Using private organizations to support public schools:
Implementation lessons from Argentina

Analía Verónica Jaimovich

Fernando Reimers
Richard Murnane
Felipe Barrera-Osorio

A Thesis Presented to
the Faculty of the Graduate School of Education of Harvard University
in Partial Fulfillment of the Requirements for the Degree of Doctor of Education

2016
Para Ernesto y Pelusa. Gracias por darme ese libro.
Acknowledgements

Contrary to what is often believed, writing a doctoral dissertation is neither an individual endeavor, nor a linear one. The path towards the finishing line is filled with detours and multiple people and institutions who challenge and support you along the way. I am deeply indebted to all these people and institutions, as well as the detours that took me to the finishing line (a finishing line that in fact is merely a beginning).

I would like to thank the committee members who helped push my thinking throughout the qualifying paper and dissertation writing stages of the doctoral program: Richard Murnane, Fernando Reimers, Richard Elmore, and Felipe Barrera-Osorio. In their own way and in their own time, each of them provided input that helped me dig further, challenge my own beliefs, and support my ideas. I would also like to acknowledge the financial support received from the Fulbright Program, the Harvard Traveling Fellowship, and the DRCLAS fellowship, without which this dissertation would not have been possible.

Special thanks go to the professional teams of the programs I worked with during the qualifying paper and the dissertation stages of my doctoral program: the Fe y Alegria and the Escuelas del Bicentenario programs in Peru and Argentina, respectively. And, most importantly, to the principals and teachers in the schools I visited while doing fieldwork for this dissertation. All of them opened the doors to their practice without asking for anything in return other than thoughtful ideas and honest understanding of their practice. Many of the most interesting questions I posed during this process arose in
conversation with them, trying to find answers to questions they ask themselves daily. Thank you for letting me be a participant in those questions.

Dissertations are in fact a collective endeavor. Ideas are produced not in isolation, but in interaction with a community of colleagues and friends who both challenge and support you at every step of the way. I am deeply indebted to Lorena Lo(lo) Landeo, my “academic partner in crime”; it was during the many long late-night conversations with her that many of the ideas in this dissertation were developed, analyzed, discarded, and reinterpreted. I am also indebted to Santiago Rincón-Gallardo, whose focus on culture and people made me reinterpret my passion for institutional arrangements. Special thanks also go to my writing group partners, Jennie Weiner and Julianna Kershen; your work helped shape my own work. Ivana Zacarias, Lizzie Adelman, and Gwendolyn Casazza acted both as sounding boards for ideas, professional colleagues, and dear friends. Fernanda Saforcada, Myriam Feldfeber and Toni Verger helped shape the foundations over which this academic work was developed. Thank you for challenging my ideas and helping me push them much further.

The detours I took while completing the doctoral program were crucial to understanding what answers to what real questions I was really trying to find. I am grateful to the professional teams I have worked with during these detours at the IPEBA, the IADB, and the Ministry of Education of Chile; and very especially to Emiliana Vegas, Mercedes Mateo, Gregory Elacqua, Jesús Duarte, Valentina, Pato, and the NEP and school leadership teams. The (academic and not academic) questions you posed while trying to solve “real life” issues shaped my thinking both about the value of this dissertation as well as the questions that I was trying to answer.
No dissertation can be completed without the unwavering support of a community of friends and family. I owe the completion of this milestone to many, many friends who were there “en las buenas y en las malas”, in Boston, Lima, Washington, Buenos Aires, and Santiago. They are far too many to mention them all, but I would like to give special thanks to Mari, Mauri, Jen, Armida and Mathew, Delia, Carola, Karen, Maria Gracia and Juan Cruz, Pancho and Sole, the Adelman family, Ursulitu, Pesho, the Landeo and the Joseph families, Ana, Yyannú, Nico and Ceci, Elisa and Juan, Ady and Maria, Karin, Avril, Pollo, Liora, Maite, Vicky, Rafa, Anahi and Luciano, among many, many others.

Finally, the most important of all the supports was the love and patience of my families: la abuela Alby, Damián and Lore, Mariano and Meli, and Perikouchy (your “doctora tíá” intended to finish this dissertation before you were born and is glad she finished it before you were able to read it), Shunko, Mishki, Claudia, Gladys, Ollantay, Inti, and Mario.

To all of you, thank you.
Table of Contents

Chapter 1: Introduction .................................................................................................................... 1

Chapter 2: Literature review and conceptual framework ................................................................. 6

The role of external support in school improvement ........................................................................ 6

Non-government organizations and school support .................................................................... 7

Government district offices and school support ........................................................................... 11

School internal capacity and the mediation of external initiatives at the school level .............. 13

Chapter 3: Methods ....................................................................................................................... 16

Research approach and questions ................................................................................................ 16

Site selection .................................................................................................................................. 20

Data collection .............................................................................................................................. 21

Analysis ......................................................................................................................................... 25

Chapter 4: Context of the research ............................................................................................... 28

Governance of public education in Argentina ................................................................................ 28

Characteristics of the research context ......................................................................................... 30

Chapter 5: The BIC Program: development, structure, and theory of change ......................... 38

Development of the BIC program ................................................................................................ 38

Structure of program delivery ....................................................................................................... 41

Program central office .................................................................................................................. 42

Local implementation teams ......................................................................................................... 43

Direct and mediated (whole-district) delivery strategy ................................................................. 44

Program theory of change ............................................................................................................ 46

District-wide capacity building ..................................................................................................... 47

School management with a focus on instructional leadership ......................................................... 51

Instructional improvement in the classroom .................................................................................. 53

Chapter 6: The dynamics of school support in two delivery approaches: district-level analysis . 57

Structural differences in program delivery ..................................................................................... 60

Program delivery in action: district level dynamics ..................................................................... 65

Parallel vs integrated implementation .............................................................................................. 66

Crafting systemic coherence .......................................................................................................... 70

Chapter 7: The dynamics of school support in two delivery approaches: school-level analysis .. 83
School-level dynamics based on program delivery approach .................................................. 84

Opening the classroom ........................................................................................................... 84

Give a man a fish or teach a man to fish? ............................................................................. 90

Principal instructional leadership .......................................................................................... 95

Chapter 8: Conclusions, further research, and implications for practice ............................... 99

Limitations and implications for research................................................................................ 103

Implications for practice .......................................................................................................... 105

Appendix A: Internal Coherence Assessment domains, factors, and indicators included in the
ICAP teacher survey .................................................................................................................. 107

Appendix B: Interview guides for semi-structured interviews ................................................. 115

Interview guide for members of the program central office ..................................................... 115

Interview guide for BIC local program coordinators ................................................................. 119

Interview guide for government district officers ................................................................. 124

Interview guide for local program coaches ............................................................................ 129

Interview guide for school principals ....................................................................................... 134

Interview guide for teachers ..................................................................................................... 139

Professional development meeting observation protocol ......................................................... 143

Appendix C. List of documents analyzed .................................................................................. 144

Appendix D. Businesses and institutions participating in the BIC program ............................. 148

Appendix E. Examples of BIC program instructional tools ...................................................... 151

Appendix F. Program delivery structure: central and local teams ......................................... 160

Appendix G. Direct and mediated delivery mechanisms in the BIC program .......................... 161

Appendix H. Program theory of change (implementation and program theory) ..................... 163

Appendix I. Structural differences in program delivery ........................................................... 164

Appendix J. Program delivery in action: Description of district-level dynamics .................... 165

Appendix K. Program delivery in action: Description of school-level dynamics ..................... 169

References ................................................................................................................................ 172
Abstract

Latin-American governments are increasingly promoting public-private partnerships to provide much-needed external support to schools, but little is known about the mechanisms through which such partnerships operate. This study aims to contribute to the literature on external support for school improvement by analyzing how a non-government organization in Argentina provides support to schools using two different implementation mechanisms, one where instructional support is provided directly by the non-government organization to schools, and another where school support strategies are mediated by government district offices.

