:

Name	District	Province
Fe y Alegría 17	Villa El Salvador	Lima
Fe y Alegría 32	San Juan de Lurigancho	Lima
Fe y Alegría 33	Ventanilla	Callao

Additional Interviews:

■ Ms. Leonor Romero, Director of the Department of education proposal of Fe y Alegría's Central Office and three members from their teaching staff.
■ Mr. León Trahtemberg, education expert.
■ Mrs. Cecilia Torres Llosa, Institute Investigator and Director of Project Support "Mathematics for All".

Notes

1. The schools selected were aimed to be representative based on its seniority (neither too old nor too new), and which had received average performance results on tests given by the *Instituto Apoyo*, 2001.
2. Dominican Republic, Guatemala, Honduras, El Salvador, Nicaragua, Panama, Colombia, República Bolivariana de Venezuela, Ecuador, Peru, Bolivia, Brazil, Paraguay, Argentina, Haiti, and Uruguay.
3. http://www.feyalegria.org
4. FYA Principals interviewed for this study expressed that the community actively participated in the construction of schools.
5. Currently, all schools in Lima but one are directed by a religious person.
6. To this respect, it is interesting to include what was mentioned by the FYA17Assistant Principal: ". . . the objective here is not that everyone goes to college, but rather to give them education for work."
7. For example, FYA17 has, for 60 and 70 vacancies for beginners and first year, respectively, 183 and 203 pre-enrolled. FYA 32 usually has 50 or 60 vacancies for every grade and approximately 400 applications (interviews with the Principal).
8. In FYA32, the Principal expressed that the selection criteria first included whether the students came from another FYA school or whether they have a sibling in the school, and then later they use lottery. However, in certain cases they can include criteria for "participative parents" or give preference to the ones coming from the province or state schools (leaving the ones that come from private schools for last).
9. FYA schools selected are located in the poorest districts of Lima and Callao, while public and private schools are not necessarily in marginalized areas.
10. EC stands for Educational Centers.
11. The comparability between the two groups of schools considered in the study is based on the following variables: a) distance between the studied schools and the closest school; b) number of students per teacher in each room; c) level of marginality in the school's location; d) socioeconomic level of the population attended by the school; and e) child labor rates of students according to the perception of the school principal.

12. *". . . we come with our batteries recharged, and we started the year and transmitted our energy to the teachers, who capture it and work with this mystic",* said the Principal of FYA33 (Ventanilla, Callao).

13. It is interesting to compare the strategy with the one from MINEDU in which none of the schools receives its results.

14. *"Sometimes we see ourselves reflected in our brothers, and I ask myself several times how they, being foreigners, come and give their time* [. . .] *and us who are here* [. . .] *can't do the same. So sometimes this encourages us not to measure time; to be here when is needed."* FYA32 Assistant Principal (San Juan de Lurigancho, Lima).

15. FYA17 Assistant Principal expressed that the school prefers to call the forms "Companion forms", which reflects, to a large extent, that these represent a constant monitoring to the work of teachers.

16. As it was expressed by León Trahtemberg and Cecilia Torres Llosa in their interviews.

17. *Soles* refer to Peruvian currency the *"Nuevo Sol".*

18. *". . . those from the Central Office come to take in our ideas."* FYA32 teacher (San Juan de Lurigancho, Lima).

Fe y Alegría Experiences

*A Network That Adapts
to Local Realities*

Literacy in Elementary Schools

MARGARITA SPROVERA*

The process of learning to read and write is essential for all subsequent learning, since the majority of what is learned in school involves these two abilities. As one moves forward to the next grade, the use of written texts, which are the most widespread, cheap and effective form of knowledge transmission, increases. There are several reasons why Fe y Alegría in Chile launched a new literacy program in schools: i) it was found that many students read poorly, which made it difficult for them to learn; ii) low-level learning of reading and writing was not being completed in first grade, and iii) there was a group of students who could not be taught how to read. The new program, which was based on an exhaustive diagnosis that took into account the reality of Fe y Alegría schools, generated improvements in reading speed and enabled schools to teach how to read to all students.

1. Program Context

1.1. Importance of Learning How to Read and Write

During the mid-nineteenth century only one in ten persons knew how to read and write. Today, one in five adults is illiterate, which means that there are 771 million illiterate people and two thirds of them are women (UNESCO 2006). To this group, add those individuals under 15 who have been in school and have not acquired the minimum abilities of reading and writing. From this last group of people, the concept of functional illiteracy is used (Jiménez del Castillo 2005). Wagner (1990) states that "it is believed that a person has received functional literacy when he or she has acquired knowledge and literacy skills that enable him or her to effectively undertake all the activities in which literacy has been normally adopted in their culture or group."

Literacy is a wider concept than only learning to read and write, even though their effective learning is in its core. UNESCO in 2006 defined literacy as follows:

> "A person is functionally literate who can engage in all those activities in which literacy is required for effective functioning of his group and community and also for enabling him to continue to use reading, writing and calculation for his own and the community's development."

The acquisition of literacy has advantages both at the collective and individual levels, as indicated in "Alfabetización puerta del conocimiento" [Literacy, Door to Knowledge] (Entreculturas 2007). At the individual level there are highlighted benefits including self-esteem and personal autonomy, especially among women, since it enables individual or group participation in family, community or workplace activities. UNESCO (2006) high-

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lights different collective benefits of literacy: it increases political participation; benefits cultural changes, since it promotes critical reflection; and helps preserve cultural diversity. Improving literacy levels may be important in prolonging life expectancy, lowering infant mortality and improving health. There is a correlation between female education and fertility decline; literate parents tend to send more their children to school and are in better conditions to help them. Finally, the UNESCO report summarizes:

> "Literate environments and societies are essential for achieving the goals of eradicating poverty, reducing child mortality, curbing population growth, achieving gender equality, and ensuring sustainable development, peace and democracy."

Finally, the right to literacy is implicit in the right to education recognized by the Universal Declaration of Human Rights. Also, UNESCO (2006) indicates that literacy is a right that enables other rights because people that can read and write can also have access to the rights that the law recognizes.

1.2. Education in Chile

Chile's Ministry of Education has had a constant concern for improving student results. This can be seen in three indicators: low illiteracy rate of the population, high levels of education coverage of students, and low dropout rate, shown in Tables 5.1, 5.2, and 5.3.

Illiteracy: number of illiterates who are 15 or older. Those considered illiterate are persons that in the Labor Force Survey of INE declare to have zero or one year of education, as well as those who do not remember how many years of study they have.

Coverage: number of persons of a particular age or age group to reach a given level in relation to the total population of the corresponding group with appropriate ages for the education level (basic and secondary) by gender.

Dropout: Total number of students that fulfill the conditions to be enrolled in a certain grade in school and are not enrolled, in relation to the theoretical enrollment in the following grade. Dropout is recorded both when it occurs during the school year and when passing from one grade to the next one.

Table 5.1. Illiteracy rate (percentage)

Men	3.8
Women	3.9
Total	3.8

Source: Ministry of Education, Department of Studies and Development (2007).

Table 5.2. Education coverage rate (percentage)

	Men	Women	Total
Basic Education	95.6	94.2	94.9
Secondary Education	75.0	79.4	77.1

Source: Ministry of Education, Department of Studies and Development (2007).

Table 5.3. Dropout rate (percentage)

	Men	Women	Total
Basic Education	1.4	1.0	1.2
Secondary Education	8.3	6.2	7.3

Source: Ministry of Education, Department of Studies and Development (2007).

In order to more objectively know the improvements in student learning, Chile has a Measurement System of the Quality of Education (SIMCE) administered by the Ministry of Education. Its main purpose is to contribute to the improvement of the quality and equity of education, report on the performance of students in different areas of the national curriculum and relate them with the school and the social context in which they learn. SIMCE tests evaluate the achievement of fundamental objectives and minimum mandatory contents of the curriculum framework in different segments of learning through a measurement applied around the country, once a year to students who attend a certain educational level.

Table 5.4. Results from the language and communication evaluations for 4th-grade of basic education

Year	Number of institutions	Number of students	Average score	Difference compared to 2002
2002	6,140	251,398	251	
2005	7,518	252,724	255	4
2006	7,609	248,147	253	−2
2007	7,996	241,483	254	1

Source: Author's calculations.

Despite high education coverage and low dropouts, when reviewing the national results of language and communication SIMCE's tests for 4th-grade of basic education, between 2002 and 2007, it is found that there have been no significant improvements. Starting in 2002, the results are comparable because a standardization scale was set up so that the average in the country is 250 points. As shown in Table 4, this average has hardly been surpassed in subsequent measurements.

The results of national evaluations can be complemented with PISA Results (Programme for International Student Assessment) applied to 15-year old students in 2001 and 2006. In 2001, reading skills were evaluated and the results placed 28 percent of the students in the lower level of the test and 20 percent below this level[1]. In 2006 reading was also evaluated and it was found that 22 percent of students performed at the lower level and 15 percent below this level.

The learning of reading and writing is critical for all subsequent learning, as most of what is learned in school makes use of reading and writing. Hence, as a student moves forward to the next grade, the use of written texts increases, texts being the most extended, cheap and reliable means of knowledge transmission so far (Eyzaguirre and Fontaine 2008). Furthermore, texts become more complex as one progresses through the years of schooling.

The Ministry of Education has taken over this situation and in 2008 the School Preferential Grants Act (SEP) was enacted. The initiative seeks to ensure a quality educational service for students in the subsidized system, giving an additional grant to students who are identified as vulnerable. The School Vulnerability Index (SVI) is an annual measure carried out by JUNAEB (School Nutrition and Fellowship National Board of the MINEDUC) in April of each year, through the implementation of a survey to the first basic education grade and the first secondary education grade (8th/9th grade) from those educational institutions who apply. JUNAEB is the body responsible for the construction of the School Vulnerability Index (SVI), which is used to target the attention that this body provides. The SVI is built on the basis of a census survey, which measures the vulnerability of students attending municipal or private subsidized institutions in the country. The SVI–SINAE, adds to the SVI three other variables: mother's education, father's education and monthly household income.

The SEP law, besides delivering more resources, requires commitment to the fulfillment of certain educational results. Among the results sought from educational institutions are improving outcomes in phonological awareness and reading speed, both directly linked to the learning skills of reading and writing. These measurements have not been required before in Chile, where all assessments were guided toward reading comprehension.

1.3. Description of the Context in Which the Program is Being Developed

The reading and writing teaching program started at the Francisco de Borja School from where it extended to the rest of Fe y Alegría's educational centers in Chile.

Fe y Alegría's centers in Chile do not select their students. In case it is required, because the number of applicants exceeds the number of vacancies, they use "positive discrimination", meaning that they will first choose the poorest students. Municipal schools are in a similar situation and it is common that they select the poorest students through different ways.

Even though the teaching of the ministries' plans and programs is mandatory, there is no regulation that obliges the center to use a specific teaching methodology, providing them with more freedom. Nevertheless, when visiting the Fe y Alegría's centers, we found that teaching methodologies were often diverse, even between teachers in the same level and between other levels, which generated difficulties for the students.

1.4. Program Beneficiaries

The number of people that benefit from the program are shown in Table 5.5.

One relevant characteristic of the students who participate in the Fe y Alegría centers has to do with their living conditions. Most of the families live overcrowded, with more than one family in each house. This overcrowding leads to two different characteristics which, from the experience of Fe y Alegría schools, influence the student's learning processes and generate special education needs: the first one is the high noise level in the house, product of the number of people living in it and the habit of listening to music or watching TV with a very high volume, as well as the lack of an appropriate space for studying. The second characteristic is related to the kind of oral language used within the popular sectors of Chile; it is spoken with a lot of words in *coa*, a slang-like talk that originates in the prisons and later extends to society. For the population served by Fe y Alegría schools in Chile, the use and knowledge of *coa* is highly valued by the students, while the use of "formal language", the one that is supposed to be used in the classrooms, is limited and we inferred is less known by the community. Given that most of the educational content is taught verbally (Eyzaguirre and Fontaine 2008), those students who have the poorest "formal language" use are in disadvantage. In addition, in Chile many words are very commonly distorted, for example they say *estai* instead of *estás* or *podís* instead of *puedes.* The use of these words among middle-class and high-class children is also common, but while most of them know which one is the correct one, in the lower classes they usually do not. Moreover, there are some dialectic variations of the popular sectors that are discriminatory against the people who use them, namely words like *acerga* instead of *acelga* or *estijera* instead of *tijera.* These oral language characteristics have already been detected by the Ministry of Education, which has also pointed out the urgent necessity to address the issue in order to improve the students' learning. With this purpose, Language Schools were created, in which they treat specific disorders in the oral language in popular sectors' schools in Chile.

Table 5.5. Total beneficiaries of the program

FyA students	6,000
Families	2,900
Municipal schools' students	6,400
Educators (Teachers and non-teachers)	400
Educators not from FyA (Ministry of Education's Supervisors and Municipal schools' teachers)	340

Source: Author's calculations.

1.5. Socio-Economic Profile of the Families

Fe y Alegría educational centers provide services to a high percentage of vulnerable students, i.e. they are part of the most helpless

Table 5.6. Percentage of vulnerable students in Fe y Alegría centers

School	Basic education				Secondary education			
	SVI—SINAE basic 2008	SVI—SINAE basic 2007	Average commune 2008	Max. commune	SVI—SINAE secondary 2008	SVI—SINAE secondary 2007	Average commune 2008	Max. commune
IPH	91.0	84.5	81.8	97.6				
CJAL	80.1	71.5	64.1	97.5				
SICT	77.7	69.5	79.3	96.8				
Escuela PH	96.1	96.6	86.4	98.8				
Escuela SFco	95.2	97.2	89.0	99.4				
Colegio HC	97.7	100.0	82.5	98.9				
SIV	73.2	65.3	79.9	98.8				
CSA	92.0	87.7	64.1	97.5	93.9	85.9	76.2	95.0
SLB	84.3	84.8	78.6	99.2	92.0	84.8	87.4	96.6
CPPA	86.8	70.1	65.6	96.3	93.8	79.5	77.6	96.7
CEA					97.9	94.3	96.7	97.9

Source: JUNAEB, School Vulnerability Index.

third according to the Social Protection index card. Students who are in this third constitute the poorest group.

The School Vulnerability Index (SVI) of Fe y Alegría students for basic education is about 85%, which means that more than 8 out of 10 students are in a situation of social vulnerability, 8 percentage points above the average of their communes. For secondary education (professional technical) this percentage increases to a 95%, 10 points above the average of their communes.

Table 5.6 shows the percentage of vulnerable students who attend Fe y Alegría centers in Chile.

Some family conditions are identified in the SVI such as housing characteristics, overcrowding level, health care access, educational level, and income. Besides these characteristics described by the SVI, in our experience we have found some features from students and their families that we consider relevant for their learning process.

1.6. Basic Information of the Population's Spatial Distribution

The educational centers of Fe y Alegría in Chile are located in various communes in Santiago de Chile and one in the province of Valparaíso, just as shown on the map (Figure 5.1).

2. Staff in Charge of the Program's Progress and Other Stakeholders

Total Number of People Involved and Their Main Roles

The language program for literacy teaching has followed the following track:

■ **2002–2005:** The program is developed and applied at the Francisco de Borja School. Through this stage 7 teachers participated from this school.
Work Methodology: The team met weekly or biweekly, depending on time availability. All the work was done during school hours or through unpaid extra hours they decided to donate in order to finish the job.

Figure 5.1. Location of Fe y Alegría centers

- Escuela Padre Alvaro Lavín
- Instituto Padre Hurtado Huechuraba
- Escuela José Antonio Lecaros Estación Central
- Colegio San Alberto Estación Central
- Sede Borja
- Sede Goretti
- Escuela San Ignacio de Loyola Valparaíso
- Colegio Enrique Alvear Cerro Navia
- Colegio San Luis Beltrán Pudahuel
- Escuela San Ignacio Calera de Tango
- Colegio Hogar de Cristo
- Escuela San Francisco
- Escuela Padre Hurtado
- Colegio Padre Arrupe Quilicura

Source: Fe y Alegría Chile.

Several in-class practices, as well as literacy-oriented materials were given to this team. The team analyzed these practices, made modifications that were considered pertinent and also developed new proposals. Once the practices and materials were agreed, the teachers applied them in the classroom. Sometimes, these processes were supervised to support and observe whatever happened during the installation of the materials.

Work meetings, generally, were divided in two parts:

1. Revision of what had happened inside the classroom with the materials and practices agreed on. Change proposals when necessary.
2. Revision of new practices and materials, and schedule of next sessions.

- **2005:** Fe y Alegría Chile is created and the program is taken to every educational center. In order to extend the program, a group of homologues of initial literacy was formed, where a representative from each educational center participated. The extension started with a massive training of the representatives of all centers in January of 2006. Afterwards, it continued with several monthly meetings of this group of homologues, to which several achievements, difficulties and new proposals were brought. All this was complemented with numerous visits to the centers.

- **2006–2007:** Several tests as well as an Evaluation Result Management System (RMS) were developed online and started to be applied in the centers. For the development of this system, specialized personnel were hired and counted with the active involvement of an expert on systems design who supervised the work.

Throughout the development years of this experience a group of 16 educators has participated directly, some of them elementary school teachers and some of them nursery school teachers. Their participation was concentrated in different time periods. Two speech therapists have also participated, as well as an educational psychologist. In a less direct way, another group of 20 educators have also made different contributions. All of them have a Bachelor's degree and work full-time in the educational centers of Fe y Alegría.

3. Program Development

3.1. Why Was It Developed?

Among the reasons that led to the development of this program there are three that we consider very important:

  i. In 2002, there was a plan to improve the learning of students between 2nd and 11th grade at Francisco de Borja School. In order to find some of the causes of low performance, all the students in the school were evaluated on diverse abilities. In this evaluation it was found that one of the biggest difficulties for many students was that they read deficiently, i.e. they had problems with the decoding and the coding processes, reading comprehension and production at all evaluated levels. Therefore, if a new policy of improvement was to be implemented in the educational center, it was necessary to improve the reading and writing learning processes during the initial years to strengthen this ability for future learning. Among the problems found were: slow readers; higher level students had syllabic reading; difficulties to read long words or complex syllables; mistakes on every evaluated grade (i.e. *conego* instead of *conejo, rrata* instead of *rata, and ágila* instead of *águila,* among others).

  ii. Low-level literacy learning could not be achieved on the first basic year. This includes to learn how to code and decode, which is the base to develop the abilities required for a higher level literacy-oriented knowledge (reading comprehension and text production), which are developed throughout the school years. There was a significant group of students who had to continue this process during the second year.

  iii. Finally, there was a group of children who could not be taught how to read. It was attempted in many different ways but they were not able to learn and it was not clear why. This recognition was the most important milestone throughout the path covered: to be able to see the problem from the "not-knowing"; even more from the "I do not know" perspective. The acceptance of this condition was not an easy task, but once it was assumed it was liberating.