The study is a qualitative exploration of the dynamics of the external support relationship. Using interviews, observations, and document review as sources of data, I explore how the institutional arrangements involved in different implementation mechanisms affect how the external support program is experienced at the district and school level. The analysis shows that the original design of the instructional support strategy developed by the program underwent significant adaptations as it was being implemented at the different levels of program implementation. These differences seem to have been related to the institutional choices that were made throughout program implementation, rather than to the interaction between the program and schools with different levels of internal capacity.
Chapter 1: Introduction

A central challenge faced by governments around the world is how to support schools for instructional improvement. Literature has pointed to the fact that improvements in the quality of instruction in schools can be propelled by external organizations that scaffold individual schools in their improvement processes. Such scaffolding works through the provision of targeted resources schools need to move to higher levels of effectiveness in supporting student learning (Elmore, 2004).

A recent trend in Latin American countries is the surge of public-private partnerships to support school improvement. While the term “public-private partnership” encompasses a myriad of institutional arrangements (Robertson et al, 2012; Chakrabarti & Peterson, 2009; LaRoque, 2008; Patrinos, Barrera Osorio, & Guáqueta, 2009), a growing trend is a set of arrangements whereby non-government organizations (foundations or for-profit organizations) manage and deliver on-site support systems for instructional improvement in public schools. In Latin America, such institutional arrangements have become particularly appealing for governments in a context where meager education budgets and low existing capacity limit the ability of the government to implement on-site school support programs directly.

Non-government external support organizations may be able to infuse the system with financial resources in addition to government funding, as well as mobilize resources more flexibly to focus on instructional improvement, due to the freedom from public sector regulations in procurement, hiring and management. There may also be differences in the human resources, design of the support programs, institutional culture, and scale at
which non-government organizations work. The result of such flexibility could arguably be a more direct relationship with schools that allows for targeted support. On the other hand, non-government organizations work within the constraints of existing government regulatory frameworks and need to interact with government agencies in various ways (Supovitz, 2008), which may impose certain limitations to their action.

This dissertation aims to contribute to the literature on external support for school improvement by analyzing two different modalities of support provided by a non-government external support organization in a developing country context, and by addressing questions related to the scale and channels through which external support programs are delivered to schools. While there is research in the US on non-government external support organizations for school improvement, such literature is scarce in the context of Latin America. Understanding the ways in which non-government external support organizations work in a developing country may provide insights regarding the possibilities and challenges governments face when relying on external providers for school improvement.

I analyze how a non-government organization in Argentina provides support to public schools. The program under analysis – the Escuelas del Bicentenario Program, translated as the Bicentennial Schools, henceforth “the BIC program”-- was implemented between 2006 and 2013 in a total of 132 public primary schools (grades 1 to 6) in Argentina. The BIC program provided on-site coaching to school principals on instructional leadership, school organization, data use for monitoring improvement, and the design and monitoring of school improvement plans. In addition, BIC provided on-site coaching for teachers using program-developed curriculum, teacher guides and
instructional materials in Language Arts, Mathematics, and Science. Coaches visited schools regularly to provide support to teachers with lesson planning, model lessons for teachers, and discuss specific issues arising in their classrooms.

A specific feature of this program was that it provided support to schools using two different implementation mechanisms, one where instructional support was provided directly by the non-government organization to schools, and another where school support strategies were mediated by government district offices. There are potential tradeoffs between scale, consistency of support, and responsiveness to local circumstances between the mediated and the direct approach which underscores the importance of obtaining evidence to elucidate the nature of these tradeoffs. While mediated delivery mechanisms may be useful to expand the scale of a program, they risk a dilution of the technical capacity delivered through a direct delivery mechanism that allows for more intensive support to schools. At the same time, direct delivery mechanisms may lack the reach and sustainability that mediated mechanisms may provide. Direct delivery mechanisms run the risk of creating “islands of prosperity” or parallel implementation structures that will vanish when the funding for the public-private partnership runs out. These tradeoffs underscore the need to understand the differences in adaptations and challenges to implementation an external school support program faces based on the scale and channels through which it reaches schools.

I analyze the theory of change of the external organization, the specific strategies developed to scaffold schools in their improvement process in each of the implementation mechanisms, and how those strategies are adapted and re-interpreted at each level of their implementation. In addition, a full understanding of the nature of the support relationship
between schools and external support organizations requires taking into account how external support strategies are negotiated and adapted when they reach the school level. In my qualifying paper (analyzing the role of an external organization in providing school support in Peru) I found that coaches tended to adapt the external organization’s support strategies to what they perceived to be the specific needs of each individual school, and schools seemed to vary in the degree to which they requested specific adaptations based on their existing internal capacity for school improvement (Jaimovich, 2012). Therefore, in order to fully understand how support strategies are negotiated and adapted when they reach the school level, it is necessary to take into account the level of internal capacity of the schools when the external support arrives.

This dissertation is structured so as to be able to compare the implementation of the school support program in the two different delivery mechanisms, while at the same time taking into account how the existing internal capacity of schools may affect how the external support program is delivered at the school level. In order to do this, I selected two school districts (one within each type of implementation mechanism). Within each district I selected three schools, pairing each of them with a school in the other district with similar internal capacity for school improvement as assessed by the Internal Coherence Assessment Protocol (Elmore & Forman, 2011).

The study is thus a qualitative exploration of the dynamics of the support relationship between the external support provider and the schools. I use qualitative interviews, observations, and documents to analyze two main questions: 1. how the main school support strategy of the external support program is negotiated and adapted at each level of the implementation process, from the central office of the program, through the
local teams and the school coaches, to principals and teachers, and 2. whether the implementation of external support strategies in the two delivery mechanisms varies depending on the schools’ level of internal capacity.

The motivation behind these questions is to assess how institutional arrangements (the two delivery mechanisms described in this dissertation) affect the way system actors interact with the program, and eventually, affect program results. The methodology chosen for this dissertation allows analyzing in depth the former, and developing hypotheses for the latter that could be tested with different methods. In this sense, the dissertation aims to contribute to recent literature on implementation science (see Bryk et al, 2015) by documenting the ways system actors interact with one another in improvement processes within the constraints and possibilities that different institutional arrangements provide.
Chapter 2: Literature review and conceptual framework

Existing research on how external support providers influence school capacity can be grouped in different strands that have so far not been productively integrated. One such strand, including studies of non-government providers as well as studies of government providers, looks at the mechanisms through which external providers offer support. A different strand looks at the other end of the support relationship, examining how external policies are reconstructed at the school level based on school conditions. The integration of the two perspectives can produce a more nuanced understanding of the process of school change. In this section I first review the literature on the role of external support in school improvement, for non-governmental and governmental providers, followed by a discussion of the literature on school capacity as a central contextual factor in understanding how external support influences school improvement.

The role of external support in school improvement

Of particular relevance for this dissertation are studies that address the role of two types of external organizations in school support: government district offices and non-government organizations. This is so because I explore how the support relationship between a non-government organization and schools works in two delivery mechanisms, one where there is a direct relationship between the non-government organization and schools, and another one where such relationship is mediated through the action of government district offices.
Non-government organizations and school support

Research in the US has analyzed the role of non-government external organizations in school support through the analysis of Comprehensive School Reform (CSR) programs. These external support programs have been implemented by a range of non-government organizations, comprising for-profit firms, membership organizations, and not-for-profit institutions (Cohen et al 2014: Rowan, 2001; Rowan, Camburn & Barnes, 2004). These organizations are analogous to the organization I analyze in my dissertation in that they provide external direct instructional support to public schools. Research on the effectiveness of CSR programs shows that there is a wide variability in program effects, suggesting that some programs may work much better than others depending on their institutional design and type of support strategies they put in place (Borman et al, 2003).

Rowan and Miller (2007) analyze the design and operations of three CSR programs (Accelerated Schools Project, America's Choice, and Success for All) to describe how different design features affect operating strategies. They find that external support programs relied on very different school support strategies depending on features of their design. The Accelerated Schools Project used a system of cultural controls to produce instructional change, leading to the development of school environments that were quite strong in professional community with strong teacher autonomy. In contrast, the other two interventions used more standardized approaches to instructional reform. Success for All pursued a strategy of “procedural controls” with a strong focus on the
development of routines that eventually acted as an organizational substitute for instructional leadership. America’s Choice also pressed for instructional standardization, but it did so encouraging development of strong instructional leadership in schools. The authors find that the two CSR programs that were organized to produce instructional standardization produced higher levels of instructional change in the schools where they worked.

Cohen et al (2014) analyze the same three external support programs, from the perspective of how the “improvement by design” strategy to effect large-scale school improvement works. Improvement by design defines the strategy that non-government school improvement networks develop in which a central organization develops a common design for school-wide improvement and then collaborates with a large number of schools to implement such design. Cohen et al find that the extent to which these programs could be successful and sustainable was challenged by the fact that the schools they were trying to improve had a “double life”: they were members of the program, while at the same time were members of the public education system and thus subject to its policies. The external support programs found increasingly necessary to integrate their work with the public structure in order to achieve results. In the words of the authors,

“one way to summarize the explanations for the paradoxical effects of the intervener’s success is that every school that joined one of the three networks led a double life. Each belonged to a new professional community that stood outside the public schools, but each also belonged to a public system. […] The interveners were trying to build purpose-driven schools in public systems that had long avoided clear purposes. […] They were trying to build coherent school in the midst of an enterprise that was deeply incoherent. Because the interveners took
schools as they were yet tried to turn them into something that they never had been, they could only work by engaging the school systems and becoming vulnerable to all their weaknesses. They built school systems to do what the public systems had not done, in the interstices of those systems, while they depended on them for funds and political support” (Cohen et al, 2014, p.175).

These studies call attention to how the institutional arrangements through which programs are delivered (for example, the extent to which an externally-developed program is delivered through the regular administrative structure of the public education system, or, rather, through a totally parallel *ad-hoc* structure) may affect the prospects of external support programs in changing instructional practice. They provide insights on how the work of non-government organizations is torn between the need to develop coherent systems (which calls for dissociating themselves from the context) and integrating their practices with the existing public structures and policies to ensure reach and sustainability. However, the fact that these studies compare school support strategies across programs that are different *by design* limits the extent to which it is possible to infer conclusions about the dynamics of implementation, and in particular about how the same overall school support strategy is adapted and modified depending on different institutional mechanisms for program implementation that mean a different type of relationship with the public system and its policies.

The aforementioned studies analyze how non-government external support organizations work in a developed nation. Few studies analyze this phenomenon in the context of developing countries. Of note are the studies of Bold et al (2013), and Gvirtz
and Oria (2010). Bold et al (2013) find that when NGO-developed programs are scaled-up through government channels, programs are faced with a different political economy (for example, organized opposition from the teacher unions) and implementation constraints (for example, difficulties in monitoring) that may affect the way a program is implemented, and, eventually, its results.

Gvirtz and Oria (2010) focus on the design process of the BIC program in Argentina. They describe the decision-making process at the program central office whereby it was decided to add a mediated delivery mechanism to the already existing direct implementation mechanism. The decision was motivated by the high teacher and principal turn-over rates in some districts that made the direct support strategy unsustainable given that school staff who had received professional development would migrate to a different school, leaving schools in the program with low capacity. Given that teachers and principals tend to migrate among schools within the same school district, the program central office decided to move towards the mediated strategy to be able to target all schools in a district, thus not “losing” teachers and principals that had received professional development and leveraging the program resources to influence a larger number of schools. Gvirtz and Oria’s study highlights how local conditions make the adaptation of delivery mechanisms necessary. However, their study has not addressed the ways in which the two delivery mechanisms in the BIC program affect how the general support strategy is actually implemented in each local context.

Collectively, these studies on external school support call attention to the importance of assessing how institutional arrangements affect the way system actors interact with the program, and eventually, may affect program results. The first research
question of this study aims to address this issue, taking advantage of the fact that the program under study has one program design that is delivered through two different institutional arrangements.

*Government district offices and school support*

An alternative strand of research has analyzed how districts’ actions affect teaching, curriculum, and assessment (Sykes, 2009). Most of this research takes a case study approach to analyze the practices and structures of school districts that show an improvement in student performance. Collectively, this literature suggests that districts that support improvements in teaching and learning share several of the following attributes: stable district leadership, a strong focus on instructional improvement, a system-wide approach to reform, district-wide instructional coherence, the alignment of policies, the use of data at various levels of the system to support instructional improvement and policy development, school-based teacher professional development, and support for developing instructional leadership in principals (Childress, Elmore, Grossman, & Johnson, 2007; Elmore, 1993; Elmore & Burney, 1997, 2000; Hightower, 2002; Levin, 2008; McLaughlin & Talbert, 2003; RAND, 2005; Supovitz, 2006; Snipes, Doolittle, & Herlihy, 2002; Togneri & Anderson, 2003; Zavadsky, 2009).