During those years the step from fist grade to the second grade was automatic. The students could advance even if they lacked the necessary minimum knowledge that facilitates the understanding of the upcoming knowledge they should acquire. Currently, even though is possible to repeat the first grade, any student who has not learned the basic literacy skills (coding and decoding) could continue to the second grade, since this is not a necessary condition. The student could obtain the minimum grade point average with other classes that allows him or her to move up to the next grade.

3.2. What to Do?

What was found in the educational centers of Fe y Alegría was not far from what had been intuited and spoken about with the municipal schools' supervisors. There were students at all levels that had very bad levels of reading or would not read at all. This could be confirmed with the students who were received by the Fe y Alegría centers. These centers were oriented toward those students who were not part of the school system for several years. It is usual that some of the students have completed between 2nd and 8th grades and do not read or do it poorly. This seemed to be a "loud secret". This is further supported by the SEP law requirements, which, for the first time, include measurements for literacy learning: phonemic awareness and reading speed, as well as reading comprehension. Apparently, the process of low-level literacy learning is not achieved at the required levels, in order for the attention and memory resources to be left available for reading comprehension in many vulnerable sectors.

The main difficulty faced in this task was that nobody knew how to deal with it, and could not identify the causes that were in its foundation. From this situation, which was quite limiting, we concluded that it was necessary to follow three paths:

   i. **Controlling anxiety:** perhaps the most important element. We were all professionals, and were supposed to know what to do when a child was not able to learn. Facing this, the first reaction was to do something, even though we were not sure what. Until we humbly accepted that many times our actions were more oriented to calm the anxiety than to solve the learning problems of the students.
   ii. **Learning from academia:** we needed to know how people learn how to read and write. Learning was focused on how to develop learning processes of encoding and decoding, since such skills, which can be considered "very basic", were achieved in a deficient way. Besides, the knowledge of the teachers had many gaps. Often the cause of students' literacy-learning difficulties could not be identified, and therefore it was hard to come up with a solution to the problem.
   iii. **Study and observe the experience:** we decided to visit other institutions that addressed students with similar characteristics to those in Fe y Alegría in order to learn from them. In addition, the characteristics of students who usually attend Fe y Alegría schools that might facilitate or hinder the learning of reading and writing were identified.

3.3. First Keys

Key 1: the first key came from the study and the subsequent revision of the educational practices in the Fe y Alegría centers. We learned that learning to read and write entails the development of visual skills and the development of phonological awareness, the importance of short-term memory, the attention and construction of different lexical and sub-lexical "storages" (García Vidal and González 2000).

Phonological Awareness is a meta-linguistic ability that allows the child to reflect on the spoken language, on the sounds of the spoken language (Ericson and Juliebo 1998). It is the ability that better predicts a successful learning of reading and writing (Adams 1994), and is very likely that those children who do not develop phonological awareness will become "struggling" readers. Among the pre-development skills of phonological awareness, there is the child's ability to detect and track rhythms, rhymes and the skill of segmenting and blending sounds of language (Turkewitz et al. 1984).

In the review of practices in Fe y Alegría, this learning was key to realize that teaching methodologies were primarily visual and of paper and pencil.

Conclusion 1: focalized oral activities needed to develop phonological awareness and auditory discrimination were not available.

Key 2: Based on the information above, it was decided to assess students on abilities that had not been tested previously. When the results of the evaluations were reviewed, it was found as expected, that the vast majority of students did not develop phonological awareness and had difficulty in the auditory discrimination of some sounds and manipulation of syllables.

Conclusion 2: the students needed focalized activities to develop phonological awareness and syllable manipulation. This supported conclusion 1.

Key 3: The third key came from the analysis of common mistakes in writing that the students between 2nd and 11th grade presented, as well as from the study and consideration of the context. The most common mistakes they made when writing were:

■ The writing of the r—rr: in almost every grade, and in large numbers in 2nd and 3rd grade, students made mistakes like: *rratón, Enrrique,* "*taro*" when dictated *tarro.*

■ The writing of the g—j: in almost all grades, and in large numbers in 2nd and 3rd grade, students made mistakes like: *Jitarra* instead of *guitarra, conego* instead of *conejo.*

■ The writing of the c—q: less frequently; students made mistakes like spelling **ceso** instead of *queso.*

■ Confusion in the writing of ch—ll—n, or d—t: with a frequency similar to the previous one, there were students, mostly between 2nd and 4th-grade, who made mistakes like: *aralla* instead of *araña, cabacho* instead of *caballo, llocolate* instead of *chocolate.*

■ Omissions and substitutions of some letters: the omission was common in words that have some complexity, for example omitting the "n" in the word *puente.* And there was a group of substitutions such as *agüela* for *abuela.*

These mistakes were analyzed based on the abilities that were being acquired and then classified into three groups:

i. Mistakes that arise from being unaware of the use of some pairs of letters that may have the same sound; this is called contextual spelling. Contextual spelling refers to those cases where the phoneme can be represented by two graphemes and there is a conversion rule that indicates which to use. This rule depends on the phonemes that follow and precede, in some cases, the phoneme in question (García Vidal and Gonzalez 2000).

ii. Mistakes that arise from poor auditory discrimination. There are phonemes that sound very similar; the resemblance is due to the proximity of the hinge points in them. Those children who have worse auditory discrimination than expected, have difficulty distinguishing these sounds (García Vidal and Gonzalez 2000). Regarding the omissions of letters in words, García Vidal and González (2000) indicate that the most frequent omissions affect the phonemes that are difficult to perceive as separate units (semi-vowels as i in *piedra*). Also, the frequency of omissions increases when considering complex syllables (i.e.: *trans-por-te, tri-ci-clo*); information that is consistent with the observations made in Fe y Alegría. The origin of this difficulty is also found in the auditory analysis.

iii. Finally, to find the cause behind substitutions such as *agüela* for *abuela* or *cuerta* for *puerta,* we asked for some help from speech therapists that work with poor students, and the explanation was very simple: children were unaware of the correct word.

Conclusion 3: it was necessary to develop activities that would allow students to develop better auditory discrimination abilities and improve the oral language used on a daily basis. The latter directly affects the entire school staff, which needs to make an extra effort in order to use an oral language not only familiar for students, but also correct, since most oral skills are acquired through immersion (Gardner 1993).

Key 4: as important as the reasons above, the disorganized methodology for literacy skills teaching and the lack of focus.

Conclusion 4: it was necessary to organize and focus the teaching.

3.4. Initial Agreements

After the evaluation and analysis were conducted, new initial agreements were created that led to the subsequent work:

Agreement 1: to develop focalized activities meant to develop phonological awareness, auditory discrimination and manipulation of syllables. The activities should be intentional and organized. It is not just about orality for the sake of orality; it is necessary to define goals and a method to achieve each one of them.

Agreement 2: to promote participation among the Fe y Alegría students in the programs carried out by the Ministry of Education for Oral Language Disorders. To apply for ministerial resources to fund the creation of the same programs in Fe y Alegría schools. To promote the exchange of knowledge, as well as agreements between the teachers and the professionals from the Language Schools at the center to work in an interdisciplinary way.

Agreement 3: to change many educational practices in order to teach how to read and write, starting by increasing the oral interaction between teachers and their students within the classroom in order to achieve goals.

Agreement 4: to develop appropriate practices and materials designed to teach how to read and write in a classroom with 40 to 45 students, being this the usual number of children in the Fe y Alegría classrooms.

Agreement 5: to work from a prevention perspective. This meant that practices should be created to develop the necessary abilities to learn how to read and write, and that these should be applied in the classroom before the abilities were required to learn how to read and write.

Agreement 6: to train the teachers and give them the necessary tools for them to know why a student was having problems learning how to read and write. This way they could implement the appropriate measures to solve this problem.

Agreement 7: the process of teaching reading and writing should begin in kindergarten and continue into first grade; by doing so, two years could be dedicated to achieve this task.

4. Language Program

As the program advanced, the different components were clarified. This clarity did not emerge all at once, but over time. In fact, once the program is installed and as time goes by, changes arise both in students and in schools, product of the installation of the program and of the changes in the context that require further modifications.

4.1. Materials

The first job was to organize the learning that students should acquire and, based on this, develop activities and materials. This process lasted around two years because it was tested in the classroom and it took too much time to resolve some of the difficulties faced by the students while learning how to read and write, e.g., the correct spelling of words using r and/or rr.

Along with the students' material, a methodology was being developed to work in the classroom, which was being written and systematized for subsequent years so it could be transferred to other teachers. Along with the methodology, the creation of a set of materials was needed, for the teacher to post in the classroom.

The initial materials that were developed for students to use in the classroom include two books, one for kindergarten and one for first grade. Along with these, two other books for the teachers (one for kindergarten and one for first grade), in which the methodology is briefly described and includes materials that could be posted and used in the classroom.

Kindergarten Books

As noted previously, it was agreed that the process of teaching literacy skills should begin in kindergarten. For this, a guide book for students was created. This book is divided in three parts: development of phonological awareness, graphomotor exercises, and learning of the first four vowels and consonants. The guidelines are preceded by oral work, except in the case of graphomotor exercises.

Development of phonological awareness: these activities should lead children to think about a specific resonant characteristic of words. The guidelines presented for this ability are final tasks. Before, children must listen and identify familiar sounds, as well as listen and identify familiar rhymes, in that order. Guide books work on the length of the sound of a word, leading students to think in terms of words, and then continue with oral activities of syllabic manipulation. Examples are shown at right.

Graphomotor abilities: it is common that, because of the poor economic conditions of the families, students in Fe y Alegría schools have not been able to use pen and paper to draw before starting school. Thus, they need to participate in activities aimed to develop graphomotor abilities. The graphomotor abilities that help to develop the material are:

■ **Pressure:** it refers to the pressure that the child exerts with a pencil on the paper; when loading a lot of weight on the hand, it
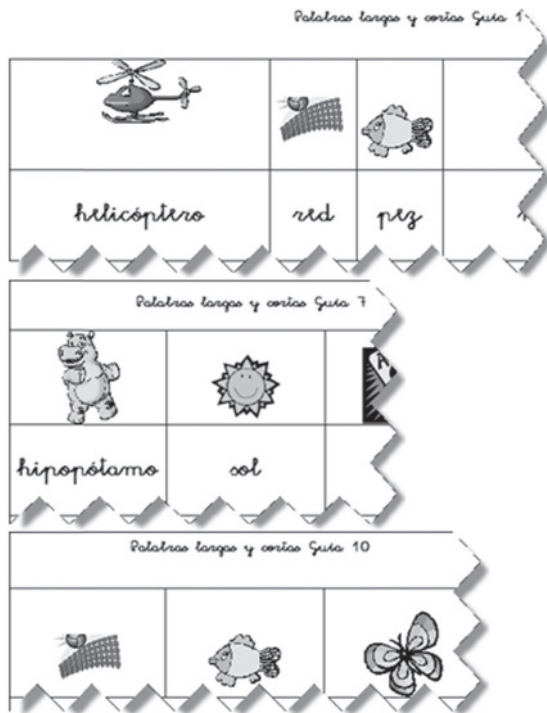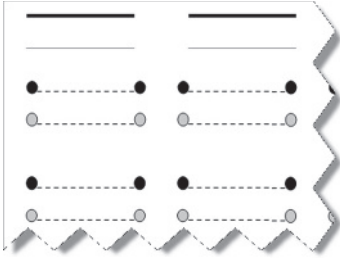
gets tired and has difficulty making curved lines. To exercise this graphomotor ability, they perform "pressure copies" with different lines, in order for the child to learn how to change the pressure of the pencil on the paper. These exercises are performed with guides as shown at left (top).

■ **Sinistrogiro:** refers to the circular movements made to the left by the child when writing. These movements are a problem to many; they practice with exercises like the one shown at left (bottom).

Learning of the vowels and the first four consonants: knowing the vowels is crucial for learning literacy skills. It is required to learn how to distinguish them visually and orally, being the visual distinction easier than the oral one. The vowel learning process begins with a series of oral exercises described in the teacher's book, oriented for the students to identify the initial vowel and then advance in complexity. Most of the exercises should be preceded by out-loud voice exercising (this is described in the teacher's material). The first four consonants that are learned are: L—M—S—P.

First Grade Books

Similar to the Kindergarten book, there was a book with guidelines for first grade students and another one for teachers.

The order in which the consonants are learned was one of the tasks that took longer, because some of them are more complex and many of the mistakes found in the diagnostic phase were related to this learning.

After various tests in the classroom and evaluation of its results, the following criteria were agreed for the order in which consonants should be taught:

■ Children have more difficulty in differentiating the consonants from the vowels auditorily, since the sounds of the first ones are not sounds that occur naturally in language (Ericson and Juliebo 1988); this is why the first 8 consonants must have the minimum level of phonological difficulty, especially the first four. It was decided that the first 8 consonant should be: L—M—S—T—P—D—N—F.

■ The r—rr was another great difficulty, so it was decided to present one after the other to make all necessary distinctions, both auditory and written. The same was done with the consonants c—q and g—j.

■ Finally, with the consonants ch—ll—ñ, other difficulties were present when auditory confusions occurred. Thus, it was decided to present them one after the other to verify that the child made all the necessary distinctions.

4.2. Training

The theoretical-practical learning that was being acquired required that the teachers who participated in the project were trained, as well as new teachers who would get involved in the future. For this reason, a training workshop was designed in which teachers from

kindergarten to 4th-grade were invited to participate. Higher grades teacher were invited, as it is common for them to have students with some of the literacy difficulties listed above.

This workshop teaches the learning processes of reading and writing, shows the use of the designed materials and emphasizes on the diagnosis and solution to the difficulties that children may have.

4.3. Evaluation

The moment in which the learning process of reading and writing begins can be easily defined. However, determining when this learning can be considered complete is not as simple. Evaluations are essential to distinguish the stage in which the child stands. The evaluation process of learning how to read and write was divided in three parts:

- **Vowel Learning:** In order to determine that the vowels have been learned, they should be evaluated individually, hopefully by a person outside the classroom. Learning should be evaluated through visual and auditory testing and the students should get perfect marks in both. Furthermore, it is not enough to know the vowels most of the time, since in order to read and write properly they should be known all the time.
- **Writing:** To evaluate the process of writing a series of dictations were designed, focusing on different writing difficulties presented by students in the diagnostic phase, i.e. confusion in the use of r—rr, g—j or confusions of consonants ch—ll—ñ. Such mistakes need to be registered in order to have clarity regarding when they were removed.
- **Reading:** this was the process that required more work for its evaluation. The first thing that had to be determined was the point at which the learning process is supposed to end, agreeing that it was achieved when there is an automation of the process (Abadzi 2008). This implies that for its evaluation a measurement of the students' reading speed for several years is required. Tests were designed for this purpose, standardized tables were sought to indicate the number of words per minute the student should read at each level, and also, reports were designed to present results.

5. Funding and Program Assessment

5.1. Program Funding

The only funding that was available for this program was used to develop the registration and reading evaluation results production system. This funding was provided by a private donor who wished to remain anonymous. The donation was of US$ 16,000; the rest of the program was developed through worked and donated hours by those who participated.

5.2. Criteria for Evaluating the Program

To evaluate the impact of the program, a measurement of oral reading speed was chosen. It is a simple and reliable indicator that shows the progress of such skill, and measures the level of automation of the decoding process. This indicator has been validated by research as an observable sign of progress in reading ability (Madeleine and Wheldall 2005). Moreover, students who read slowly, since they have not actually automated the process of decoding, have more difficulties when extracting the meaning from text (Pinell et al. 2004).

Above, it was noted that the acquisition of phonological awareness is key in the learning process of how to read and write. This is why a new test to evaluate it has been developed, but is still in the review phase.

5.3. Fe y Alegría Reading Speed Evaluations

Fe y Alegría Chile began to evaluate the reading speed of students in 2005. For this, tests were prepared with their levels of difficulty matching what is required by the textbooks used by the Plans and Programs of the Ministry of Education at every level.

The beginning of the evaluation process in Fe y Alegría centers was complex due to opposition from the teachers. After they were trained and provided with tools, the process began to be accepted. An important source of support for this process was the Ministry of Education that set the annual measurement and reporting of reading speed as a requirement to access the Preferential School Grant funds.

Evaluating the students from Fe y Alegría schools have taught us that a double process of evaluation needs to be carried out:

- **An external evaluation process:** the students are assessed by evaluators (from Fe y Alegría's national office) who are external to the school, in similar conditions in which the other assessments were done at the beginning and at the end of the school year, with tests that are not known by the center before being applied.
- **An internal evaluation process:** the students are evaluated by their teachers. This allows the teacher to know the progress of each student, and also enables her to listen to the reading of those students who do it wrong, since most of the times they try to go unnoticed. In many cases the teacher is surprised by the poor quality of the reading skills.

To conduct these evaluations, Fe y Alegría has developed tests for levels between 1st grade and the 8th grade. The group of tests of Fe y Alegría Chile includes 3 different tests for 1st grade and 6 different tests for each level form 2nd to 8th grade, so that schools apply them on the dates they consider appropriate.

The amount of information obtained in these assessments is very large, so the report production becomes very complex. Hence, it was necessary to create an Information System for the Management and Evaluation Results (SIGRE), an online system where data is entered and reports are produced to be analyzed by teachers and management teams. The system became operational in 2006, which has allowed maintaining a historic record of the information.

Although there were improvements in the reading speed between 2006 and 2008, the most notable achievement was that all students were taught how to read.

Table 5.7 shows the number of children evaluated in the centers of Fe y Alegría Chile from 2008 to 2009.

5.4. Public Service

Since 2008, the experience of Fe y Alegría was shared and others were trained in the new methodology. The training has been targeted to schools that serve deprived areas.

The Ministry of Education called upon Fe y Alegría to speak about their experience on speed measurement to technical representatives of all Regional Secretaries of the Chilean Ministries, in August of 2008. From this experience, the Fe y Alegría team has:

Table 5.7. Students Evaluated in Fe y Alegría centers 2008–2009

F&A students	9,000
Municipal Students	5,400
Other Establishments	300

Source: Author's calculations.

- Presented its experience to all supervisors of the 5th and 8th region in Chile. They are the ones in charge of tutoring the municipal schools of their respective regions through the evaluation process.
- Trained 100 Supervisors of the 5th region on initial literacy skills.
- Trained 100 teachers of the Master Teacher Network in the 5th region on initial literacy skills. These teachers are the ones in charge of tutoring and training in the municipal schools of the region.
- Taught the evaluation processes of reading and phonological awareness to management and faculty teams from 19 schools and centers of the city of San Antonio. In addition, it coordinated the evaluation of the commune.
- Taught the evaluation processes of reading to teams and teachers from 6 schools and centers from the city of Cartagena. In addition, it coordinated the evaluation of the commune.
- Trained management teams and teachers from 17 schools and centers from the city of Coelemu on initial literacy skills.