A few studies have attempted to describe in detail what happens in the external support relationship between government district offices and schools. Most of these studies have focused on analyzing patterns and contents of the interactions between district and school staff (Daly & Finnigan, 2010; Johnson & Chrispeels, 2010). Honig
(2012) focuses on what government district offices’ staff do when providing intensive job-embedded support for the development of instructional leadership. Examining the work practices of executive-level staff in three districts to describe their school support strategies, Honig finds that district staff use strategies such as differentiation, modeling, developing and using tools, and brokering (buffering, mediating with other public offices, translating external demands to the school). She also finds that these strategies are mediated by structural conditions such as the ratio of schools to coaches, time constraints, and principal’s readiness to accept external supports.

In the context of developing countries, Gvirtz (2008) analyzes the role of the intermediate levels of administration of education systems in Argentina, Chile, Colombia and Peru (school districts, municipalities, UGELes, etc). She finds that these local education management units are relatively weaker as compared to the functions fulfilled by district offices in the US. Nevertheless, local management units do perform a series of important functions related to instructional improvement in the system, such as supervising principals, developing local improvement plans, and coaching teachers, among other functions.

This literature calls attention to the fact that external organizations may find themselves in competition with school districts when supporting schools for instructional improvement. The instructional improvement processes external support organizations put in place, at the very least, need to interact with the improvement processes school districts are already implementing, and, at worst, may even collide with them. This is particularly relevant in the case of external support programs that are institutionally integrated with the public education local administration structure, such as the program
analyzed in this study. Programs like this one do not fall on *tabulae rasae* form the point of view of their involvement with district-wide processes. Existing processes, institutional structures, and local system actors’ views may affect the way the program is implemented. The first research question in this dissertation takes advantage of the fact that the program is delivered through two different mechanisms that imply a different type of relationship with the public education local administration.

**School internal capacity and the mediation of external initiatives at the school level**

The literature on the role of external support organizations in school improvement tends to look at the support relationship in a rather one-sided manner. Studies have tended to simplify the relationship between external organizations and schools, focusing on what external organizations do, and failing to address how support strategies are negotiated and adapted to specific school contexts (Rorrer, Skrla & Scheurich, 2008; Louis, 2008).

For many decades, researchers have emphasized how hard it is for education reforms to actually affect the instructional core (Cuban, 1984, 1990; Rowan & Miskel, 1999). A strand of research that has taken into account the phenomenology of change (Fullan, 2001) in schools suggests that the limited effect of external initiatives on instruction may be due to the fact that school actors have an important role in re-interpreting, adapting, and challenging reform initiatives. Researchers such as Coburn (2001, 2004, 2008, 2012), Cohen and Ball (1999), Datnow and Castellano (2000), deJong (2008), Hill (2001, 2006), Jennings (1996), Knapp and Peterson (1995), Spillane (1999,
2004), and Spillane, Reiser and Reimer (2002) have analyzed the ways in which teachers’ beliefs, expectations, previous knowledge, and social context within which they work mediate how external initiatives are incorporated into instructional practices.

This research calls attention to the need to take into account the mediating role of existing beliefs, structures, and processes in schools in the negotiation and adaptation of external instructional support initiatives when they reach the school level. Elmore (2004) provides a model of how schools improve their performance. Such model states that schools begin the improvement process by paying attention to student performance. They then focus their work on improving individual and organizational capacity to meet a determined performance target. If schools succeed in addressing this first problem of performance, they are typically faced with the fact that they do not have the knowledge and skills necessary to address the next level in their improvement process. They typically then demand from external sources the necessary skills and knowledge to scaffold their improvement process.

According to this model, external supports for instructional improvement do not “fall” on tabulae rasae, but rather are integrated by school actors into existing structures, processes, and beliefs schools have been developing in order to attempt improving performance. School internal capacity may play a role in shaping how principals and teachers react to, negotiate, and require adaptations to external support strategies. In addition, the perceived level of internal capacity in a school may affect how providers of external support adapt their support strategies at the school level. Previous research on the topic has shown that school internal capacity mediates teachers’ responses to external accountability pressures (Elmore, 2004), but no research has yet been conducted on the
relationship between internal capacity and how schools respond to external instructional supports in the context of Latin America.

I use the Internal Coherence framework to explore the adaptation of external support strategies in the context of the BIC program. Internal coherence (Elmore, 2004; Elmore & Forman, 2011) describes a school’s internal capacity to engage in ongoing improvements in instruction and student learning. The internal coherence framework relies on research in organizational learning and school improvement, and identifies three main organizational features that the school improvement literature associates with improvement: leadership focused on the support for instructional practice, individual and collective efficacy beliefs of teachers and administrators related to instructional practice and student learning, and organizational structures and processes to support improved instruction and student achievement, both at the team level and whole-school (see Chapter 3).

Question two in this dissertation aims to address the issue of the interaction between schools’ existing capacity and external supports. The question explores whether the implementation of external support strategies in the two delivery mechanisms varies depending on the schools’ level of internal capacity. The main objective of this second research question is to try to isolate the characteristics of program implementation that are due to institutional arrangements in each delivery mechanism from the ones that may be due to schools’ internal capacity levels.
Chapter 3: Methods

Research approach and questions

The study is a qualitative exploration of the dynamics of the support relationship between the BIC program and schools in the context of two contrasting delivery mechanisms: one where there is a direct relationship between the non-government external support organization and the schools, and another where this relationship is mediated through the action of government district offices. I seek to understand how the possibilities and constraints imposed by each implementation mechanism affect how school support strategies are delivered, negotiated, and adapted at each level of the implementation process.

The study is organized around two main research questions:

1. How is the main school support strategy of the BIC program negotiated and adapted at each level of the implementation process, from the central office of the program, through the local teams and the school coaches, to principals and teachers? This question focuses on the differences and similarities in the implementation process between the direct and the mediated delivery mechanisms.

2. What, if any, role does the existing level of internal capacity of schools play in the way external support strategies are negotiated and adapted as they are introduced to the school level? This question aims to analyze whether the implementation of
external support strategies varies depending on the schools’ level of internal capacity, and whether this relationship (external support- internal capacity) plays out differently in the direct and the mediated delivery mechanisms. I thus focus on how coaches adapt support strategies based on the perceived needs of schools, and how principals and teachers in schools with varying internal capacity react differently to the external support provided by the organization, in each delivery mechanism.

Thus, the data collection and analysis were organized so as to be able to compare the implementation of the school support program in the two different delivery mechanisms, while at the same time taking into account how the existing internal capacity of schools may affect how the external support program is delivered at the school level. In order to do this, I selected two school districts (one within each type of implementation mechanism). Within each district I selected three schools, pairing each with a school in the other district with similar internal capacity for school improvement as assessed by the Internal Coherence Assessment Protocol (Elmore & Forman, 2011).