6. Current Status of the Program

The development of this program has allowed all students from Fe y Alegría to be taught how to read and write by the end of 1st grade. Now the challenge is to achieve a greater percentage of good readers by the end of 1st grade, namely, more fluent readers. An amendment to the program is being developed alongside the educational center with the best results at this level, to be applied starting on pre-kindergarten.

In the evaluation, what was most difficult to introduce in the classroom was the targeted oral activities to develop phonological awareness. In the evaluation of the students with poorest results, these remain as the key variable. This is the reason why this part of the program is being redesigned.

7. Recommendations

Learning throughout this program relies on the ability that at least one person who participated in this project had to see reality through a different lens.

To Focus

Low and high-level processes differ from each other within the learning processes, as shown in table 5.8.

It has never been questioned whether the goal is to achieve a good reading comprehension, text production and reading promotion. However, we realized in a crude way that too many Fe y Alegría students failed to acquire the minimum requirements in the basic-level processes to enable other skills to develop and we were not teaching all of them how to read.

Table 5.8. Learning processes

	Reading	Writing
Low-level Processes	Decoding (Precision, Speed and Fluency in Reading Skill)	Encoding (Spelling)
High-level Processes	Reading Comprehension	Text Production

Source: García Vidal and González (2000).

It is necessary to focus for some time on basic-level processes, without abandoning others to ensure that all students will read in the appropriate timescale. A longitudinal study in the UK showed that evaluations of language conducted with 7-year old students were determinant for subsequent achievements, even after making adjustments for socioeconomic status (Currie and Thomas 1999). It would seem that the time for them to achieve a good reading level could not be too long.

The experience of Fe y Alegría and numerous studies show the importance of phonological awareness when learning literacy skills, which is necessary to have targeted programs that develop the required skills for learning. These programs should be started, if possible, during preschool and followed until the required skills are acquired.

Take the Context into Account

Research has shown that during the process of learning how to read (not on reading comprehension), the exercises are mostly traditional. However, the main issue is to sort by degree of difficulty, the skills needed in relation with the context in which they are taught. Context analysis becomes defining, since the previous skills, or the ones that are required to learn how to read and write, develop differently in different social contexts. This is a very important key for teaching literacy skills to everyone in the popular sectors. There is a natural learning of the language and its characteristics that occurs at home and immediate surroundings during the early years (Gardner 1993). This facilitates or hinders the future access to reading, which also depends on the social and cultural context in which the child grows. It is then necessary to develop teaching practices and materials targeted to the popular context.

Order, Systematization, Order, and More Order

This is not simple within poor communities because there are many emergencies and unexpected events. However, the experience of Fe y Alegría has shown that organization is essential. Being systematic in teaching is too, since this is required by the low-level learning processes, the evaluations and the implementation of improvements for those students who have difficulties. Otherwise, time passes and not only will they not reach the goals, but sometimes it is not clear why they have failed

To Evaluate

In contexts in poverty, time is often the enemy, since it starts to pass and no goals are achieved. Thus, an evaluation system is essential to make improvements while it is still possible. Resources are not abundant and therefore the evaluation system should be efficient and simple. Since Reading Speed is an indicator of reading progress, it is recommendable that this process should be measured through systematic evaluations until students achieve automation.

Because of the importance of the phonological awareness in this process, given that it is likely to increase the probability of a successful process of learning on how to read and write within a reasonable time, it should be measured at different stages.

To Train

To achieve this it is required to provide tools to the teachers. In the case of Fe y Alegría Chile, several of them do not know in detail the cognitive processes related to the learning

process of encoding and decoding. This knowledge is necessary, especially when students have difficulties, many, in the case of Fe y Alegría. It is an required in every educational center that at least one teacher may be able to diagnose the problems and say what to do to in order to solve the difficulties. Barber and Mourshed (2008) are very emphatic when they say "the only way to improve results is to improve the instruction of teachers."

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Notes

1. The test has five levels.

Popular Teachers Training for the Transformation of Practices

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The training program of popular teachers, now known as global plan, has as objective to broaden and strengthen the training processes of Fe y Alegría staff through various modalities to contribute to their personal development; identification with the identity, mission and vision of the movement; ownership and implementation of the popular education model of quality; and efficient management. The program has served more than two thirds of teachers and managers of the federation around the world. From a diagnosis of the training needs, the program has been consolidating a Federation's training proposal that attempts to coherently respond to the purposes of its educational ideology, to the analysis of the society they aspire to transform and to the kind of teacher needed to achieve it. This article describes how to articulate, implement and fund the global training plan for managers and teachers.

1. Introduction

The training program of popular teachers (known as Program 10 or P10) has as objective to broaden and strengthen the training processes of Fe y Alegría staff through various modalities: in classroom, virtual, and permanent network teams of research and training, to contribute to their personal development and to a better identification with the identity, mission and vision of the Federation; to promote the ownership and implementation of the popular education model of quality; and to achieve more efficient management.

To build a common language for planning and to ensure that the demands and interests of the member countries of the International Federation of Fe y Alegría (IFFyA) were included in the federation's plans, this movement has developed 2 global plans, each for a period of 5 years: the first one from 2001 to 2005 and the second one from 2005 to 2009.

2. Program Context

2.1. Main Global Data from the Work of the Federation in the Field of Teacher Training

The Program 10 works with teachers and managers from different countries in the Federation, which according to statistics for 2007 add up to 39,253. As table 6.1 shows, more than two thirds of the teachers working in Fe y Alegría are women (67 percent).

Table 6.1. Personnel global data distributed by function, gender and religious status 2007

	Distribution by functions					Condition			
	Total	Managers	Teachers	Technicians professionals	Administ. assist.	Facilities assist.	Laics	Relig	S.J.
Male	12,966	688	8,832	1,029	1,024	1,393	12,804	162	68
%	33.0	36.1	32.2	38.8	25.1	43.2	33.3	19.7	100.0
Female	26,287	1,218	18,555	1,626	3,057	1,831	25,625	662	—
%	67.0	63.9	67.8	61.2	74.9	56.8	66.7	80.3	—
Total	39,253	1,906	27,387	2,655	4,081	3,224	38,429	824	68

Source: Fe y Alegría.

For Fe y Alegría, the purpose of education is to train people in all of their dimensions and throughout their lives for them to achieve their personal transformation, the transformation of others and of their environment. This implies that, in addition to carrying out an educational work with children, youth and adults, this movement insists emphatically on the training of teachers who work in their centers to take them come closer to the profile of a trained and committed teacher who can implement change processes.

In this sense, Fe y Alegría conceives the teachers training as an integral, permanent and unfinished process. This process seeks to train popular teachers to be reflective, autonomous, and with knowledge, skills and attitudes to lead transformation processes that contribute to improve the quality of education.

While its organization is characterized by the functional autonomy of the 20 countries that constitute it, with regions and schools that have common principles and objectives as well as communication and solidarity, it is IFFyA's responsibility to: stimulate the collective construction and the ongoing review of its proposal for popular education and social promotion; to promote cohesion of the national educational work of Fe y Alegría, the identity with the ideology; and to generate resources, meeting spaces and common training in all countries.

To achieve this, the training program for popular teachers or P10 is created. The program began in 2001 as a result of the development of the first Global Plan for the International Federation (hereinafter GPIF I), and was created to study in depth the different types of training for Fe y Alegría staff contributing to their personal and professional development from the perspective of popular education, and to the construction of the movement's identity.

To fulfill operational objectives, the global plan established the implementation of priority actions that constituted the framework of various projects, some of which culminated at the end of five years and others that required prolongation. In this regard, and consistent with its conception of training, the action "to encourage training and high instruction of professional managers, teachers, promoters, and technical/professional staff of the Movement" (GPIF I) is permanent, and continues in the second global plan for the development and institutional strengthening (hereinafter GPIF II) executed from 2005 to 2009. From 2009 the plan became known as personnel training program.

Similarly, the lines of action "to promote the association or the constitution of networks for research and for continuous training among teachers . . ." and "to promote the training of teachers in the dimension of learning to learn . . ." have guided the planning, design and monitoring of the various projects that have been executed by the program. These have had an extensive coverage and have produced a series of publications and sup-

Table 6.2. Education level reached by the students' representatives from 418 schools in Fe y Alegría (in percentages)

	Parents educational level				
	Illiterate	Elementary school	Middle school	High school graduate	College education
Father	3.6	36.6	22.7	26.7	10.4
Mother	5.8	37.4	22.0	23.7	10.1

Source: Fe y Alegría.

port materials for the trainings, contributing to the institutionalization of a proposal for teacher training in different member countries of IFFyA, respecting their reality and needs.

2.2. Context

The Fe y Alegría educational centers serve a culturally, socially, territorially and economically diverse population, and they are all located in popular sites in urban, semi-urban or rural areas. According to a comparative study regarding the location of schools in marginal areas, conducted with the participation of 298 Fe y Alegría educational centers and 287 public schools[1], a higher incidence of urban marginality was found in Fe y Alegría schools (41.4 percent) compared to public schools (27.5 percent), which is consistent with the educational project of this movement. The study found that in Peru, Bolivia, República Bolivariana de Venezuela, and Colombia, schools were located in disadvantaged urban marginal areas, while in Nicaragua, Paraguay and El Salvador, marginality level was similar in both types of schools. Only Ecuador had a higher percentage of public schools in marginal neighborhoods.

IFFyA's Quality Program (known as P1) performed a descriptive analysis of the sociofamiliar context of students in 418 schools from 15 countries of Fe y Alegría[2]. Key results are presented in the following tables.

The results on the educational level of the representatives are quite similar (see table 6.2). The most frequent answer is that both finished elementary school and did not continue their studies (36.6 percent of fathers and 37.4 percent of mothers). The lowest percentage of representatives have very low education levels, with a significant difference between genders: the percentage of fathers who cannot read and write is 3.6 percent, while that of mothers is 5.8 percent.

The analysis of table 6.3 shows that occasional worker and salary worker are the most frequent occupations of fathers, adding up to 71 percent. Meanwhile, 48.2 percent of the mother work only at home.

Table 6.3. Occupation of the students' representatives from 418 Fe y Alegría schools (in percentages)

	Job occupation					
	Unemployed	Works at home	Occasional work	Salary worker	Business owner	Company owner
Father	5.4		35.0	36.6	16.7	6.3
Mother	48.2		17.7	17.4	11.7	5.0

Source: Fe y Alegría.

Most students live with both parents (70 percent), although 22 percent live with only one of them. In order to determine whether the students live in overcrowded conditions, the number of people with whom they share a room was used as a proxy, finding that 18.5 percent shared their room with 3 or more people, while 45.6 percent shared it with 1 or 2 people. Finally, over half of the students have basic public services: water and electricity.

2.3. Population

Since its inception in 2001 and until 2009, the program has served the following population through the development of 5 major projects presented in table 6.4.

Compared to the current total number of teachers and managers of Fe y Alegría, the Program 10 has been able to serve 66 percent of this population.

- The first project developed by the program was the Popular Teachers Training Program, which has been considered a milestone within Fe y Alegría. It was designed to serve 100 percent of the teachers who belonged to the movement during its lifespan and reached coverage of about 88.4 percent.
- The expansion of the movement in recent years, both in relation to the number of countries and schools, has resulted in the continued growth of the population of new teachers who need to participate in training processes.
- According to Swope and La Torre (1998), the vast majority of teachers working in FyA complete in their schools between 1 and 10 years of service, leading to high turnover rates that limit the permanence of achievements. This happens to be a matter of concern due to the large investment of resources and time that the movement dedicates to train its staff.
- A survey given to 4,189 participants from 10 countries of the first cohort of the Popular Teachers Training Project[3], found that the group was formed mainly by women (71 percent), especially married women (54 percent) who came from low income families and had surpassed the levels of formal education of their parents.
- The first cohort of the training of popular teachers in virtual environments has 433 participants of whom 68 percent are women, which replicates the relationship between men and women in the global population of IFFyA.

Although there is no precise data, often a large number of Latin American teachers are forced to perform other paid activities in order to complement their income. For exam-

Table 6.4. Projects developed by Program 10, duration, mode and beneficiaries

Duration	Project	Educational mode	Num. beneficiaries	
			Direct	Indirect
2001–2005	Training of Popular Teachers	In Person	24,682	704,732
2005–2008	Mathematical Development	In Person with Virtual Activities	361	10,830
2005–2008	Training of managers	In Person	62	1,200
2007–2009	Researchers' Network	Virtual	428	12,840
2007–2010	Training of Popular Teachers Under Virtual Environments	Virtual	900*	27,000
		Total	26,433	756,242
			782,675	

*The project aims to serve 900 participants in 2010

ple, some teachers work one shift with Fe y Alegría, one shift with the public sector, and at a university or college at night. Likewise, some others combine teaching with another activity of a different nature. According to Elvir (2006), 21 percent of the participants in the first cohort of the Popular Teacher Training Project worked two teaching jobs. This situation deteriorates the quality of education because the teachers are forced to move from one place to another and lose time they could use to plan their activities, innovate or think about their teaching practice.

In a case study conducted with participants of the first cohort of the Popular Teacher Training Project[4], it was found that the majority of them were women who graduated from Normal Schools with average ages between 31 and 40 (see table 6.5).

In many Latin American countries the processes of initial training offered by universities and educational institutions are not based on the actual situation of those studying education. Processes are based on prospective criteria, far removed from reality, which does not allow the necessary preparation to address cultural diversity, social inequality and the learning that they have to experience daily in the classroom.

Similarly, it is observed that there is a division between the Ministries of Education, which implement educational reforms, and the training institutions. This causes the teachers who graduate to be outdated when they face the transformations that are happening in schools, thus requiring an update process and permanent training. Moreover, Elvir (2005) notes that there are some characteristics in the teachers who affect their training processes, including the lack of reading habits, the lack of personal time management, and the lack of basic learning skills like the production of summaries.

A study on Fe y Alegría[5] used two main criteria to describe the profile of FyA teachers who form the population served by the Program 10:

- Their willingness and availability to perform multiple tasks during the workday and to work overtime or in holidays.
- Their moral character.

The study finds that these two are the main features that make possible the implementation of the strategies to improve the efficiency levels of FyA centers.

Finally, it can be claimed that the Fe y Alegría staff, which constitutes the target population of the training projects proposed and implemented by the program, is highly committed to their profession, have a great desire to thrive and have accumulated significant experience in education.

Table 6.5. Information on training, gender and average age (in percentages)

Country	Initial formation		Gender		Average age		
	Normal	University	Female	Male	20–30	31–40	41 +
Argentina	53.4	30.1	77.7	22.3	21.4	40.8	37.9
Colombia	29.3	62.9	74.6	25.4	14.0	33.0	53.0
Ecuador	40.0	47.0	67.0	33.0	32.4	41.8	24.4
Honduras	59.0	0.0	35.3	64.7	76.5	23.5	0.0
Paraguay	78.9	4.2	65.0	35.0	56.6	28.5	5.9
Peru	38.7	48.8	73.0	27.0	26.9	48.1	23.0
Dominican Republic	35.0	55.0	77.0	23.0	25.0	41.0	34.0
Venezuela, R.B.	37.5	37.7	80.0	20.0	25.2	41.6	31.4

Source: Elvir (2005).

3. Staff in Charge of Running the Program and Other Stakeholders

Since its inception, the personal training program has been located in República Bolivariana de Venezuela, where Fe y Alegría was born in 1955, in the city of Maracaibo, at the Father Joaquin Research and Training Center. The location has become a strength since it provided support infrastructure, a reference team to reflect and dialogue, and a connecting thread to the process facilitating the continuity and consistency of projects undertaken and accompanied from this instance.

The team that currently manages the Program is structured as indicated in table 6.6.

The program articulates its activities through a network of stakeholders with different functions:

a. The Program's International Committee constitutes an organizational instance to support the formulation of policies related to educational processes, as well as the planning and evaluation of the project activities executed by the program. The committee consists of the general coordinator and 5 other members of different Fe y Alegría centers appointed by the Board of Directors. Some of its functions include establishing links between the various federative programs, validating training proposals, and coordinating times and resources.

b. The Program's National Managers (known as "national liaisons") are the bridge between the national pedagogic teams and the program, in order to spread and implement the executed projects and the forthcoming ones, as well as to accompany the undertaken processes of training and follow up on the participants enrolled in each of the countries. In some cases, i.e. Bolivia, the liaison also plays a role in the selection of teachers who will enroll in various projects proposed by the program. Despite the progress made with the team of liaisons, there are still two major difficulties that must be solved: first, some countries have not yet designated a person for the team, and second, the multiple functions that these professionals must meet, prevent them from dedicating enough time to accompanying the educational processes implemented by the program.

c. The Program Tutor is a member of the IFFyA office appointed to accompany the International Program Committee and support the Chief Program Coordinator in the direct monitoring of projects, as well as to serve as a communication channel between the Federation's Board and the program staff.

d. Since the program has focused its attention on virtual learning, there has been a consolidation of a team of online mentors who tutor the participants in their educational processes through the Fe y Alegría platform, virtual classroom, guiding and encouraging the construction of collaborative learning.

e. External stakeholders are other people involved in the progress of various projects, undertaken especially in recent years, under partnerships

Table 6.6. Current program team

Position
General Coordination
Executive Coordination
Manager for the Management Team Training Project *
Manager for the Networks of Research Teachers Project
Manager for the Popular Teachers Training under Virtual Environments Project
Virtual Classroom Support

(*)The Management Training Project is the only one that has been conducted in Argentina

with universities from the Association of Jesuit Universities of Latin America (AUSJAL) that were formed to achieve university certification and recognition for the Popular Teacher Training program:

- The Universidad Católica Andrés Bello in Caracas, through its Center for Online Studies, has been responsible for designing the materials and virtual tutoring sessions for the Action-Research course conducted in the framework of the Networks of Research Teachers Project, as well as the modules and popular teacher training program in virtual environments.
- The Pontificia Universidad Javeriana in Bogota, the Pontificia Universidad Católica in Ecuador and the Universidad Antonio Ruiz Mendoza in Peru have made their teachers available as content experts for the development of the program's modules, and to act as coordinators and tutors of the program's virtual classroom.
- The Universidad Gabriel René Moreno in Santa Cruz, Bolivia, is participating in the Popular Teacher Training program by incorporating their teachers as tutors.
- The Latin American Faculty of Social Sciences (FLACSO) and the International Institute for Education Planning (IIEP)—UNESCO collaborated in the development of materials for the series of managers training, which contributed greatly to the enrichment of the training proposal.

4. Program Funding

Throughout its existence, the program has implemented projects and has received funds obtained through international cooperation (see table 6.7).

Resources have been used primarily for:

a. The preparation of educational materials: including hiring authors; edition and printing of texts (the "Popular Teacher Training" collection -17 books-, "Logical-Mathematical Thinking" -20 books- and "Training of Management teams" -6 books- (see Annexes 3A, 3B and 3C)) and the development of multimedia educational resources.

b. The translation and printing of the program's books to French and Portuguese, and the design and development of a multimedia educational tool to complement the materials for the managers training program.

Table 6.7. Projects, educational modality, funding agency and funds

Duration	Project	Educational modality	Funding agency	Funds (US$)
2001–2005	Popular Teachers Training	Classroom	Magis Americas SM Foundation	1,423,034 127,390
2005–2008	Mathematical Development	Classroom with Virtual Activities	Magis Americas	38,989
2005–2008	Managers Training	Classroom	AECID—Magis Americas	486,023
2007–2009	Researchers Network	Virtual	Magis Americas	230,228
2007–2010	Popular Teachers Training in Virtual Environments.	Virtual	AECID	453,779
			Total:	**2,759,443**

c. Payment of project personnel.
d. The purchase of equipment.

5. Key Ideas That Guide the Program

To understand Program 10 it is necessary to explain the reference framework that has guided it since its inception, the perspective of popular education with an ethical-political-transformational intention. From this perspective, the program seeks to train teachers and working staff in schools located in marginal areas, to initiate an internal change that will enable them to give new meaning to their lives and to commit to generating processes of social transformation through education.

From a diagnosis of the training needs, the Program 10 has been consolidating a training proposal for IFFyA that "attempts to respond coherently to the purposes of educational ideology, the analysis of the society we aspire to transform and to the type of education needed to achieve it[6]". The proposal assumes the teacher comprehensively in all of his or her dimensions: human, socio-political and cultural, as well as their learning and their pedagogy.

■ The *human dimension* implies a deeper self-knowledge as a teacher, as an individual immersed in a cultural context that shapes her own subjectivity, as well as a valuation of her experiences and clarification of her values to reconstruct herself as a person. As a Christian movement, it also involves cultivating the spirituality of the teachers, as well as increasing their faith and solidarity towards those who need it most.

■ Being part of a movement of popular education, t*he socio-political and cultural dimension* aims to train the teachers to allow them to understand and interpret the social, political and cultural reality; to acknowledge the world from the perspective of the impoverished and the excluded. It also aims to have qualified teachers to analyze the actions of the communities in which they live and teach, and to reflect about life in democracy and to promote it in the classroom, in the school and in the community. Overall, it aims to train citizen teachers who promote citizenship.

■ The dimension of *learning to learn* has as objective that during the training process, the teacher learns to think logically, to develop communication skills that help self-manage their own learning process, to produce autonomous knowledge, and to master strategies and research methods, especially those that involve a critical reflection on their own practice. It also seeks to train teachers who can handle office applications and telematic tools.

■ Finally, the *pedagogical dimension* seeks to train teachers capable of analyzing education to find its meaning as a social practice to transform society. It also seeks teachers to take ownership of theories, methodologies and specific strategies to improve their pedagogical practice, as well as to plan and evaluate the teaching-learning process by organizing a motivating learning environment.

The 5 projects designed and executed from the teacher training program have been based on:

a. The belief that to transform the practice it is necessary to start with the transformation of the teacher and her context: the classroom and the school.
b. The intention to train popular teachers capable of thinking critically about their job and with tools to transform it, capable of maintaining a process of self-training and implementing innovations.

c.   The need for management teams with an emphasis on pedagogy, that are open to change, and that support and accompany the processes and innovations proposed by the teachers.

The core principles that give meaning to the various training proposals implemented by the program are:

a.   **Integral training**: considers all the identities of a person (mother or father, teacher, citizen, friend, etc.) and her dimensions (affective, ethical, religious, intellectual, etc.).

b.   **To start from critical reflection**: start from the personal, social and educational reality in order to question it, problematize it, compare it with other's opinion and, as a result of these, to implement actions to transform it.

c.   **To train from the dialogue between knowledge and from cultural negotiation**: it assumes the dynamics of training as an encounter between people with different life experiences and cultural references in a horizontal relationship that can build new knowledge and concepts.

d.   **To promote research-action and systematization processes**: proposes to train researchers in their own practice to understand their problems and plan actions to improve their quality.

e.   **To boost productivity, autonomy, creativity, and joy**: a training that promotes the trainees' contributions in a creative, joyful and responsible environment.

f.   **To structure a training experience that models the desired education**: seeks to convert training practices into a space where one can experience the democratic, reflective and collaborative relations that must exist in schools and educational programs.

g.   **To form networks among the teachers and with other organizations and individuals working in popular education**: it empowers the exchange of experiences and the permanent communication with others that have the same objectives to build networks of mutual support.

h.   **To train managers** to deal with different situations and problems by providing a framework of action for specific situations and the construction of an institutional horizon. Management teams capable of reading the reality and propose concrete actions to improve the quality of the educational processes that are established in each country and each school.

i.   **To enhance the reflective ability of the management teams** as a strategy to train reflective professionals who visualize the needs and have a toolbox they can use when the situation demands it.

The computer education program (No. 3) and the personnel training program (No. 10) came together to build the training model of the IFFyA under virtual environments. This model aims to create empowered learning communities to build contextual knowledge based on the practice and to transform it.

6. Program Execution

6.1. General Articulation

From its beginning, fully aware that the quality of education improves with the training of teachers, the Program 10 has conducted 5 major projects for personnel training along two major lines: teacher training and management teams training, with two main working modes: in classroom and virtual.

In the first implemented projects, the information and communication technologies to support classroom processes started to be used. This started in 2007 when the creation of training spaces and virtual networks to build knowledge, its dissemination, the exchange of experiences, and the discussion of topics of interest were promoted at the Federation level. The implementation of projects under virtual environments has helped foster the creation of an institutional culture to offer an alternative training to each of the countries in the Federation, creating a climate of international exchange that contributes to the formation of a shared identity in the teachers attending the courses.

Given the number of teachers to be served, their geographical dispersion and the intention to influence public education, virtual education has offered an alternative that reaches a significant number of teachers in several places at once without the logistic and financial problems posed by classroom methods.

For the efficient operation of the program various synergies have been developed with other Federation programs (see table 6.8): quality of popular education (P1), training for work (P2), information technology (P3), long distance and radiophonic education (P4), nonformal education and social promotion (P5), institutional management and sustainability (P6), systematization of experiences (P7), public action (P8), and pastoral action (P9).

6.2. Executed Projects and Activities

Popular Teachers Training Project

This 5-year classroom project, from 2001 to 2006, had as objective to strengthen the integral training of teachers (including principals and management teams) from the perspective of popular education in each of the 14 Latin American countries that were members of the Federation (see Figure 6.1 that outlines the chronology of several of the projects).

The project was developed in three phases: the diagnosis, the design of the proposal and its resources, and the implementation of the training proposal that ended with an evaluation process. Each of these stages had its objectives ranging from the detection of training needs and realities of the countries, the planning and development of training materials, to the training of teachers, monitoring, evaluation, and systematization of the project.

The training process, repeated in three cohorts, had a duration of 10 months. The training was conducted through individual and collective work in each of the three dimensions (human, sociopolitical, and pedagogical), supported by brochures prepared for this purpose, under the guidance of a facilitator who had participated in a previous training process. Her responsibility was to develop activities during the classroom meetings to facilitate discussion and exchange of experiences about the topics and the construction of new knowledge. In addition, special extracurricular training meetings were held.

The main activities developed in the project were: reading materials or brochures, individual reflective processes and problem solving exercises. At the centers and during the trainings people worked hard to create a learning environment for collective construction of knowledge (billboards, presentations, exchange of experiences, etc.) and the inclusion of the topics worked during trainings in the regular meetings.

In the classroom meetings, individual work was socialized, group reflections and discussions took place, as well as problem solving, the construction of innovative strategies, participation in forums, retreats, tours, conferences, etc.

The education portal of IFFyA was used to carry out tutored and nontutored courses and forums, as well as the construction and sharing of a materials bank.

Figure 6.1. Program 10 projects according to modality and time
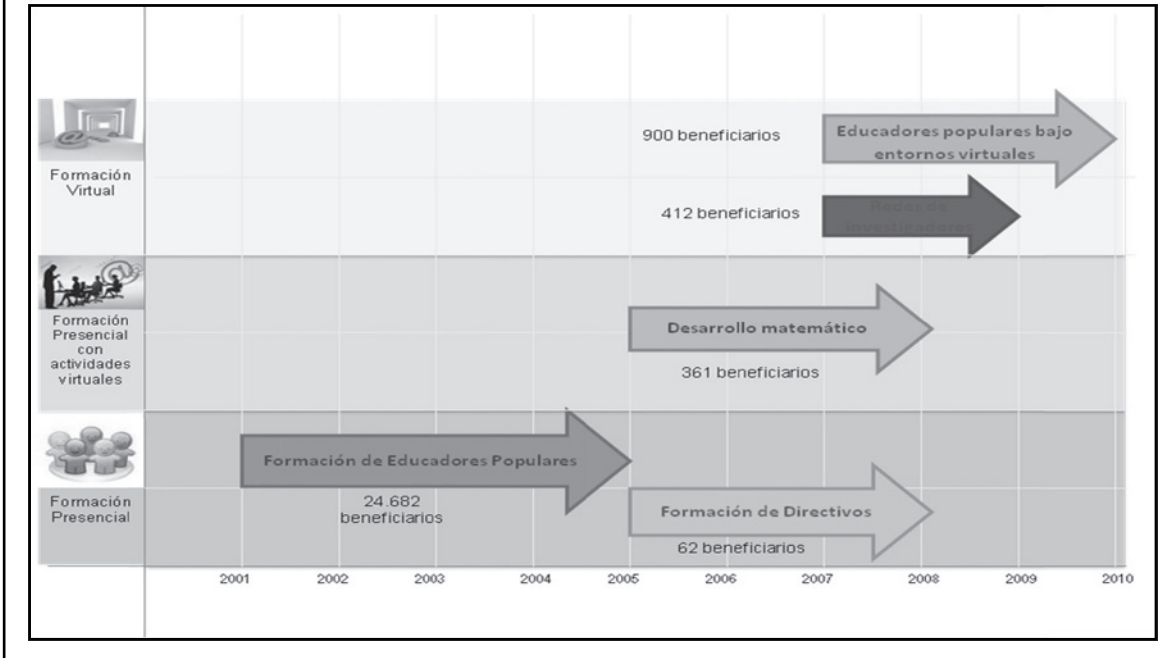
Table 6.8. Synergies with other federation programs

From	With	Activities
P10	P1	• Articulation in the improvement plans and management training • The P10 is a contribution to the improvement plans • Design and implementation of two research communities
	P3	• Support in the evaluation of virtual courses offered by P3 • Use of the virtual platform for projects executed by the Program 10 • Design of virtual training from the perspective of popular education
	P5	• Inclusion of P5's main topics in the training contents of the socio-political dimension
	P6	• Participation in the committee for the course on Social Management of the Federation course along with AUSJAL
	P6	• Evaluation of course materials designed for the popular teacher training in virtual environments that P10 is teaching in partnership with AUSJAL universities • Development of a didactic guide for the Campaign for Education, with target differentiation by: a) age, b) target audiences boys/girls—teachers—managers

Source: Adapted from Federation Statistics (2007).

DEVELOPMENT OF LOGICAL AND MATHEMATICAL THINKING

The second project implemented was partially in classrooms and lasted two years. It had 20 modules (see Annex 2 for a list of contents by year) and was attended by participants from 8 countries: Nicaragua, Bolivia, Peru, Guatemala, Colombia, El Salvador, Paraguay and República Bolivariana de Venezuela.

Its general objective was to provide participating teachers with conceptual and practical tools for understanding the logical principles underlying major mathematical concepts: number system, addition, subtraction, division, etc. It also aimed to:

■ Deepen the teacher's training regarding fundamental math skills for the work of the first six grades of basic education (see Annex 2).

■ Create a space for the invention of didactic strategies that promote learning of key mathematical concepts by students from different grades of elementary education, as well as to share the developed strategies.

A work methodology adapted to the social realities of the participants was designed for this course, keeping the focus of Fe y Alegría on its quality education for the poorest sectors. Emphasis was made on classroom sessions with virtual support. Diverse modes of study were used: teamwork within schools, individual work by teachers, and specialized virtual advice developed by tutors and specialists in the area that were assigned for that purpose in a specially designed platform.

The virtual field was especially designed for this course and was hosted as a special training module on the IFFyA portal. This field was the key area of interaction between the tutor and the liaisons, since the latter were responsible for posting the activities (called reports) made by their team on the platform. The field had several sections (support materials, digital brochures, FAQs, etc.) and 12 classrooms, where lessons could be downloaded. It also had various forums and a chat.

The educational centers (schools, care centers or programs) became spaces for training, encouragement, and support for the work of the groups attending the course. The groups were expected to support their own initiatives, to attend the initial meetings to

organize work, to provide materials, and to search actively for solutions to the problems they might face. The center or the local authorities of the area designated a teaching assistant responsible for proctoring the classroom evaluations and forwarding them to the tutor for marking.

FORMATION OF MANAGEMENT TEAMS

In order to make life in Fe y Alegría national schools more democratic, and to promote management teams as participatory bodies, this project was carried out from 2005 to 2008. The beneficiaries of the training were the pedagogic teams from the national and regional offices, since they guarantee the quality, feasibility and realization of the training in each of their countries.

Before starting the project a diagnosis was made from two perspectives:

■ To know the status of training for managers in Latin America and the Caribbean[7].
■ To know how managers in IFFyA countries were trained and what was the selection process for these positions[8].

The results showed the inexistence of public policies for managers training in Latin America or within Fe y Alegría. The few offerings were centralized by the state through short and sporadic experiences with the logic of corporate management or theories that were foreign to popular education and to working in contexts of poverty. Furthermore, there were no institutional policies for the selection of managers, and only being committed to the Fe y Alegría identity and having teaching experience were used for selection.

Subsequently, a survey was completed among FyA managers to determine the specificity of their tasks, roles and functions. Based on the diagnosis and the survey, a project for training of managers was designed, with a new conceptual framework that was shared among all Fe y Alegrías (see table 6.9): a common language, and a collection of books for managers training from a humanist and popular education perspective.

The training of technical pedagogical teams from each country was carried out at different times and levels, some in the classroom as the training seminars, and others virtually as forums, that were used to validate the book collections and the supplementary materials.

Two international training events were conducted, one in Buenos Aires and one in Caracas, that were attended by 62 members from the technical teams of different countries.

Table 6.9. Reference framework for the managers training project

	Context	Reading and diagnosis
Conceptual Axis (Dimensions to work on)	Pedagogic management	• Pedagogy of inclusion • Search of educational quality
	Institutional management	• Teamwork • Planning • Organization
	Manager's role	Shared leadership
	Principles	Values of the ideology
Methodological Axis (Specific Abilities)	Reflective manager	
	Reader manager	
	Tools for case analysis	

Source: Coordination of Personnel Training program (2009).

The two main axes of training were discussed. These are: (i) the conceptual axis, consisting of awareness, context, institutional management, pedagogical management, principles, tools, and the role of the manager. All these were put together in a theoretical-practical toolbox applicable to everyday practices. And (ii) the methodological axis, defined by case analyses and the enhancement of the managers' ability to reflect. In these training spaces, the technical teams advanced in the construction of a curricular matrix for each of their countries.

LATIN AMERICAN NETWORK OF RESEARCH TEACHERS

The objective of this project, which began in 2007, is to improve the quality of popular education through the promotion of pedagogical research by developing a network of research teachers who can analyze and deal critically and creatively with the problems that arise in the educational practice.

The research networks were formed through virtual communities grouped along five (5) different thematic areas, each of which has developed several action-research projects with topics of common interest and with the tutoring of a moderator who, at the same time, acts as an online coordinator.

The execution of the project involved the design of a general methodology of research-action[9] adapted to the particularities of Fe y Alegría. Distance training materials were developed, and with the support of the Universidad Católica Andrés Bello, the training program was designed. A total of 11 tutors were trained through a one-month course to improve their tutoring and monitoring skills.

Based on the initial design, a course of research-action under virtual environments was implemented. A total of 412 teachers have registered in four cohorts in order to acquire the tools to diagnose problems in their teaching practices and to respond to them with curricular proposals like the production of educational materials or the design of teaching modules that are more suited to the context.

The project also conducted 28-week research cycles through virtual communities to exchange ideas, experiences and research results, and are available online to all teachers. The cycles develop 5 thematic lines: Educational management, training on values, literacy teaching, innovative teaching strategies in the classroom, coexistence and citizenship (see table 6.10).

So far, there are 15 research projects that are being implemented in various educational contexts with the support and guidance of the moderator with the following stages: initial diagnosis, problem definition, execution, evaluation, and final report writing.

In partnership with the Education Quality Program (P1) learning communities are being formed to deepen the theoretical and practical development of Fe y Alegría per-

Table 6.10. Research lines, participants and researches projects in progress

Research lines	Number of participants	Research projects in progress
Literacy teaching	28	3
Educational management	44	8
Training on values	33	1
Coexistence and citizenship	8	2
Innovative teaching strategies in the classroom	21	1
TOTAL	**134**	**15**

sonnel involved in the plans to improve the P1. To attain this goal, three training cycles were designed with three communities:

■ The Democratic School
■ In-classroom innovative strategies (currently being developed)
■ Coexistence and citizenship (designed jointly with the *Entreculturas* personnel in Spain)

Cycles of forums were also developed with the participation of experts in several lines of research as a strategy to support the work that was being done in research communities.

POPULAR TEACHER TRAINING SEMINAR UNDER VIRTUAL ENVIRONMENTS

The starting point of this project is the experience of the popular teachers training program. It seeks to promote processes that institutionalize the permanent training in different countries, and to accompany Fe y Alegría and public school teachers in a comprehensive training process that leads them to become important actors in their personal and professional growth, more strongly identified with popular education and with Fe y Alegría, and in the search for the transformation of their practices and their contexts.

The seminar started in March 2007 with the revision of different virtual training itineraries to pick the most suited to the IFFyA's goals and to the characteristics of its teachers. Subsequently, several partnerships with AUSJAL universities were formed to get their participation in the design and preparation of training materials, in the implementation of the seminar, and in the certification for teachers who complete it.

The seminar aimed to train 900 teachers from the following countries: Bolivia, Colombia, Peru, Ecuador, Dominican Republic, El Salvador, Nicaragua, Honduras, Guatemala, Panama, and Paraguay. In order to achieve this goal, two 9-month cohorts were trained in 2009 and 2010. Of all the teachers who were trained, 70 percent came from FyA and 30 percent from public schools.