The Internal Coherence framework (Elmore, 2004; Elmore & Forman, 2011) describes a school’s internal capacity to engage in ongoing improvements in instruction and student learning. This framework has been developed based on research in organizational learning and school improvement, and identifies three main organizational features that the school improvement literature associates with improvement: leadership focused on the support for instructional practice (Ross & Gray, 2006; Newmann, King & Youngs, 2000; Newmann et al 2001), individual and collective efficacy beliefs of
teachers and administrators related to instructional practice and student learning (Goddard, Hoy & Hoy, 2004; Stajkovic & Luthans, 1998), and organizational structures and processes to support improved instruction and student achievement, both at the team level and whole-school (Goddards et al, 2011; Goddard, Goddard & Tschannen-Moran, 2007; McLaughlin & Talbert, 2001).

The Internal Coherence framework aligns well with the design of the BIC intervention. The BIC program provides professional development for school principals on instructional leadership, and aims to develop coherent instructional practices across teachers in participating schools by promoting coordination in content and pedagogy across grades and subjects. In addition, the program is designed so as to open teacher classrooms to the scrutiny of program coaches, and, potentially, school principals and teacher peers.

I use the Internal Coherence Assessment Protocol (ICAP) teacher survey developed by Elmore and Forman for the Strategic Education Research Partnership (SERP) project in order to assess the internal coherence of schools, as a measure of their internal capacity for school improvement. The ICAP teacher survey is designed to be administered to all teachers in the school. It requires 30-40 minutes to complete. It gathers information on teachers’ perceptions in four dimensions related to the three abovementioned domains related to school improvement: (1) school leadership, including administrators’ role in organizing, managing, and supporting teachers in their instructional roles; (2) individual and collective efficacy, defined as teachers’ perceptions of the degree to which they influence factors that determine student achievement,
individually and collectively, in the school; (3) whole school organizational structures and processes; and (4) team level organizational processes (see Appendix A).

Using data from the survey, it is possible to develop a composite measure that summarizes the level of internal coherence of the school across all four domains (see Stosich, 2013). I calculated scores on this composite measure using results from the survey so as to have a summary description of schools’ level of internal capacity. I used this composite to organize schools in groups above, around, and below the mean ICAP for both districts. However, it is important to note that research on this instrument is not yet conclusive as to whether all four domains should carry equal weight when calculating a composite measure of school internal capacity. In order to take this into account, I relied on a more descriptive approach, in which I calculated scores for each school in each of the four domains separately. In my sample, schools included in the high internal capacity group score above the mean in the composite ICAP measure and also score consistently above the mean in each domain separately. Schools included in the low internal capacity score below the mean on the composite ICAP measure and also score consistently below the mean on each domain separately, while schools grouped in the average category score around the mean in the composite measure and show an erratic behavior when analyzing each of the domains separately.
Site selection

I relied on a multi-level cross-case design to collect and analyze data to answer my research questions (Yin, 2009). Using a theory-guided approach (Seidman, 2006), I purposefully selected schools based on two main criteria:

1. To be able to analyze the constraints and possibilities imposed by the extent to which the non-government organization has a direct or mediated relationship with schools, I selected two school districts, one in each type of delivery mechanism (direct or mediated). Both districts are in the same province, to ensure comparability regarding general government policies and regulations.

2. Based on my qualifying paper research, I hypothesized that the existing level of internal capacity in a school may have an effect both on how BIC coaches adapt external support strategies while providing school support, as well as on whether and how school principals and teachers negotiate and request adaptations of external support strategies to satisfy perceived school needs. To capture this, within each one of the two districts I selected schools with varying internal capacity for school improvement, as measured by the Internal Coherence Assessment Protocol (ICAP) (Elmore & Forman, 2011). I applied the ICAP to teachers in schools in both districts (93% response rate), and paired schools in each district according to their level of internal capacity as described by the ICAP.
The final sample was composed of six schools, three in a district under the direct delivery mechanism and three in a district under the mediated delivery mechanism. Each school was paired to a school in the other district according to their internal capacity, their length of stay in the program, school size, whether the principal held a permanent appointment, and whether the school showed improvement in students’ passing rates.

Table 1. Selected school characteristics

<table>
<thead>
<tr>
<th>School</th>
<th>Years in program</th>
<th>Grades</th>
<th>Double-shift school?*</th>
<th>Number of student sections</th>
<th>Percentage of teachers holding permanent appointments</th>
<th>Principal holds a permanent appointment</th>
<th>Improvement in student flow **</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 1</td>
<td>4</td>
<td>1-6</td>
<td>Yes</td>
<td>10</td>
<td>100</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>School 2</td>
<td>4</td>
<td>1-6</td>
<td>Yes</td>
<td>12</td>
<td>66</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>School 3</td>
<td>4</td>
<td>1-6</td>
<td>Yes</td>
<td>22</td>
<td>90</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>School 4</td>
<td>4</td>
<td>1-6</td>
<td>Yes</td>
<td>12</td>
<td>100</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>School 5</td>
<td>4</td>
<td>1-6</td>
<td>Yes</td>
<td>12</td>
<td>92</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>School 6</td>
<td>4</td>
<td>1-6</td>
<td>Yes</td>
<td>18</td>
<td>94</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Double shift schools are schools that have two shifts of students, each lasting 4 hours. These schools have the same school leadership team (principal and assistant principal) for both shifts. Teachers teach either in the morning or afternoon shift, or both. Students self-select into either the morning or the afternoon shift.

** As measured by the percentage of students who progress from one grade to another over the period of four years during which the school received external support. No data are available on student achievement in standardized tests. There are no data available on social composition of the student body per school. As a proxy, I used data from household surveys to select districts that are similar in terms of socioeconomic status.

Data collection

I take a perspective informed by the phenomenology of change (Fullan, 2001). An underlying assumption in my study is that social actors at various levels of the external
support relationship make meaning of and mediate external support strategies adapting them in interaction with specific contexts at each step of the process.

Therefore, my data collection strategy included 68 semi-structured, on average one-hour-long digitally-recorded interviews with BIC central office administrators; local program coordinators, government district office staff, and local program coaches in each of the two districts; and school principals and teachers in each of the six selected schools. In the case of teachers, I selected teachers from both the morning and the afternoon shifts.¹

I aimed to capture their perceptions about how the external support strategies worked, why certain strategies seemed appropriate for specific contexts, and how and why they were adapted in the “trickling-down” process from the non-government organization central office to the school level (see Appendix B for interview protocol).

In the direct delivery mechanism, the BIC program provided support to a total of eight schools out of the 30 schools in the district. The team of local program coaches was composed of 12 people in charge of providing support to schools on school management and principal leadership, Language Arts, Mathematics, and Science. In the mediated delivery mechanism, in turn, the BIC program provided support to all schools in the district, a total of 22 schools. The team of local program coaches (which was integrated

¹ Analyzing Mexican public schools, Sergio Cardenas (2009) found that there were significant differences in the quality of educational inputs and student characteristics across the morning and the afternoon shifts in double-shift schools. There is no strong evidence suggesting this is also the case in Argentina, although anecdotic evidence suggests that afternoon shift students may be of lower SES status than morning shift students. Thus, I decided to select teachers from both school shifts for my interviews to take into account possible differences between the shifts, both in terms of teacher and student characteristics.
within the administrative structure of the government district office) was composed of 21 people.