In February 2009 the training for the first cohort started with 433 teachers divided in 15 classrooms and tutored by a team of 12 mentors selected among AUSJAL universities faculty members. These professors participated in processes of validation, design, and mentoring of the seminar, under the collaboration agreement between the IFFyA and AUSJAL. In addition, there were 3 tutors that came from the Fe y Alegría Venezuela higher education division, who participated in the tutor training course for this seminar.

The training activities have fully used the opportunities offered by the IFFyA's LMS virtual platform, promoting the formation of learning communities among participants and tutors where the pedagogy of popular education can be experienced.

Table 6.11 shows the dimensions of training, the modules associated to each dimension, and their duration.

The activities carried out for the formation of researchers networks and teacher training in virtual environments include: design of training proposals, formation of learning communities with participants from various countries, setting up courses and communities for tutors, and pedagogical tutoring for participants and mentors.

6.3. Didactic Resources

Since its origin, Program 10 has had among its responsibilities the design, production and distribution of training materials for teachers, and support for facilitators and/or tutors of its projects. An important achievement of the program is the consolidation of teams to mentor the participants in different projects, ensuring their success.

Table 6.11. Dimensions of training, modules and duration

Dimensions	Modules	Duration
Learning to Learn	1. Information technologies Communication for training 2. Competencies for communication 3. Competencies for knowing how to think	3 Months Equivalent to 72 hours (12 sessions)
Human Sociopolitical	4. To be a person that feels complete 5. Social construction, citizenship and democracy 6. Culture and education 7. To educate in globalization and planetarization	3 Months Equivalent to 72 hours (12 sessions)
Pedagogic	8. Pedagogies of popular education 9. Critical pedagogies 10. Planning and education management	3 Months Equivalent to 72 hours (12 sessions)

Source: Center for Online Studies—Universidad Católica Andrés Bello (2008).

Some of the support resources developed by the program include:

Printed:

- 15 pamphlets from the collection of the Popular Teacher Training Project (translated into French and Portuguese, see Annex 3A)
- 20 pamphlets from the book collection ***Development of logical-mathematical thinking*** (Annex 3B)
- 7 books from the ***Management Team Training*** book collection translated to Portuguese (Annex 3C)

Digital:

- 1 Multimedia CD "The School We Want"
- 1 CD about Fe y Alegría's Identity
- 1 Multimedia CD about management teams training
- 20 digital pamphlets from the course on development of mathematical thinking
- Instructional design of 10 modules of the 3 dimensions (learning to learn, human socio-political, and pedagogical) for the popular teachers training seminar.
- Instructional design of the research-action course
- 10 digitized conceptual guidelines and complementary readings for each module
- Bimonthly digital bulletin
- Program's blog

Human:

- Facilitator teams
- Tutor teams
- Liaison teams
- Technical teams
- Virtual classroom assistant

6.4. Infrastructure and Other Fundamental Resources

The Fe y Alegría Federation has adopted the principle of sharing resources according to the needs and established agreements while promoting a working culture based on

a system of networks and alliances. In this regard, the Program 10 had to work with the infrastructure of the Father Joaquin Research and Training Center, located in Maracaibo, República Bolivariana de Venezuela, where 2 offices have been provided to house the program staff and where the existing resources have been made available. It also has the support of the national offices of Fe y Alegría and from the headquarters in the Dominican Republic.

7. Results, Challenges and Lessons

7.1. Results

To evaluate the II PGDFI[10] 5 of the 6 goals proposed by the Program 10 from 2005 to 2009, were used with the following criteria: relevance, effectiveness, sustainability, and level of satisfaction, by classifying each of these indicators in "low/nothing", "somewhat", and "high/all" (see table 6.12 on the ratings). All of the goals are valued as highly relevant by most interviewees. In relation to their effectiveness, the majority was considered somewhat effective. In general, the results are considered somewhat sustainable and somewhat satisfactory.

Most projects implemented by the Program 10 have been assessed by their team based on the opinions of the facilitators and mentors that have participated in the training processes, and those of the participants. In addition, formal evaluations were also conducted at different points in the process and by various external evaluators.

a. The training projects implemented from the beginning of the program have been timely and relevant to the training needs of countries, especially for those without education systems for teachers like Honduras, the Dominican Republic and Ecuador. In parallel, the projects have contributed to strengthen the training programs of countries with a tradition of teacher training like República Bolivariana de Venezuela, Colombia and Peru[11].

b. The highest goal of the projects implemented by the program has been to achieve a transformation of educational practices of teachers who have attended, encouraging their reflection about themselves, their work and the implementing of innovations that improve their classroom and their context. In the qualitative report about the P10[12], the national coordinators indicated that around 70 percent of the teachers have implemented innovative strategies as a result of their participation in the program.

c. The presentation of an integral training proposal that includes all the dimensions of the teacher is of great importance to all participants in the program. This is evidenced by some comments made by national training coordinators: Argentina "to approach the teacher in her three dimensions"; El Salvador "the harmony between the social, the human and the pedagogical"; Nicaragua "the need to continue a training process along the three dimensions[13]". Moreover, the countries have adopted the training proposal and have designed continuing training programs that use it as their starting point.

d. In most countries the human dimension, aimed at self-awareness, personal growth and spirituality, was especially developed, accepted and valued by the participants in the program since ". . . it was important for the reflection when shifting the sight of teachers towards their own inner world[14]". In addition, according to national coordinators (Ecuador, Honduras, Panama, Guatemala and El Salvador), the study of this dimension caused a 75 percent improvement in family, personal and professional relationships.

Table 6.12. Rating of goals of the personnel training program

Goals	N = If performed	Relevance Low nothing	Some	High all	Effectiveness Low nothing	Some	High all	Sustainability Low nothing	Some	High all	Satisfaction Low Nothing	Some	High All
10.1	25	1	4	20	2	13	10	3	11	11	2	8	15
10.2	21	1	6	14	8	10	3	3	16	2	7	8	6
10.3	32	2	5	25	3	20	9	8	17	7	5	19	8
10.4	12	0	1	11	6	4	2	2	8	2	3	7	2
10.5	20	1	0	19	6	7	7	6	11	3	6	8	6

Goals:

10.1. The institutionalization of the teacher training has been established in order to continue the Latin American Popular Teacher Training Project, with the use of media.
10.2. The strategies and distance learning programs, supported by online means of communication, have been extended and qualified.
10.3. There is a training proposal for the management and technical personnel of the national offices and Fe y Alegría centers to improve the quality of popular education.
10.4. The formation of research networks and networks for permanent training and their association has been promoted.
10.5. The training of teachers along the dimension of learning to learn has been promoted, especially in the areas of mathematical and logical reasoning, as well as in essential teaching tools for an adequate performance of their educational work in contexts of poverty.
Source: FIFYA—CONSAD (2008).

e. The teaching resources developed in various projects and given to the teachers, especially the book collections, have been well received and most have been regarded as deep, nimble and with valuable content for training.

7.2. Main Challenges

a. To conduct research on the effects of training promoted by the Program 10 in the practices of teachers and management teams. The program starts from the premise that educational quality is improved by attending the training.

b. To implement training processes for the transformation of practices in the classroom and the school (detect problems, think about them, investigate, theorize, implement changes in the practice, and evaluate the result.)

c. To build the cornerstones for a Fe y Alegría continuing training school by defining a common curricular matrix that integrates national and federative experiences and that responds to the teachers' needs and interests during their professional development.

d. To promote the proposal of virtual training for popular teachers with the support of Information and Communication Technologies (ICT), favoring the processes of digital literacy and providing the teachers with the necessary support to overcome difficulties and to integrate the use of ICTs in their lives and their classrooms.

e. To establish incentives for staff involved in the training processes that include the recognition of their work by their teammates and by the regional or national teams, as well as certification or academic accreditation.

f. To accompany the training process of teachers of those Fe y Alegrías that do not have continuing education programs, to overcome the barriers imposed by different languages or lack of funding.

7.3. Lessons Learned

The first project of the program (Latin American popular teachers training project) was implemented through a massive strategy of attention to personnel providing a curricular matrix, a methodology for continuing education and contributing to a better positioning of the Federation in the different countries. However, it is not possible to repeat or maintain training processes that are very complex and ambitious, and that is why projects with more focalized strategies have been designed and implemented. The federative structure of attention to personnel that was consolidated during this project is currently used by the program for quality education (P1).

    Virtual education has offered an innovative alternative to achieve broad and high quality coverage since it allows to reach a significant and growing number of teachers in different places at the same time without the organizational and financial problems posed by in-classroom methods. The experience of managing projects in virtual environments has produced the following lessons:

a. Projects under virtual environments require the formation of a technical-pedagogical team in continuous training that can tutor the participants.

b. When planning projects under virtual environments, it is necessary to acknowledge the great difficulties the participants face to have access to ICTs.

c. In order to participate in projects under virtual environments, teachers who enroll must be fully proficient in writing.

d. The projects' activities should be closely related to the teachers' realities to influence effectively the transformation of their practices.

e. Projects implemented under virtual environments promote self-training, collective construction of knowledge and exchange of experiences.

For teachers training to be effective and contribute to improve the quality of education, it should be based on the educational practice and recognize it as an object of knowledge. Thus, the projects that have been designed and implemented so far, in classroom or virtual, promote reflections on the practice and its problems, the theorization and the comparison with other theories to build new knowledge.

The training of popular teachers is a relatively unexplored field in the academia. This demands forming partnerships with institutions and organizations that are truly committed to popular education in order to achieve the academic recognition or accreditation that training needs.

Teacher networks constitute a pathway towards innovation and change, and they facilitate group work, the exchange of experiences and the construction of learning communities. It is necessary to continue promoting the formation of networks where teachers assume the leading role for research and the development of pedagogical knowledge. The program has implemented a decentralized management style, coordinating four training projects from its headquarters in Maracaibo, one from Argentina, with the Dominican Republic, and liaisons in all countries.

8. Recommendations

Based on the learnings acquired through the execution of the projects, Program 10 considers appropriate to make some policy recommendations for improving the quality of education through the popular teachers training:

a. The training of the teachers must be considered as a continuous and permanent process that begins with initial training and extends throughout their life. It is then recommended to organize projects with a schedule that answers their own training needs.

b. To promote the design and the implementation of integral training proposals that address the multiple dimensions of the individual, such as learning to learn, human, educational and socio-political, among others, adapted to their needs and their context.

c. In order to have a real impact on the students' learning, the training of teachers should be centered in the reflection about their teaching practices and linked to the dynamics of the schools under the tutoring of a principal.

d. It is necessary to incorporate information and communication technologies into the teachers training so that, besides knowing how to use these tools, they feel capable of integrating technology into their classrooms.

e. To improve the quality of education requires the formation of management teams that emphasize the pedagogical processes that accompany the teachers and carry out a participatory and democratic management of schools.

f. To create systems of incentives and recognition for teachers who participate in the trainings and show transformations in their practices. These systems include the signature of partnerships and agreements with universities and ministries for the academic recognition of the training projects.

g. To form partnerships with governmental or non-governmental educational organizations that promote training processes for teachers to ensure a better distribution of resources and greater coverage.

h. To form teachers networks to promote communication and the exchange and socialization of experiences to facilitate their self-training.

i. To create coordination instances in the existing training programs to avoid duplication and ensure their continuity.

j. To offer teachers the resources, technical support, time and space to participate in permanent training processes that enhance their professional development.

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Annex 1. Federative Statistics: Distribution of Personnel by Function and Status (2007)

Country	Total	Distribution by function					Condition		
		Managers	Teachers	Professionals and technicians	Administrative assistants	Facilities assistants	Laics	Religious	Jesuits
Argentina	**497**	**24**	**415**	**19**	**39**	**—**	**484**	**13**	**3**
Male	162	5	133	1	23	—	159	3	
Female	335	19	282	18	16	—	325	10	
Bolivia	**9,529**	**465**	**7,604**	**174**	**1,270**	**16**	**9,331**	**198**	**6**
Male	3,773	185	3,056	75	457	—	3,714	59	
Female	5,756	280	4,548	99	813	16	5,617	139	
Brazil	**1,158**	**54**	**491**	**102**	**375**	**136**	**1,133**	**25**	**13**
Male	332	22	159	27	91	33	319	13	
Female	826	32	332	75	284	103	814	12	
Chad	**19**	**4**	**15**	**—**	**—**	**—**	**19**	**—**	**—**
Male	14	4	10	—	—	—	14	—	
Female	5	—	5	—	—	—	5	—	
Chile	**459**	**31**	**242**	**55**	**67**	**64**	**453**	**6**	**6**
Male	192	18	98	25	20	31	186	6	
Female	267	13	144	30	47	33	267	–	
Colombia	**4,053**	**182**	**2,729**	**276**	**270**	**596**	**3,949**	**104**	**6**
Male	1,091	45	698	93	61	194	1,083	8	
Female	2,962	137	2,031	183	209	402	2,866	96	
Ecuador	**2,573**	**200**	**1,747**	**188**	**252**	**186**	**2,542**	**31**	**5**
Male	947	109	578	87	100	73	942	5	
Female	1,626	91	1,169	101	152	113	1,6	26	
El Salvador	**346**	**25**	**211**	**43**	**32**	**35**	**333**	**13**	**2**
Male	135	17	59	26	10	23	133	2	
Female	211	8	152	17	22	12	200	11	
Guatemala	**637**	**60**	**463**	**26**	**33**	**55**	**628**	**9**	**1**
Male	214	26	139	15	7	27	213	1	
Female	423	34	324	11	26	28	415	8	
Haiti	**25**	**1**	**13**	**2**	**7**	**2**	**23**	**2**	**1**
Male	13	1	9	1	1	1	12	1	
Female	12	—	4	1	6	1	11	1	
Honduras	**56**	**4**	**14**	**21**	**7**	**10**	**56**	**—**	**—**
Male	35	4	7	14	1	9	35	—	
Female	21	—	7	7	6	1	21	—	
Nicaragua	**525**	**31**	**346**	**37**	**15**	**96**	**498**	**27**	**2**
Male	124	5	57	13	4	45	122	2	
Female	401	26	289	24	11	51	376	25	
Panama	**85**	**16**	**33**	**15**	**6**	**15**	**85**	**—**	**—**
Male	42	8	17	8	—	9	42	—	
Female	43	8	16	7	6	6	43	—	

Annex 1. Continued

Country	Total	Managers	Teachers	Professionals and technicians	Administrative assistants	Facilities assistants	Laics	Religious	Jesuits
				Distribution by function				Condition	
Paraguay	**891**	**64**	**722**	**63**	**27**	**15**	**880**	**11**	**3**
Male	395	28	314	41	5	7	392	3	
Female	496	36	408	22	22	8	488	8	
Peru	**3,785**	**218**	**2,918**	**114**	**246**	**289**	**3,597**	**188**	**12**
Male	1,255	83	913	39	80	140	1,224	31	
Female	2,53	135	2,005	75	166	149	2,373	157	
Dominican Republic	**1,638**	**122**	**933**	**119**	**96**	**368**	**1,561**	**77**	**1**
Male	396	19	215	37	11	114	395	1	
Female	1,242	103	718	82	85	254	1,166	76	
Venezuela, R.B.	**12,977**	**405**	**8,491**	**1,401**	**1,339**	**1,341**	**12,857**	**120**	**7**
Male	3,846	109	237	527	153	687	3,819	27	
Female	9,131	296	6,121	874	1,186	654	9,038	93	
Total	**39,253**	**1,906**	**27,387**	**2,655**	**4,081**	**3,224**	**38,429**	**824**	**68**
Male	12,966	688	8,832	1,029	1,024	1,393	12,804	162	68
%	33.0	36.1	32.2	38.8	25.1	43.2	33.3	19.7	100.0
Female	26,287	1,218	18,555	1,626	3,057	1,831	25,625	662	—
%	67.0	63.9	67.8	61.2	74.9	56.8	66.7	80.3	—

Annex 2: Project for the Development of Mathematical Thinking

First year contents	
Module	**Content**
1. Mathematical Knowledge	• School training and norms for group work • Mathematical education • Characterization of the mathematical thought we should build • Study math as teachers
2. Decimal Number System	• The number • The different number systems • Positional numbering system • Reading and writing in a positional number system • Position signs and the order of numbers
3. Additions	• The concept of addition • Adding in the decimal number system • The development of skills for addition • Computation of sums • Teaching addition • Problem solving
4. Subtraction	• The subtraction of natural numbers • Subtraction on the decimal number system • The development of skills for subtraction • Mental calculation for addition and subtraction • Teaching subtraction • Problem solving
5. Multiplication	• The multiplication of natural numbers • The development of skills for multiplication • Multiplication on the decimal number system • Computation of products • Teaching multiplication • Problem solving
6. Exponents	• Exponents on natural numbers • The representation of an exponent • The regularities of an exponent • The properties and no-properties of an exponent • Exponents on the decimal number system • Teaching exponents • Problem solving
7. Division	• The division of natural numbers • The development of skills for division • The division in the decimal numeric system • Computation of quotients • Teaching division • Problem solving
8. Divisibility	• The concept of divisibility • The market of numbers • From conjectures to demonstrations • Divisors and multiples of a number • The maximum common divisor • The minimum common multiple • Teaching divisibility • Problem solving
9. Fractions I	• Origin of the fractions • The concept of fractions and its representations • Consequences derived from the concept of fraction • Numerical representation of the fraction • The concept of diversity in fractions • Fractions in our life • Teaching fractions at school • Problem solving

Annex 2: Continued

First year contents	
Module	**Content**
10. Fractions II	• Order of fractions • Adding fractions • Subtracting fractions • Multiplying fractions • Powers of fractions • Dividing fractions • Problem solving
Second year contents	
11. Ratios and Proportions	• The mathematical concept of ratio • Arithmetic of ratios • The mathematical concept of proportion • Some situations concerning ratios and proportions • Direct proportionality between two variables • Direct cross multiplication • The particular case of percentage • Inverse cross multiplication
12. Geometry: Concepts and Basic Constructions	• What is geometry? • How are the geometric objects? • To study geometry: Why and for what? • Progress in learning geometry • Elementary geometric concepts • Construction and measurement of geometric elements • Alternative constructions with ruler and square • Relationships between lines and angles
13. Polygons and Triangles	• What is a polygon? • Triangles: construction, classification, notable features, congruence, similarity • Relationship between angles and sides of a triangle • Perimeter and area
14. Quadrilaterals and other Polygons. Symmetry	• Quadrilaterals: concepts and elements, construction and classification • Parallelograms: concepts, elements and classifications • Relationship between triangles and parallelograms • Construction of parallelograms • Perimeter and area of parallelograms • Trapezoids: concepts and elements, construction and classification • Regular Polygons: concepts and elements, area, similarity and congruence • Tiles and mosaics with polygons • Symmetry of plane figures
15. Circumference and Circle	• The concepts of circumference and circle • Elements of a circumference and of a circle • Circumference construction • Measurement of circumferences and circles • Area of a circle
16. Geometric Bodies	• What is a geometrical body? • Polyhedron: concepts and elements, classification • Polyhedral constructions • Solids of revolution: concepts and classification, components, construction • Measures of geometric bodies