Table 2. Distribution of interviewees

<table>
<thead>
<tr>
<th></th>
<th>Central level</th>
<th>Local implementation level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct</td>
<td>Mediated</td>
</tr>
<tr>
<td></td>
<td>delivery</td>
<td>delivery</td>
</tr>
<tr>
<td></td>
<td>mechanism</td>
<td>mechanism</td>
</tr>
<tr>
<td>Central program coordinators</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Members of the board</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Other central office staff</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Government district office</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local BIC program</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>coordinator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local program coaches</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>School leadership teams</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>(principal + assistant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>principal)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

I triangulated the information collected through the interviews with information gathered through observations of meetings between BIC coaches and principals and teachers at each site, taking field notes. Observations aimed to capture whether and how program strategies were negotiated and adapted during on-site support meetings.

Observations of professional development meetings between BIC coaches and principals and teachers were focused on understanding the actual strategies coaches put in
place when interacting with school actors, as well as how those strategies were adapted in each case (See Appendix B for observation protocol). The set of observations comprises three coaching meetings between BIC coaches and principals and teachers in each school, for a total of 18 observations of meetings.

Table 3. Observations of professional development meetings

<table>
<thead>
<tr>
<th>Participants</th>
<th>Direct delivery mechanism</th>
<th>Mediated delivery mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIC coaches – school principals.</td>
<td>3 observations (one in each school)</td>
<td>3 observations (one in each school)</td>
</tr>
<tr>
<td>BIC coaches – Teachers. Language Arts.</td>
<td>3 observations (one in each school)</td>
<td>3 observations (one in each school)</td>
</tr>
<tr>
<td>BIC coaches – Teachers. Mathematics.</td>
<td>3 observations (one in each school)</td>
<td>3 observations (one in each school)</td>
</tr>
</tbody>
</table>

Another source of data for triangulation were program and school documents. I collected documents that describe BIC’s theory of action and general school support strategy, adaptations of the general strategy over time, program tools to provide training to principals on data use at the school level, and teacher guides and instructional materials. Documents at the school level included improvement plans developed by each of the six participating schools, curriculum documents, and other school planning materials. In total, I analyzed more than 80 documents (see Appendix C for a list of the documents analyzed).
Analysis

I used qualitative thematic analysis to process my data (Boyatzis, 1998), in an iterative process, using the Atlas.ti software. I analyzed the documents, interview transcripts, and observation and field notes in a three-tiered process. In the first round of analysis, I relied on the existing literature on external support for instructional improvement and my research questions to generate etic codes. An etic approach (also known as “deductive”) uses as its starting point theories, hypotheses, and concepts from outside of the setting under study. My initial etic codes aimed to organize the information around categories such as “delivery strategy”, “focus of support”, “scale”, fidelity of implementation”, “sustainability”, “data use”, “pedagogic approach”, “buffering”, “network of support”, “hierarchical dependency”, among others.

These categories were useful to provide a general framing for the subsequent development of emic codes in phase two of the analysis. Emic codes are inductive codes that take as their starting point the perspectives and words of research participants. I developed such emic codes relying on a grounded theory approach (Charmaz, 2006; Corbin & Strauss, 2008). I inductively developed the emic codes in two phases (Charmaz, 2006). First, I coded the interview transcripts, observation field-notes, and selected documents for each site separately, using low-inference codes and “in-vivo” codes whenever possible. I then used the most significant initial codes to integrate and organize larger amounts of data using the constant comparative method (Glaser & Strauss, 1967), which led to the identification of higher-inference codes (Miles & Huberman, 1994). Throughout the process, I checked for possible researcher bias in emergent codes and interpretations by asking colleagues to code some of my transcripts.
using my *emic* codes, and checking for discrepancies between their coding and mine. This phase of the analysis was done blindly, that is, masking the descriptors that stated whether the documents being analyzed (interview transcripts and observation and field notes) were from low, medium, or high ICAP schools, or in the mediated or direct delivery mechanism. Among the codes developed during this phase of the analysis were the following: “providing support without control”, “externalizing principal’s pedagogic leadership”, “developing communities of practice”, “solving the teacher rotation problem”, “boycotting program implementation”, “working in parallel to mainstream policies”, “integrating the program to mainstream policies”, “gaining ease of access”, “exercising hierarchical authority”, “opening the classroom”, “providing top-down activities”, “generating tailored *secuencias didácticas* (*instructional sequences*)”, “using program materials”, “adding additional academic resources”, “providing specific feedback”, “requesting program adaptations”, among others.

The third phase of the analysis concentrated on analyzing whether there were systematic differences in the frequency with which the codes developed in phase two appeared in the mediated and direct delivery mechanism, on the one hand, and on schools with different internal capacity as measured by their ICAP level, on the other hand. I thus grouped the documents based on these two groups of descriptors (mediated/direct, and ICAP low, medium, high) and developed matrices to analyze cross-case patterns (Miles & Huberman, 1994; Yin, 2009). The first matrix compared the frequency of each code based on whether the source of information was an interview transcript or field-note from the direct delivery mechanism or the mediated delivery mechanism. The second matrix compared the frequency of each code based on whether the source of information
was an interview transcript or field-note from a high, medium, or low ICAP school.

Finally, I checked whether there were differences across the combinations (were codes from the low ICAP school in the direct delivery mechanism different from codes from the low ICAP school in the mediated approach?) (see table 4).

**Table 4. Structure of analysis matrix**

<table>
<thead>
<tr>
<th>Direct delivery mechanism</th>
<th>Mediated delivery mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low internal capacity</td>
<td>School 1</td>
</tr>
<tr>
<td></td>
<td>School 4</td>
</tr>
<tr>
<td>Average internal capacity</td>
<td>School 2</td>
</tr>
<tr>
<td></td>
<td>School 5</td>
</tr>
<tr>
<td>High internal capacity</td>
<td>School 3</td>
</tr>
<tr>
<td></td>
<td>School 6</td>
</tr>
</tbody>
</table>
Chapter 4: Context of the research

Governance of public education in Argentina

The provision and management of education in Argentina is the responsibility of each of the 24 provinces in the country. While provinces need to comply with minimum federal regulations set forth by the Ministry of Education and the National Congress, each province has decision-making authority over issues such as curriculum frameworks, instruction, human resources, student standardized tests, school supervision and support policies, and financing. Curriculum frameworks, thus, are determined at the provincial level, while complying with a set of core contents that are set at the federal level.

The day-to-day management and supervision of education is decentralized from provinces to government district offices that manage human and financial resources, supervise schools, and provide technical support to them. Government district offices are not autonomous and are required to comply with regulations set forth by the province. There is a range in the scale of districts across the country. Districts have on average between 10 to 35 schools.

The number of district staff is based on the number of students in the district. In general, there is a Head Supervisor for the whole district, and a supervisor for each education level (pre-primary, primary, secondary) for every 15 to 20 schools. Besides administrative personnel, other district staff includes orientation teams composed of psychologists and social services personnel, including teachers in charge of working with students with special needs, and speech therapists who are normally based in a school that functions as hub for other schools.
Despite the fact that districts are expected to provide professional support for principals and teachers, most districts have small teams that perform mostly supervision, rather than support, functions. An analysis of the role of supervisors in district offices in the Province of Buenos Aires (where I conducted the fieldwork for this dissertation) shows that they are required to fulfill a number of technical functions: to promote best practice-sharing across schools, to analyze data to determine improvement needs, to develop a district supervision plan, to provide technical support to teachers and principals, to provide support to schools in the development of school improvement plans, to supervise and provide guidance to schools in their improvement process. Regardless of these functions, qualitative accounts of the work of supervisors in district offices suggests that their role is still much more focused on supervision than on support and improvement functions, and that district supervision plans are characterized by a lack of focus on the analysis of data to determine improvement needs (Dufour, 2008).

In-service teacher professional development is provided by the provincial ministry of education through special centers (called Centros de Innovacion Educativa, CIEs) that organize courses in the evenings, during the weekend, or on special professional development days during which teachers are excused from classroom teaching. There is a team of government technical specialists (ETRs, equipos tecnicos regionales) in charge of these courses. These teams depend directly from the provincial ministry, and have no direct relationship with the districts. There are also private professional development providers that organize courses for which teachers are required to pay. Both types of courses count towards the professional development credits teachers have to complete in order to be promoted in their careers. In the province that was
selected for fieldwork, there were no on-site teacher professional development programs. All professional development programs (publicly and privately provided) took place outside the classroom and often times outside school hours. In this sense, the BIC program was an innovation, since it was the only professional development program in the province at the time of fieldwork that provided on-site support to principals and teachers.

**Characteristics of the research context**

Fieldwork for this study was conducted in two school districts that are located in the same province, to ensure that there was comparability in terms of the government policies that would affect the work of schools in each district. The two selected districts had 22 and 30 primary schools respectively. Both districts were comparable in terms of socioeconomic indicators. Both districts had a combination of rural and urban areas (although the schools selected for fieldwork were all in urban areas) and a socioeconomic status that was around the provincial mean (district A slightly above and district B slightly below). Districts were also comparable in terms of student flow indicators (see Table 5).
Table 5. Selected characteristics of districts in the sample

<table>
<thead>
<tr>
<th></th>
<th>District A</th>
<th>District B</th>
<th>Provincial average and (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of population below poverty line</td>
<td>14.4</td>
<td>16.6</td>
<td>15.6 (4.3 to 30.4)</td>
</tr>
<tr>
<td>Percent of population living in urban areas</td>
<td>87.2</td>
<td>93.3</td>
<td>96.3 (20.2 to 98.6)</td>
</tr>
<tr>
<td>Percent of school-aged children in grades 1-6</td>
<td>99.5</td>
<td>98.8</td>
<td>98.4 (88.5 to 97.5)</td>
</tr>
<tr>
<td>Percent of children who repeat a grade in the first cycle of general education (grades 1-3)</td>
<td>5.1</td>
<td>5.4</td>
<td>5.9</td>
</tr>
<tr>
<td>Percent of children who repeat a grade in the third cycle of general education (grades 6-8)</td>
<td>14.2</td>
<td>15.4</td>
<td>13.5</td>
</tr>
<tr>
<td>Average number of students per classroom in the first cycle of general education (grades 1-3)</td>
<td>25.5</td>
<td>26.8</td>
<td>26.9</td>
</tr>
</tbody>
</table>

Source: Dirección General de Cultura y Educación. Dirección Provincial de Planeamiento.

At the time of fieldwork, a new curriculum framework outlining expected learning goals for each grade had been under implementation in the province for four years. This curriculum framework (the “Diseño curricular para la Educación Primaria”) determined competencies and skills to be developed during primary education. Schools were mandated to comply with the curriculum framework and develop curriculum (that is, specific instructional sequences for each grade level and for the school as a whole to
achieve the curriculum framework goals). The Diseño Curricular is based in the following principles:

a. The curriculum should be organized in a circular manner: contents should be presented in such a manner that they are addressed at a greater level of complexity in each consecutive iteration. Teachers are responsible to plan activities to ensure this cycle during the academic year, and it is an institutional responsibility of the whole school to ensure that curriculum planning across grades takes this principle into account.

b. Schools are free to organize time and activities to approach the delivery of the content as it sees fit. The curriculum framework recommended that in double-shift schools (that is, schools that house two student shifts of four hours each) at least 6 hours per week are devoted to language arts and mathematics, and four hours per week to social sciences and natural sciences. The distribution of time is entirely a prerogative of the school. Some schools choose to have natural sciences in one large block to allow time for experiments, while others decide to distribute the time across the days of the week.

c. The curriculum framework approach is based on the idea that children learn best through exploration. It is this suggested that topics are presented in such a way that students can come up with varying possible solutions, and that part of the learning process consists of contrasting the varying solutions that appear in the group.
The Diseño Curricular determines the contents, competencies and skills that each student should develop by the end of each cycle/year of primary education. Contents for language arts are organized around two cycles of three years each (grades 1-3 and grades 3-6), whereas contents for Mathematics, Natural Sciences and Social Sciences are organized yearly. In addition, the Diseño Curricular offers a few examples of teaching activities and recommendations on how to organize the classroom. While the contents are mandatory, the recommendations on instructional activities and classroom organization are not.

For example, an example of content and suggested instructional activities for Language Arts for the first cycle of primary education (grades 1-3) would be “to read, listen to others read, and comment on a variety of literary texts”. Specific contents to be addressed are “to follow the reading done by others”, “to choose texts that one would like to read or listen to”, “to adapt the reading to the characteristics of the text and the situation”, “to express the effects that the text produces in the reader”. Suggested instructional activities related to this content are, for example, reading out loud by the teacher, anticipating the characteristics of the text by looking at non-textual cues, etcetera.

In the case of Mathematics, an example of contents to be addressed in grade 2 is addition and subtraction. The specific content is presented as: “Exploring strategies for making approximated calculations in addition and subtraction”. A suggested instructional activity for this content in grade 2 is the following: “the teacher will introduce problems that could be solved with an approximate calculation, without the need to find an exact solution. An example of such type of problem would be the
following: ‘there is a truck that can carry 500 packs of bottles. Yesterday the truck was
loaded with 250 packs and today the owner wants to load 330 additional packs. Is there
enough space for all the packs in the truck?’’. Teachers are encouraged to elicit
different answers from students, and to help them identify the differences in the strategies
each student chose to solve the problem. The same content is presented for grade 3
(“‘Exploring strategies for making approximated calculations in addition and
subtraction’”). In this case, the type of instructional activity suggested is the following:
“the teacher will introduce problems that could be solved with an approximate
calculation, without the need to find an exact solution. An example of such type of
problem would be the following: ‘Tito would like to buy a used motorbike. He has seen a
red one that can be paid for in two instalments of $3100 and $2740, and a black one that
costs $6000. Which motorbike is cheaper?’ Some students will try to solve this problem
with an exact calculation. The teacher will guide discussion to show that it is enough to
estimate and approximate answer, and that this can be achieved in different ways: 3000
+ 2000 is 50000, and 100 + 700 is less than 1000, so the black motorbike is more
expensive. Another option could be 3100 + 2000 is 5100, and with 700 there is not
enough money to reach 6000” (see Diseño Curricular pages 93 and ss.).