Annex 2: Continued

Second year contents	
Module	**Content**
17. Introduction to Statistics	• The meaning of statistics • Data: collection, organization and analysis • Measures of central tendency • Measures of dispersion
18. Statistics and Probability II	• The chance • The mathematical theory of probability • Sample size and probability • Probability of an event
19. Introduction to Algebra. Equations	• The generalization in arithmetic, the representation of properties, symbolic syntax • Equations: concepts and associated elements • Equation solving • Problem solving
20. Mathematical Functions	• The concept of function • Function representation systems • Types of functions • Linear functions

Annex 3A: Popular Teacher Training Project Collection

Dimension	Title	Author
Human	• To be a person that feels complete. Human formation from the Ignatian perspective	Carlos Rafael Cabarrús, S.J.
	• Living with others and with nature	Beatriz García
	• Spirituality "Where the asphalt ends"	Benjamín González Buelta, S.J.
Socio-political and cultural	• The Globalization: forms, consequences and challenges.	Emanuele Amodio
	• Democracy, participation and citizenship	Luisa Pernalete
	• Culture, multiculturalism, enculturation	Xavier Albó, S.J.
	• The recovery of local urban history	Ana Féliz
	• The recovery of history from the indigenous perspective	Rosa Torras y Cecilia Alfaro
Pedagogic	• How does one learn?	Gabriela Alejandra Fairstein, Silvana Gyssels
	• How does one teach?	Antonio Pérez Esclarín
	• Popular education and its pedagogy	Beatriz Borjas
	• Educational management at service of innovation	Lola Cendales
	• Learning how to do research through research	José G. de Llano, Mariella Adrián
	• Educational informatics at school	Germán Mariño
	• Non-formal education and popular education	Lola Cendales
	• Technological education	Jaime Benjumea
Identity	• Fey Alegría's identity	Fe y Alegría Team

Annex 3B: Development of Mathematical Thinking Book Collection

Title	Author
Mathematical knowledge	
Decimal number system	
Addition	
Subtraction	
Multiplication	
Exponents	
Division	
Divisibility	
Fractions I Concept and Representation	
Fractions II Order and Operations	
Ratios and Proportions	Martín Andonegui Zabala
Geometry: Concepts and Elementary Constructions	
Polygons, Triangles	
Quadrilaterals and other Polygons. Symmetry	
The Circumference and the Circle	
Geometric Bodies	
Introduction to Statistics	
Introduction to Probability	
Introduction to Algebra	
The Mathematical Function	

Annex 3C: Management Teams Training Book Collection

Dimension	Title	Author
Presentation	Managers training. Understand their actions to improve their practices	Silvana Gyssels
Context	Schools and social context in Latin America. When Globalization arrives to the classroom.	Néstor López
Pedagogy	Pedagogy of inclusion. Pedagogic management for management teams	Silvia Finocchio, Martín Legarralde
Managers' Role	Managers' role	Liliana Jabif
Principles	The principles that guide our practices: challenges and dilemmas	Mariana Rossi, Cristina Allevato
Casuistry	Case Analysis: a look into everyday life	Mariana Rossi, Cristina Allevato

Notes

1. Swope, J., and Latorre, M. (1998). This study included nine countries: Peru, Bolivia, República Bolivariana de Venezuela, Nicaragua, Ecuador, Guatemala, Colombia, El Salvador and Paraguay.
2. International Federation of Fe y Alegría (2008).
3. See Elvir (2006).
4. See Elvir (2005).
5. Swope and Latorre (1998), pp. 187
6. Bethencourt (2003), pp. 38.
7. See Cardini (2006).
8. See Gyssels (2006).
9. International Federation of Fe y Alegría (2007).
10. FIFYA-CONSAD (2008).
11. Elvir (2005).
12. Bethencourt (2003).
13. Op cit., pp. 21–22.
14. Elvir (2005), pp. 60.

Management System for Rural Education Networks

An Alternative for Transformation and Development—Fe y Alegría Peru

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In the mid-90s, after 30 years in Peru, Fe y Alegría decided to venture into rural areas that were the most affected by nearly two decades of political violence. This chapter describes the adaptation process of the pedagogical proposal, designed for urban schools, to fit the reality of rural areas. Some of the important achievements of this strategy include increased hours of school work, reduced drop-out and absenteeism rates, improved teachers performance, and production of materials that fit the rural reality.

1. The Challenge of Rural Education in Fe y Alegría

1.1 Characteristics of Rural Areas in Peru

During the eighties and nineties, Peru experienced migration from the countryside to the city as a result of political violence. People fled towards the cities in search of safety, security and livelihoods. Currently, rural areas have the highest poverty rates in the country and do not have access to basic services like water and electricity, good roads, or means of communication. Incomes are extremely low, placing rural areas at a self-subsistence level.

According to the Peru National Statistical Office—INEI–[1], in 2002 53.4 percent of the population of Peru was poor and 24 percent was extremely poor. However, poverty reached 70 percent in rural areas (compared to 35 percent in urban areas) and extreme rural poverty reached 37 percent (compared to 4 percent in urban areas)[2]. According to statistical information from the Ministry of Education[3] (MED), of the 28,695 public Educational Institutions (EI), 47.7 percent are located in small populated centers, 64.7 percent are located in rural areas that are geographically dispersed, with 84 percent of the poor households and 95.5 percent of extremely poor households. Illiteracy in the country is a big problem and reflects the lack of a school culture in the family that may affect the quality of education that children can achieve. The MED highlights that 12.1 percent of Peru's population who are 15 or older, are in absolute illiteracy, with two-thirds of that percentage in rural areas with an illiteracy rate of 24.8 percent.[4]

1.2 Characteristics of Rural Education in Peru

SCHOOL CYCLES IN THE PERUVIAN EDUCATIONAL SYSTEM

In the national educational system of Peru schooling should start at age four. However, schooling for children in rural areas generally starts with elementary school because there is neither enough budget nor sufficient qualified personnel. In the best case scenario, rural areas have Non-School Programs for Elementary Education (PRONOEI)[5] that provide support services for early stimulation of children under six. This is why many rural children have their first approach to school when they are 6, 7 or 8 years old, with the added *handicap* of a gap in their stimulation and development of basic skills. The initial and elementary education currently includes six grades of study that have been organized in five cycles (the first two cycles correspond to early stimulation and initial education) as described in table 7.1.

TYPOLOGY OF EDUCATIONAL CENTERS

The MED uses the number of teachers working in elementary educational institutions (EI) as a function of the total number of students to determine the type of educational institution. The different types are shown in table 7.2.

In rural areas, due to its dispersed population, gender inequality in enrollment, the labor force that children represent in their homes, the low expectations from parents regarding the quality of learning that the school offers, and several other factors, the Unitarian or Multi-grade schools represent the vast majority of institutions in the area since the number of students is not enough for the operation of a Poly-teacher educational institution. Out of the 28,695 nation's public EIs in the country, 75 percent are Unitarian or Multi-grade (21,300 EI) where 43,992 teachers work and 985,000 children attend[7].

Table 7.1. Cycles of initial and elementary education

Cycle	Grades of study	Optimum age
Cycle I	Early stimulation	Under 3
Cycle II	Initial	4 and 5
Cycle III	1st and 2nd grades	6 and 7
Cycle IV	3rd and 4th-grades	8 and 9
Cycle V	5th and 6th-grades	10 and 11

Table 7.2. Types of educational centers

Type of educational center	Characteristics
Unitarian	One instructor teaches all the grades and is the school principal[6].
Poly-teacher Multi-grade	Simply called multi-grade. Two to five teachers distribute their work across the six grades, and one of them is the principal (in charge of a classroom.)
Complete Poly-teacher	Called poly-teacher. This center has six or more teachers, each of them responsible for one grade. A full-time teacher is the principal.

TEACHER PERFORMANCE AND SCHOOL CALENDAR

Currently, rural education in the country is in a crisis that places Peru among the weakest educational systems in Latin America, with the rural schools as its weakest link. These schools, many of which are Unitarian, are located in remote places, completely disconnected and abandoned by educational and political authorities. In these places, classes usually start late[8] since teachers often arrive to their schools one or two months after the date designated by the MED. The teachers decide whether to live at their workplaces, depending on the distance and time it takes to get from their home to school. Many of them spend more than three hours in public transportation or walking to school. Others choose to stay in the rural community throughout the week, sacrificing several hours on Monday and Friday to get to school and return home. In other cases, teachers choose to

stay in the community for the entire month since it can take them one or more days to go home and return to school (e.g. in the jungle and the mountains).

INFRASTRUCTURE AND EQUIPMENT

Some factors intervene in the crisis of rural education, as the precarious conditions for work. The classrooms have been built by the communities without adequate technical supervision and many of them remain unfinished. The furniture is also insufficient and the existing one is deteriorated.

TEACHER TRAINING AND EDUCATIONAL CONTEXT

When Fe y Alegría began its rural education programs, it encountered the following reality: teachers with deficient pedagogical training (without a degree) who did not prepare their lessons and who showed absenteeism in schools; children who completed elementary school without knowing how to read and overage[9]; low enrollment rates for girls; almost nonexistent initial education with programs that ignored the context in which the school was located, and with deficient conditions in terms of infrastructure, furniture, libraries, and equipment.

1.3 *The Urban Proposal of Fe y Alegría Worked But There Was No Rural Counterpart*

After 30 years in Peru, Fe y Alegría, which had schools in Lima and other inner cities, decided to venture into rural areas since they were the most affected from the nearly two decades of political violence in the 80s.

The country's rural areas represent the most affected and excluded sectors of society, and rural schools played a shoddy imitation of urban schools since rural conditions are different from the ones in the city. In this context, Fe y Alegría took on a new commitment for education in Peru: "the new challenge is to find a system that works in rural schools in the country. To design and implement appropriate educational systems for the multicultural, often bilingual, and always marginalized reality of rural areas in mountains, forests and coasts of Peru."[10]

Therefore, it was necessary and essential to *conceptualize the rural school in its own identity and to endow it with appropriate methodologies and strategies for children's learning, the permanent training of teachers, to generate meaningful schools, and to include in the national and regional budgets sufficient financial means for them to function efficiently.* Rural schools[11] need to find their own referents, different from the social, economic, cultural, geographical, and familiar referents in urban schools.

Five programs were set up in rural areas: Fe y Alegría No. 44 in Andahuaylillas, Cusco; Fe y Alegría No. 47 on the Iquitos-Nauta road; Fe y Alegría No. 48 in Malinga-Tambogrande, Piura; Fe y Alegría No. 54 in Moro-Pamparomás, Ancash; and recently, Fe y Alegría No. 72 in Pucallpa, Ucayali. Each rural education program[12] has gone through different processes, both at an institutional management level and at a pedagogic level, in order to respond to the characteristics and needs of the rural population. Thus, from the curricular standpoint, the competencies, skills and abilities to develop in students are clearly defined, emphasizing in topics such as intercultural issues, equity, environment, Human Rights, and linkages with production.

The management programs for rural networks in Fe y Alegría use as a reference point for the curricular proposal the MED basic curriculum design, and they also contextualize it by taking into account the demands, needs and problems of rural reality. At the same time, they define and formulate skills that enable teachers to become involved and to work in the local socio-productive system while fully exercising their citizenship.

The challenge is to restore rural men's and women's dignity, language, culture, worldview, and knowledge. The strategy is to bring all the small multigrade and unitary schools located in an area (valley, basin, the axis of a road sector) and give direction to the educational process, involving an educational community with unique characteristics due to its context.

2. The Central Approach: A Rural School That Responds to Reality

2.1 Increased Presence of the Fe y Alegría Rural School That Tries to Break with the National Hegemonic Model of Urban School

In a country like Peru that has a cultural, linguistic and geographic variety, it is not possible (or should not be) to apply the same national educational model. 30 percent of the school population lives scattered in rural mountainous, coastal and jungle zones. Fe y Alegría rural education programs, knowing the geographical area, the communities' idiosyncrasies, with their interests and aspirations, the local and regional processes, and local and regional institutions—with which can have strategic alliances–, proposes a school that responds to the rural reality.

Fe y Alegría is inserted in a concrete geographical and cultural space that allows it to design a rural school that develops a process of joint construction of an educational project that fits the rural context where all the stakeholders participate: students, teachers, local authorities, parents, and the general community. To improve rural education, it is not enough to rehabilitate the infrastructure, to deliver school packages or to hire teachers. This is a rural school that starts from the previous knowledge of the students, who have developed many skills appropriate for the areas in which they live, and that responds to the diversity of educational needs, seeking to develop the potential of each student, thereby promoting educational experiences that enable integral development.

2.2 The Fe y Alegría Rural School of is a Network of Schools That Walk Together and Provides Identity

Fe y Alegría rural education programs are defined as networks of educational institutions that share and develop an educational proposal that is integrated with the sustainable development processes in the region where it operates. An educational network is a joint management unit by a group of schools with similar characteristics, needs and demands, enabling a shared vision of local and regional development and the skills required to manage it.

Each rural program becomes a network of educational institutions that are accompanied and energized by a core team, led by the general coordinator of the network, who is designated by the Fe y Alegría national director. In addition, teachers and engineers or technicians that specialize in agriculture, team up to respond to priorities such as:

■ The Network management model.
■ The permanent training and tutoring of the network teachers
■ The training on values.
■ Technical and productive education: environmental valuation which is especially important in rural areas.
■ The improvement of the school's material conditions (infrastructure, furniture, etc.)
■ The development of diversified curricular structures.
■ The development of skills for work and the preparation of educational materials: permanent research on reality and local living conditions.

- Training and a permanent relationship with parents.
- Development of Human Rights, gender equality, citizenship and peace culture.
- Children's health conditions.
- In some networks, the Intercultural Bilingual Education.

The network consists of 25 to 30 schools and their respective educational communities (teachers, students and parents). These schools have a common educational project that is implemented jointly. They motivate, challenge and meet each other to reverse the backlog of rural education, and to avoid isolation in a widely dispersed and distant reality due to the location of rural schools. Feeling the support, sharing the challenges and having the visits to the classroom are also incentives to provide quality education.

The strength of the identification with Fe y Alegría and its educational proposal is the cornerstone of the rural school management system, which has as a center the value of Fe y Alegría expressed in the ideology,[13] and that is renewed and adapted to the reality where the network is located.

2.3 The Fe y Alegría Rural School: An Inviting School

What makes Fe y Alegría rural schools inviting to students and the community is a set of features like motivation and the proper treatment of teachers; a good institutional environment; learning appreciated by the students; appropriate infrastructure; the decoration and cleanliness, and equipment. It is also inviting because the network's management team plans the training and tutoring of teachers taking into account their real profile and training needs. Fe y Alegría tries to make its rural schools "nice," "ludic" and "attractive", where children feel happy, welcome and respected.

Directionality in the training: Each of the rural education programs encourages directionality[14] from the various forms of training, in which various perspectives and possibilities have been combined. Among the main issues that are favored in the trainings are: a) curricular diversification; b) annual and short-term planning; c) multiculturalism; d) new pedagogical approaches; e) active methodologies in integral communication, literacy, native language and its translation to Spanish, logical-mathematical thinking, etc., g) evaluation system; h) human and personal training; i) network educational projects; j) the appropriation of Fe y Alegría's Education Proposal and of the guidelines for rural areas.

Tutoring Visits: The tutoring and monitoring in the classroom is one of the best practices and is the cornerstone to consolidate the proposal of work in network. A permanent and qualified tutoring is guaranteed to every school and every teacher in the network. The tutoring consolidates what is learned during the training and the motivation is kept alive, encouraging more work. Each pedagogic team visits the school every month to observe classes, participate in the classroom, talk to the teachers, children and parents, share the daily life of the teachers and the school, and evaluate the teamwork. During this tutoring, the teams discover the needs to improve the incidence, the intervention, and the learning.

Awareness of the school conditions: The awareness of the school conditions, which allow a better learning is essential for the "*educability*" of children. For that reason, new classrooms have been constructed and many existent others have been refurbished. Also, small furnished houses were built for teachers, and water service was improved in many schools. In addition, the supply of desks for teachers, cabinets, school supplies, and classroom libraries have also been improved.

2.4 The Network Has a Common Educational Proposal That Promotes a Directionality

The main objective of rural education programs is to contribute to the improvement of quality in basic and technical-productive education. From the axes of intervention, each network has the challenge of formulating its common educational project, consistent with the Fe y Alegría institutional mission, with the guidelines of education policy and, above all, in correspondence with the interests, potentialities and problems of the communities involved.

The Fe y Alegría network provides directionality, motivates and tutors the network of rural schools. It also provides a shared vision of the institutional goals and defines the profiles of professionals in the network. The network management team is autonomous, responsible for the operation of the network, and uses methodologies and strategies to improve the work's progress. Its responsibilities include:

■ The teacher selection process and the justification of teacher allocation tables before committees of the Regional Direction of Education in their respective regions.

■ The training and monitoring of teachers in the classroom and of the principals of each school.

■ The centralized management of various affairs before other institutions, ensuring the participation of teachers in their respective schools.

■ The evaluation of progress in these responsibilities and the decision-making in coordination with the principals.

■ The promotion of creative and motivating activities to strengthen the identity and mobilize the educational community.

■ The coordination with local and regional authorities to improve educational conditions in the villages.

3. Assessment of the Fe y Alegría System of Rural Networks

By venturing into rural education, Fe y Alegría Peru wants to break the schemes of a uniform school in a multicultural, multilingual country, reversing the deficiencies in rural education. It also aims to build and offer a network management model for rural education in the country.

The Rural Education Programs were formed from the MED, which implied a significant investment in human and material resources, time and energy to organize this model and "place" it in the public education. However, these programs, which started as a true decentralization of education in Peru, had no effect and produced no significant changes in the quality of rural education.[15] The work in networks proposed and designed by Fe y Alegría is a management model that works in rural areas and should be considered as the true decentralization of education since the actors are responsible for its effective functioning.

For the purposes of this chapter, the qualitative and quantitative information of each rural education program were combined: a) review of the material; b) work and evaluation meetings with pedagogical teams; c) observation and visits to each program; d) skills test; e) performance evaluation of each program. Work and evaluation groups were formed with the key actors involved in the program, seeking to obtain the necessary information for the systematization of the Fe y Alegría rural education programs in Peru.

3.1 Achievements

The Fe y Alegría rural education programs have produced some improvements on the educational system in Peru. The "in-network" proposal has been influential and has become public policy. MED is promoting the formation of networks among schools geographically nearby.

The achievements that are mentioned below are steps in a process that involves the entire school community. Each achievement also made a difference with other rural public schools not managed by Fe y Alegría.

Increase in the Number of Effective Hours for Schoolwork

The factors that allow teachers to stay the appropriate number of hours in their educational institutions are: the teachers' commitment and responsibility, the parents' permanent concerns about their school, and the visits of the network's management team. In addition, adequate academic and management planning, as well as the permanent advice for teachers led to an increase in the actual classroom hours, preventing the teachers from leaving the classes to attend secondary activities.

However, in some educational institutions there are principals who, in addition to be in charge of a classroom, share responsibilities with the director of the Local Education Management Unit (UGEL), forcing him or her to be absent from school. The traditional absences in the rural public educational institutions are: three days per month for the teachers to collect their salaries, visit other schools, and perform non-teaching activities during school hours, rehearsals for national holiday parades and managerial duties.[16]

Figure 7.1 shows the evolution of enrollments in each rural education network from 2003 to 2008.


Figure 7.1. Enrollment
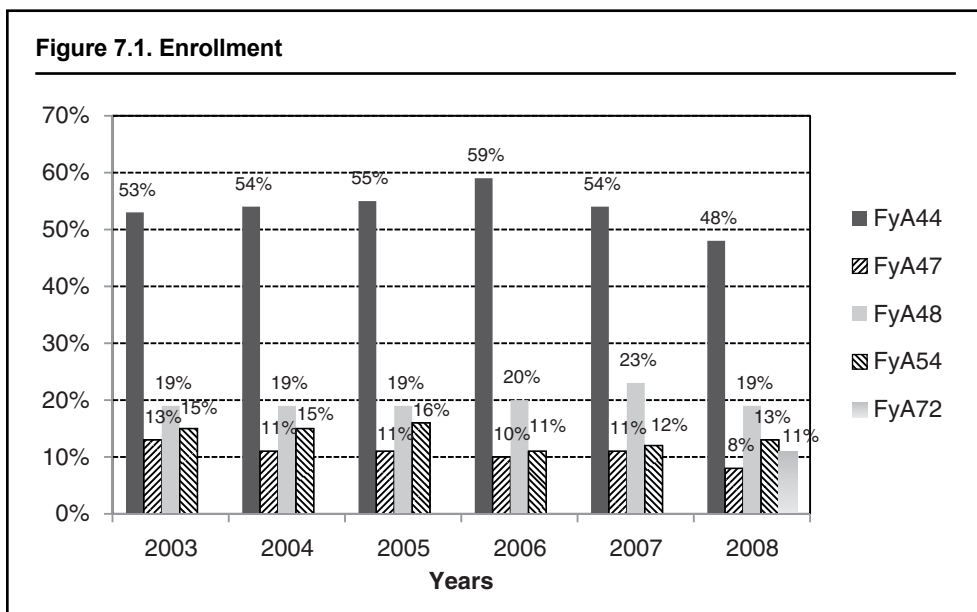
Significant progress has been made in the reduction of dropout and absenteeism rates.[17] Among the factors that support this progress are:

- The teachers meet the requirements for enrollment and they begin classes without delay.
- There is no class abandonment. In the worst-case scenario, teachers lose a working day for the collection of their salaries when they have to commute more than 8 hours.
- The activities or learning sessions are more attractive because of the use of appropriate methodologies for students, particularly the proper use of the native language.
- More credibility among parents and the community regarding the work of their teachers.
- More organization and engagement by the community concerning the improvement of their school.

Figure 7.2 shows the evolution of the percentage of students who dropped out from each of the rural education networks.

IMPROVEMENT OF TEACHER PERFORMANCE: TRAINING AND PERMANENT TUTORING

Typically, in rural areas, the MED intermediate bodies are not present because of difficult access and remoteness of the schools. In contrast, in Fe y Alegría's network there is a team in charge of conducting training and permanent monitoring to ensure that teachers are trained and constantly updated on the handling of assessment and programming

Figure 7.2. Number of dropouts
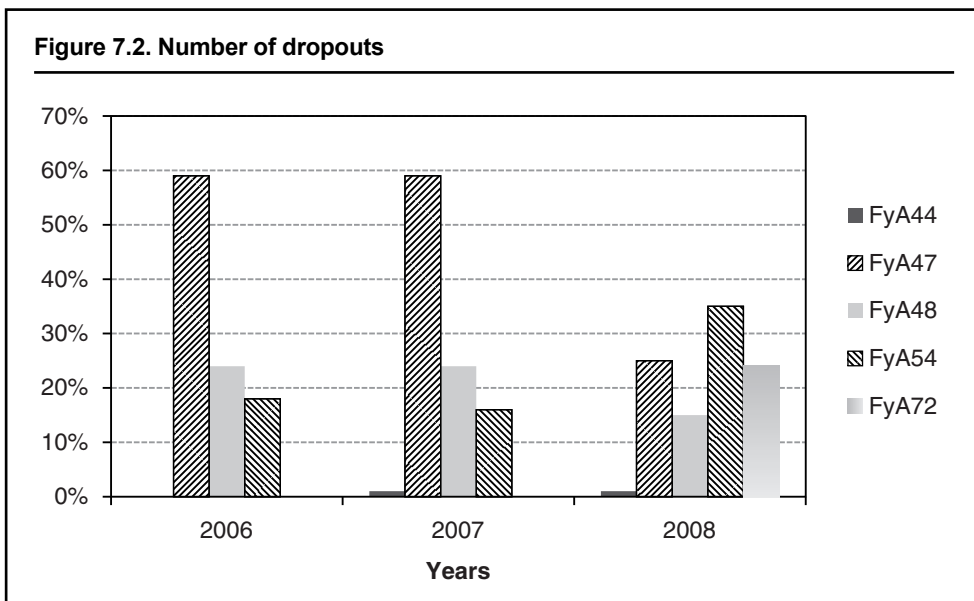
Source: Fe y Alegría Peru

tools, design and preparation of teaching materials, as well as in personal training and professional commitment.

In this way, teachers are abandoning traditional vertical teaching practices for a process of student-centered learning, applying personalized, cooperative and flexible strategies depending on the characteristics of the students. This is reflected in the time teachers spend preparing their support materials, the classroom's environment and the use of various methodological resources.

In each of the rural education programs there is pedagogical tutorship vs. "administrative" supervisions (rare or nonexistent) from the State that care only about compliance with external standards, that are important, but do not evaluate the performance of teachers or the learning outcomes.

Figure 7.3 shows the perception on the impact of monitoring and training of the network's pedagogic team on the teachers in rural schools.

PRODUCTION OF EDUCATIONAL MATERIALS IN ACCORDANCE TO REALITY

The network management allows schools to develop common teaching resources that are used for multiple schools. The pedagogical action that is being developed from each rural network is supported by the production and distribution of an important number of printed and other kinds of materials prepared according to the needs:

a) Those to be used by the teachers as supporting material.
b) Materials for students.
c) Materials for parents.
d) Publication of experiences and research to influence other schools and areas.

Figure 7.3. Perception of the impact of training on teachers' training
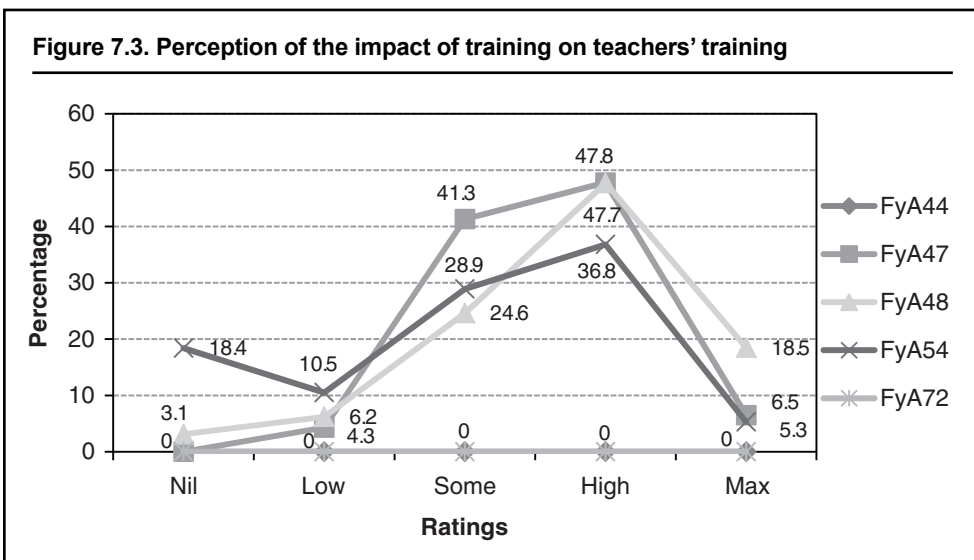
Source: Fe y Alegría Peru

3.2 Effects and Impact of Fe y Alegría's Rural Networks

Teacher's Self-Esteem and the Recovery of Her Role as Promoter of Development

The importance of personalized interaction for the teacher is often underestimated. Network management makes the teacher feel she has a social function beyond the walls of the school and that she is valuable. It also encourages the teachers to play their role by providing a framework, a space for reflection, evaluation and encouragement that leads to an increased awareness of their role as a dynamic agent in the community where they work. Some teachers encourage the educational community and locals to take initiatives to promote community's development.

The Joy of Going to School (Changes in Students)

Students go to school with joy because they know they will see their teachers and other students who come from distant places to study there, and with whom they share a democratic coexistence in which the children are equal and go from being spectators to being actors.

Nonexistence of Common Practices of Corruption

A major difficulty in rural education is to find a job position in the school. It is common for teachers to bribe principals in order to get one. In Fe y Alegría teachers go through a selection process and positions are allocated based on merit.

Inclusion of Culture and the Local Production System in the Curricular Structure

The rural school is based on reality. It knows the characteristics, needs, interests, and concerns of communities and individuals, and their life experiences, possibilities, limitations, as well as the characteristics of the socioeconomic and cultural context in which they live. All this is used by teachers who work on skills that strengthen the knowledge and appreciation of the local culture, and by students who implement efficiently productive projects at school. Children are receiving an education with a variety of topics, contents, local stories, local traditional practices, experiences that are brought to school contributing to the formation of local and regional awareness, commitment and appreciation of their reality.

Strengthening the Community's Social Tissue

Network management streamlines the reconstruction of the community's social tissue. The network also helps rural schools to be appreciated by helping the community to assume as its responsibility the improvement of their local education through communal work or by evaluating the teachers assigned to their school. In the formal education system this work is undertaken by the parents association, while in the communities where Fe y Alegría operates, the task is assumed by the communities.

Work on Human Rights and Gender Equality in Rural Schools

The network management system proposed by Fe y Alegría is based on the conviction that the role that education plays in the achievement of the right to equality is crucial. Therefore, it chooses to respond to the gravity of the situation by developing a proposal that not only retains girls in school, but at the same time, shows that poor and marginalized girls can achieve high quality personal and educational competencies.

Fe y Alegría No. 44, in partnership with the Peruvian Institute of Human Rights and Peace, and sponsored by the Ford Foundation, has developed a range of activities such as the creation, validation and implementation of materials for children, parents and teachers. It has also implemented specific methodological proposals for each sector. It has produced

games, videos, posters, workbooks and teaching guides with conceptual frameworks and pedagogical proposals that, in a simply manner, help to include these topics in the curriculum. It has developed and implemented a tutoring, monitoring and evaluation plan that has been highly successful in improving indicators such as:

■   Gender equality in enrollment.
■   Percentage of years of study.
■   Cumulative overage.
■   Annual learning results of the students.

The largest number of girls excluded from the education system comes from families in extreme poverty in rural areas. While 5 of every 100 non-extremely poor girls do not go to school, that number is doubled for extremely poor girls. "In urban areas the average of men's studies is 9.3 years, slightly higher than that of women, which is 8.1 years. In rural areas, the gap is greater with the average of women's studies equal to 2.9 years versus 4.7 years in men."[18]

Figure 7.4 shows that during the intervention of Fe y Alegría No. 44 in Cusco (1998–2008) the gender gap in enrollment was closed, taking into account that discrimination against girls was much greater than it is today. One could say that in the first three levels equality was achieved, while in 4th, 5th and 6th-grades the gap is still significant, especially in 6th-grade which affects the passage of girls to secondary school.

3.3 A Network Management Model for Rural Education

The Fe y Alegría rural education programs are a referent for rural education in each of the regions where they operate: Cusco, Loreto, Piura, Ancash and Ucayali. Since 1995 when the Fe y Alegría rural education program No. 44 was started, until 2008 when the fifth Fe y Alegría rural education program No. 72 began, a model of network management was built

Figure 7.4. Comparative trends in shares of enrollment for boys and girls, 1998 and 2009
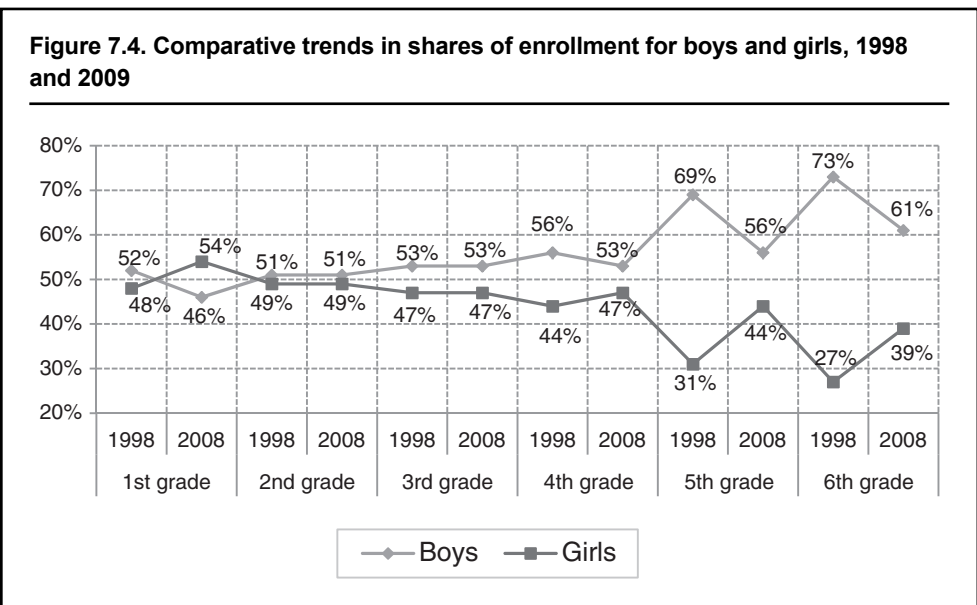
Source: Fe y Alegría Peru

in each region with an average of 25 to 30 rural education institutions located in as many rural towns, called communities in Peru.

The network management model is appropriate for rural areas with scattered schools that tend to isolate themselves, and uncontrolled teachers unmotivated by the remoteness and abandonment of schools. This is why the central office of each rural educational network is an intermediary structure for support, monitoring and tutoring, that values the role of teachers and helps them to fulfill their responsibilities. The network management provides links between teachers who go beyond their teaching work, facilitating the formation of groups to share knowledge and to prepare learning units. The work in network labor is a mutual support that generates mystique and provides meeting spaces for schools and their teachers in a remote and distant reality away from the city.

Visits are made by each pedagogic team to the teacher in his classroom to check their attendance and involve the parents in the dynamics, since they are the ones who check the teachers' attendance and report their absences, and if needed whether to fire them. The network management allows rural schools to respond to the specific conditions of their context as well as to the administrative requirements of the intermediate bodies of the MED. The network has consolidated a management and coordination team and a teaching community with a notion of network that reduces time losses by performing common tasks and creating common management tools, since the network coordination team is the only interlocutor with the intermediate MED bodies.

Reading reality has led to the adaptation of each rural network model to five different realities with favorable results, with specific accomplishments, but mostly with common and similar results that allow to reverse the deficiencies and abnormalities of rural education. This has been made possible by a network management team with the willingness and the management ability to build a good team with better teachers.

4. Lessons Learned in Network Management

4.1 Pedagogic Level

a. The geographical and cultural diversity of the country demands a creative adaptation and the search for different models from the one proposed by the MED, which offers a rural education designed for coastal and urban realities.

b. In rural area with permanent migration, students display very different preparation levels forcing teachers to envision strategies that facilitate the achievement of basic skills.

c. The practice of gender equality at school affects positively personal and family lives.

d. A good initial education is critical for the students, particularly when there is no incentive in the family for specific basic learning.

e. A strong personal training that encourages the practice of values is important and has to be worked on explicitly.

f. The personalized and friendly interaction that is sought within the network empowers the teachers' strengths, overcomes their limitations, and is a factor that contributes to improve their skills.

g. The kindness and affection of teachers enhance and promote effective, trusting and better learning, as well as a better communication among students.

h. Students have multiple skills and knowledge related to their environment and culture that can be exploited in school.

i. The curricular diversification that is contextualized with differentiated activities that are appropriate to the level of cognitive development is key to achieve meaningful learning in multigrade and unitarian schools.

j. Results are difficult to achieve without an annual program that defines the achievements that are attainable based on reality, sequenced in partial and measurable achievements in the short term.

4.2 Network Management System Level

a. Network management in rural schools works as an integrator in the communities. The permanent work with the community is therefore essential since it allows to stop dependency and opportunism and to replace them with a culture of joint construction of a vision of development that takes into account the strengths and weaknesses of the population.

b. In scattered areas with small schools, to work in network with a dynamic team is a strategy to break the isolation, strengthen the institutional life, open horizons, and innovate. Network management is especially motivating for educational multi-grade and unitarian institutions.

c. The network model is replicable if applied to an area with similar characteristics that allows the contextualization of the teaching and institutional management instruments, and above all, that allows having an educational project that frames itself within the local and regional development plan.

d. Most parents are convinced of the importance of education and how much their children need it in order to have better living standards. Thus, the greater the incentive and interest of the family, the greater the retention and learning achievement of students.

e. Patience, stubbornness and sense of humor in the relationships with MED's intermediate bodies' staff help to bring down barriers and help to overcome the bureaucratic hurdles and obstacles created by the high turnover rates.

f. High attendance rates by teachers and their involvement in life of their communities are key factors to ensure the students stay in school and have good achievements.

g. To participate in the creation of a pedagogic proposal is key for its ownership and implementation. That initial participation enhances the perseverance and commitment of each of the actors of the educational community.

h. To improve the pedagogical level and the basic skills of a teacher, several stages of transfer of simple and manageable schemes are used, from progressive demands based on the teacher's profile.

i. The role of the principal of each school is essential to create identity and an educational climate that encourages the integral development of the entire educational community.

5. Recommendations

For the public education system in rural areas to be more efficient and focused on the development of people, it is recommended that:

THE STATE SHOULD PLAY ITS ROLE

The main weakness experienced the formation and development of Fe y Alegría rural education networks was the absence of the State that not always plays its role of promoting

higher coverage and better quality of rural education. This reality calls for the formulation and development of national policies that guide regional policies. The roles and responsibilities of the various authorities and national, regional, and local agencies should be clearly specified. This is how an educational policy can be sketched for each region, with the Regional education directorates mainly leading the change prioritizing the pedagogical aspects, and becoming politically responsible for their own actions and results.

Develop a Broad and Flexible Normative Framework the Operation of Rural Education Networks

Despite the advances in the latest norms issued by the Ministry of Education, in which some references to the rural school are made, there is a need for greater specificity on these norms to achieve qualitative improvements. There are no adequate laws for rural education. It is necessary to have a specific regulatory framework for the creation of education networks and their operations. The absence of it becomes a pretext used by officials of the intermediary bodies of the Ministry of Education not to make decisions that benefit the networks formed by Fe y Alegría.

Using its institutional knowledge and experience, Fe y Alegría can contribute to the preparation of adequate legislation for the operation of rural education programs that includes specific rules regarding the duties of principals and the director of the rural network. By doing this, the State will promote educational networks and officials from intermediary bodies of the Ministry of Education will promote and support civil society initiatives regarding rural networks.

More flexible norms are required to allow the effective operation of rural networks. The norms should also contribute to reducing the "politicization" of the national and regional educational systems, which is verified when the directors of regional education and local education management units (UGEL) make hiring decisions on the basis of special interests instead of using a public call made by an independent institution. Here, network managers should have more autonomy to hire teachers, ensuring qualified and bilingual professors where conditions demand it.

Prioritize the Organization of Educational Networks

The work in network along with monitoring, tutoring and training strategies favors and strengthens the educational work in rural areas. This model requires special attention by the State that should provide enough human resources and materials to provide high quality education.

Each of the rural networks requires a core management team with seven funded positions to, among many tasks, monitor the teachers who belong to the network to detect weaknesses in their teaching and learning, which in turn will be used to design training and learning workshops.

To Guarantee an Annual Operating Budget to Each Rural Network

It is important to get a budget consistent with the multiple needs of the education system, and an effective application of the education system law by the management in each of the UGEL, allowing for the rotation of principals, as well as their selection and proper and intensive training.

Achieving these will help rural education programs to persist in the teacher training and tutoring activities, to continue encouraging the practice of values in all members of the education system, to form strategic relationships with other institutions, and to seek strategies that will enable a timely coordination with officials at the local and regional levels.

To Manage in Networks Scattered Rural Schools Located in the Same Area

It is known, from experience, that when schools are motivating, parents commit to their children's education, teachers become more interested in the training offered by the network and will keep on doing research and reflecting on their own practice. This transcendental change indicates that high quality education is being provided for rural children. Therefore, to manage rural schools in networks must forge an attitude of dialogue and a common identity to pursue the well-being of the educational communities that are apart from each other, but located in the same area.

6. Conclusions

The presence of Fe y Alegría gives hope to rural populations, often neglected by the state. The experience of Fe y Alegría aims to design solutions that are more applicable to local realities. The improvement in the quality of education should address not only objectives and contents but also the methods that best suit the rural education system. These should be the outcomes of analysis and reflection on the conditions imposed by the environment and the dynamics of the population they want to serve.

The network management system for rural schools will continue to be improved to fit the conditions where it operates, and will also continue generating synergies with other institutions to engage in participatory processes between different institutions in society and the education agents, to give them ownership of social change processes.

Finally, the challenge of transforming society from rural education requires setting goals that guide the work in each region where the rural education network is located. These goals have to do with the design of a network educational model that has physical and geographical unity, and that breaks with a unique educational model in a country as diverse as Peru. To accomplish this, a network management model that is replicable in different physical and geographical realities has to be enhanced and strengthened.

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    Fe y Alegría No. 54—Moro, Ancash.

    Fe y Alegría No. 72—Pucallpa, Ucayali.

Annex 1: Location of the Actual Networks' Experiences

*The Current Networks: Cusco, Loreto, Piura, Ancash, Ucayali*

In 1995, Fe y Alegría 44 opened its doors to start working with basic education (primary and secondary levels.) It is located in the mountains in the Quispicanchi province in the Department of Cusco. The set of districts and rural communities are distributed over three large basins: Vilcanota, Capacho and Araz; and in a high Inter-Andean Valley that interconnects them—Ccatca–. The districts are subdivided into rural communities.

In 1997, Fe y Alegría No. 47 started operations. It administers and manages educational institutions of basic education (primary and secondary levels), productive education (center for technical-productive education) and a Higher Technological Institute. Its geographical scope is the jungle on the Iquitos-Nauta highway located in the district of San Juan Bautista, Maynas Province in the Department of Loreto. Loreto is known for its geopolitical importance by sharing a 3,918 km border perimeter with three countries: Brazil (29.5%), Colombia (38.4%) and Ecuador (32.1%).

In 1996, Fe y Alegría No. 48 started managing and administering institutions in basic (primary and secondary levels) and productive and technical education (center for technical-productive education). The scope of work of this rural program is located on the coast, in the district of Tambogrande, Malingas sector, Department of Piura. Tambogrande district consists of 167 villages with 18% of urban population and 82% of rural population. The Malingas sector has a population of more than 8,000 inhabitants, in which 65% live in extreme poverty, often without land ownership. In the jurisdiction of the program is the Casanas community that belongs to the District of Chulucanas.

Fe y Alegría No. 54 started in 2000, and manages and administers institutions of basic education (primary and secondary levels) with bilingual intercultural education. The program is located in the Nepeña River basin in the highlands of the Ancash Department. Nepeña River is formed by the confluence of three rivers and watersheds: the
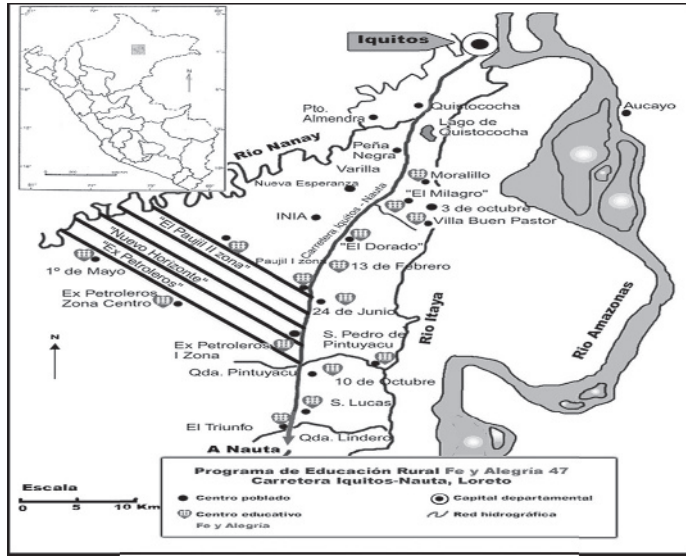
Jimpe, the Pamparomás and the Loco, that converge in the middle of the basin in the town of Moro. The rural program is located throughout the Loco River sub-basin. Politically, the basin includes 5 counties. Four of them—Moro, Cáceres del Peru, Samanco and Nepeña—belong to the province of Santa, and the District of Pamparomás is part of the province of Huaylas.

In 2008, Fe y Alegría No. 72 is managing and administering institutions of basic education (primary level). The rural network is located in a central jungle at an altitude of 180 meters. The centers that form the network are small schools located on both banks of the old course of the Ucayali River, which is accessible only by boat. Education in this geographical area is often hampered by weather conditions—rain, mud, floods, the
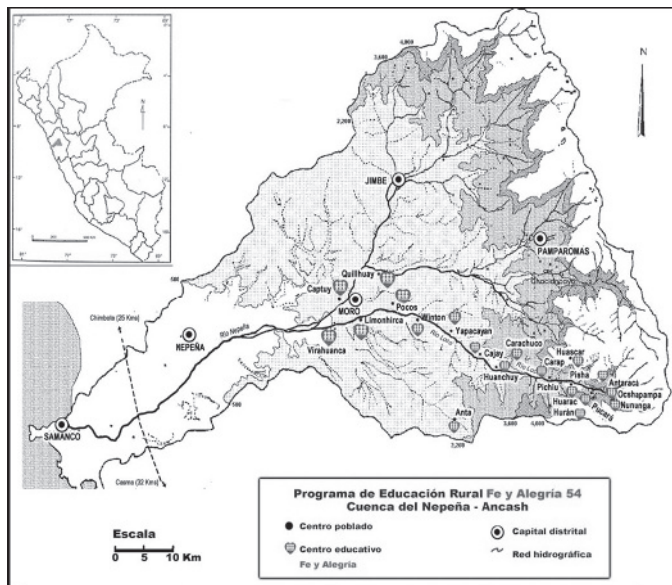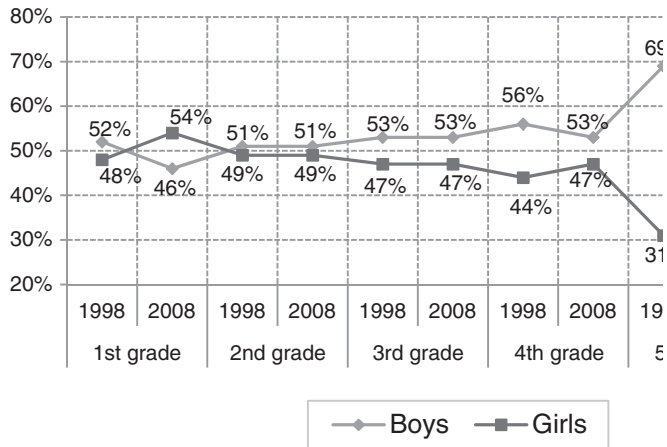
Source: Fe y Alegría Peru.

meltdown of the riverbanks—that determine the growth or decline in the population of the villages, and therefore the growth or decline in the school's population. The network has bilingual schools with *Shipibo* as the mother tongue. The areas covered by this network of schools extend to the districts of Manantay, Masisea and Callería, all located in the province of Coronel Portillo in the Ucayali region.

Annex 2: Data on the Rural Networks' Students and Personnel

Table A.2.1. Students statistics—Fe y Alegría 2009

	Initial			Primary			Secondary			Technological			CEO			Total		
	H	M	T	H	M	T	H	M	T	H	M	T	H	M	T	H	M	T
Quispicanchi	84	68	152	1,584	1,592	3,176	144	142	286							**1,812**	**1,802**	**3,614**
Iquitos	137	134	271	302	292	594	237	157	394	106	48	154	158	95	253	**940**	**726**	**1,666**
Malingas	197	189	386	656	755	1,411	181	158	339				12	24	36	**1,046**	**1,126**	**2,172**
Moro	96	83	179	466	518	984	219	100	319							**781**	**701**	**1,482**
Pucallpa	78	50	128	336	9	685										**414**	**399**	**813**
Rural	**592**	**524**	**1,116**	**3,344**	**3,506**	**6,850**	**781**	**557**	**1,338**	**106**	**48**	**154**	**170**	**119**	**289**	**4,993**	**4,754**	**9,747**

Table A.2.2. Personnel statistics—Fe y Alegría 2009

	Initial			Primary			Secondary			Technological CEO			Assistants			Rural networks' management team			Total		
	H	M	T	H	M	T	H	M	T	H	M	T	H	M	T	H	M	T	H	M	T
Quispicanchi	0	6	6	55	66	121	8	6	14							10	6	16	**73**	**84**	**157**
Iquitos	0	18	18	13	16	29	20	14	34	11	5	16	11	6	17	4	5	9	**59**	**64**	**123**
Malingas	0	15	15	31	29	60	10	6	16				2	5	7	6	4	10	**49**	**59**	**108**
Moro	0	9	9	14	29	43	13	8	21				1	1	2	7	4	11	**35**	**51**	**86**
Pucallpa	0	5	5	20	14	34										2	3	5	**22**	**22**	**44**
Rural	**0**	**53**	**53**	**133**	**154**	**287**	**51**	**34**	**85**	**11**	**5**	**16**	**14**	**12**	**26**	**29**	**22**	**51**	**238**	**280**	**518**

Annex 3: Operating Expenses and Cost Per Student in Rural Networks
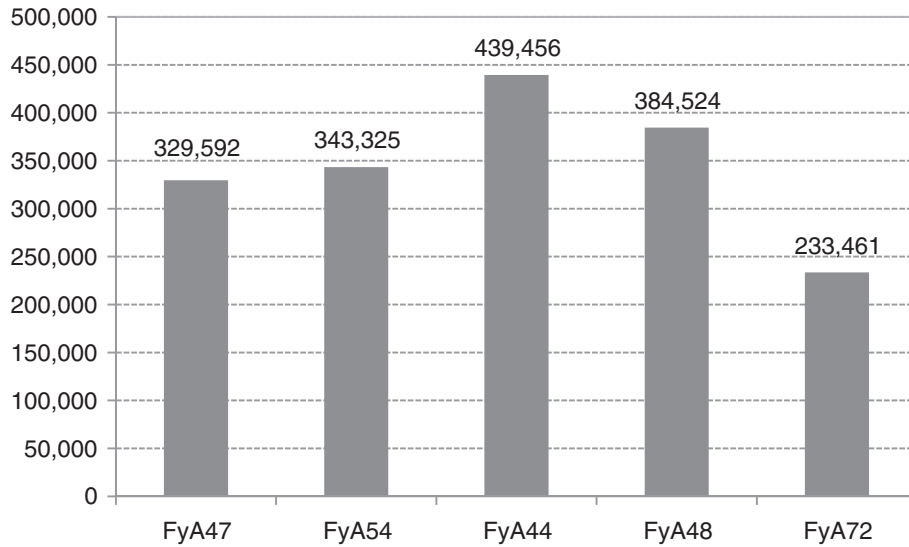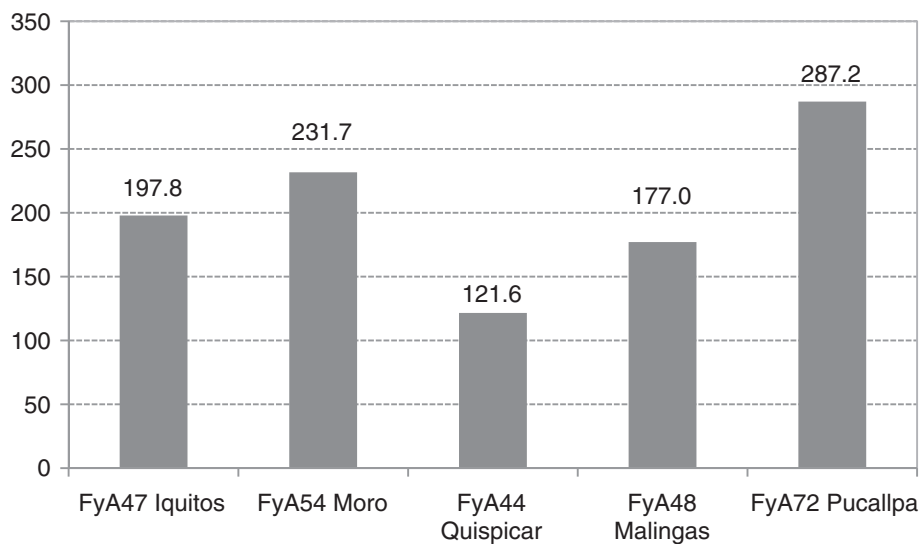
Table A.3.1. Total operating expenses by network

Table A.3.2. Cost per student by network

Notes

1. http://www.inei.gob.pe

2. Peru National Statistical Office, 2004, p. 36.

3. http://www.minedu.gob.pe

4. Mujica and García, 2006a.

5. The PRONOEI is under the promoter's responsibility, who receives economic compensation from the State.

6. In this case, teachers spend 30 hours a week developing their teaching activities and 10 hours developing the administrative ones (but often the MED does not recognize this work with an additional compensation).

7. http://www.minedu.gob.pe

8. The education system mandates 35 weeks of academic activities. Classes begin in early March and finish before December 25.

9. We understand overage as boys and girls enrolled in a grade that is not appropriate to the students of their age.

10. Fe y Alegría, 1996a, p. 50.

11. It is important to underline the differences between various rural areas. The "rurality" on the coast is not the same as in the jungle and in the mountains. There are also linguistic differences: Spanish-speaking areas and areas with languages other than Spanish as their mother tongue. This reality obliges to design more than one intervention model for rural areas.

12. See Annex 1.

13. The ideology of Fe y Alegría is the set of values, ideological principles that guide the educational work of Fe y Alegría in Peru. Source: Fe y Alegría, 1996b.

14. Through policies, support, tutoring, training and monitoring we help these guidelines to become life.

15. Interview with Prof. Daniel Arirama Silvano, who worked with the rural network team of Loreto and worked on the bylaws of rural education networks. Currently, he is working in the Fe y Alegría Rural Education Program No. 47, Iquitos.

16. Some of these traditional absences are now regulated by the Ministry of Education to avoid loss of hours.

17. The demand that secondary schools have in rural areas, within the rural networks is significant because it generates a lot of motivation for the students to complete primary in the network's schools. The secondary schools are: San Ignacio de Loyola, Fe y Alegría Andahuaylillas No. 44, El Milagro, Fe y Alegría No. 47 of Iquitos, and Maria Teresa, Fe y Alegría No. 48 of Malinga.

18. Mujica and García, 2006a. p. 60.

Faith-Based Schools in Latin America: Case Studies on Fe y Alegría is part of the World Bank Studies series. These papers are published to communicate the results of the Bank's ongoing research and to stimulate public discussion.

This volume is devoted to an assessment of the performance and selected aspects of the management and pedagogical practices of Fe y Alegría, a federation of Jesuit schools serving approximately one million children in 20 countries, mostly in Latin America. Many observers consider Fe y Alegría a successful organization, but very few rigorous evaluations have been conducted.

The available quantitative evidence suggests that the federation's schools often do reach the poor, and that students in Fe y Alegría schools tend to perform as well on test scores, if not slightly better, than comparable students in other schools. Qualitative data and case studies suggest that the factors that lead to good performance are complex and related not only to the types of "inputs" or resources used by the schools in the education process, but also to the management of these resources and the ability to implement and test innovative programs. Other factors that support this argument include the capacity and flexibility to implement and test innovative programs that take into account the local realities.

This volume will be of interest to researchers, policy makers, and practitioners working on education and public-private partnerships, and especially to those interested in what is now commonly being referred to as the "science of delivery."

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