Based on the Diseño Curricular, each school is expected to develop a curriculum
that organizes content and activities in a logical sequence across grade levels. And each
teacher is expected to plan instructional sequences and specific instructional activities
(“secuencias didácticas”) to address the prescribed content and skills during the
cycle/year. A sequence would normally be organized around a topic or question of the
main area of focus, would take about 20 days to be implemented, and would integrate
skills from the different areas (mathematics, language arts, natural sciences, and social sciences). Thus, each teacher and each school is able to organize instructional sequences in a different manner, provided that they comply with the content and skills prescribed for each year or cycle or primary education.

The approach in the Diseño Curricular was innovative in two ways. First, the organization of instructional activities in sequences meant a deviation from traditional ways of instructional planning that were common in the province up until then. In the past, teachers were required to have a daily plan of self-contained instructional activities around a specific topic. School principals and district supervisors would check that teachers actually had such plans, and that they were delivering instruction in the classroom according to their plans. The second innovation brought about by the Diseño Curricular was related to the general instructional approach. This new curriculum was much more constructivist in its approach than the methods hitherto used in the province. The emphasis on exploration that is at the core of this curriculum was something teachers were not used to. In the past, for example, mathematics used to be taught with just one “correct” way of solving problems, mostly based on applying the pertinent algorithm. In language arts, first grade students, for example, were first taught to identify letters, independently of the context in which they appeared.

That is, the new curricular approach meant a much more integrated view of knowledge, with a strong focus on developing skills and learning concepts while applying knowledge from the different areas to specific situations. This approach, paired with the request that teachers plan classroom instruction in secuencias didácticas as described above, required from teachers considerable skills and knowledge, as well as a
practice that was different from what they had learned during their initial teacher education and the “pedagogical common sense” in the province.

As the analysis below shows (see Chapters 6 and 7), developing the secuencias didácticas was a challenging task for most teachers. In this regard, it is important to note that, in Argentina, teachers are not university graduates. Until 2006, a teaching degree for primary education used to be obtained after only 2.5 years of study at a professional institute after secondary education. Since 2006, teacher initial education was extended to a period of four years of study. While teachers are taught the basics of curriculum development during their teacher initial education, the specific approach to curriculum planning promoted by the Diseño Curricular was a novelty for most teachers. Thus, teachers in the Province were ill-trained to implement the new curriculum framework without specific scaffolding.

According to the 2004 national teacher census (the most current data on teachers in the country; the 2014 results are not yet available), eight percent of public primary school teachers in the province were teaching without having a teaching degree. Among primary school teachers in public schools, four percent had been in the teaching profession for less than a year, while 35 percent had been teachers for one to 10 years. Only 66 percent of teachers had attended at least one teacher professional development course in the last five years. Forty percent of primary school teachers in the public sector were teaching in more than one school at the same time (each shift in double-shift schools in the province is four hours long, and most schools have two shifts per day). Fifty-three percent of public primary school teachers were tenured; the rest were either
substitute teachers, interim teachers, or teachers who had tenure in one position but were teaching transitorily in a different position.

The issue of a large percentage of teachers not having tenure was a particular policy concern in the province at the time of the study. According to qualitative accounts, it was fairly common for teachers to rotate across schools, staying only a few years in each school. Tenured teachers would often take leave from their permanent position and take up a transitory appointment in a more desirable school. Leadership positions, particularly, were very difficult to fill. The administrative process to grant tenure would take many months, and in some cases, years. In the meantime, positions would be filled by teachers who were also applying to other positions, and who would leave after a year or two in the position. Interestingly, although teacher rotation was high, teacher attrition was relatively low. While teachers would rotate from one school to another, few would leave the profession. Moreover, teachers would most often rotate across schools within the same district. This is one of the reasons why the BIC program developed two different delivery mechanisms (see Chapter 5).
Chapter 5: The BIC Program: development, structure, and theory of change

Development of the BIC program

The BIC Program was developed and managed by a non-government organization, and was financed through contributions from the private sector and the governments of the provinces where it was implemented. The program provided instructional support to 132 schools in 15 districts in six provinces around the country between 2006 and 2013. By the time the program was cancelled, it had benefited 1,800 teachers and about 60,000 grade 1-6 students.

The program originated initially as an attempt to scale up a much smaller external support program that had been recently developed at the University of San Andres, a top-tier private university in the country. The Programa Escuelas del Futuro (PEF) had been in operation in six schools since 2000. This program had experimented with external supports to instructional improvement but at a much more limited scale. The scaling up involved in the development of the BIC program required developing external structures to provide instructional support to schools. As one of the interviewees puts it,

We were coming from the PEF structure which was much smaller because it was a model that meant direct involvement with the school. Instead, in BIC, the challenge was to sustain improvements at scale, that's what we were trying to do... say, that was a big challenge. With PEF we had shown that schools could be improved. Now, how you support that improvement is one thing when you have a bunch of six schools, but when you are thinking about 20, 40, and so on up to 100 which was the goal that we had back then in 2006... In the case of PEF, it was enough with one coach working directly with the school, there were no intermediaries or this thing of training the trainers that we had
to create in BIC. Working in Tucuman, Santa Cruz, Corrientes, Chaco and the province of Buenos Aires simultaneously required much more than one coach visiting a school. It required creating groups of coaches, local trainers, and a whole structure to ensure that all these people were working well (Interview #2, central office staff).

The development of the external support structure to work simultaneously in several provinces was attained through mobilizing resources from private and public organizations. The program coordinators developed alliances with the governments of the provinces where the program was going to be implemented. In addition, they mobilized resources from the private sector. By 2008, 70 percent of the funding for the program was being provided by an alliance of the largest and most influential businesses in the country. The remaining 30 percent was coming from the governments of the provinces where the program was being implemented, mostly through in-kind resources: personnel, offices, transportation (Gvirtz & Oria, 2008). Appendix D lists the organizations that participated in the development of the program.

In order to better mobilize the necessary supports and resources, it was decided to house the program at an Institute of Educational Planning affiliated with UNESCO, the UNESCO-IIEP (International Institute for Educational Planning). According to the program coordinators,

Deciding where to house the program, apparently a minor detail, actually represented a key element of the governance model for the program that would affect its possibilities for action. Should we create an ad hoc foundation for the program? Should it be housed in an intermediary organization? An inter-governmental body? What type of
institution would be willing to house the program? The idea to create a foundation would make this program akin to the third sector trend prevailing in the country since 2001. It was a clear goal of the program to help build alliances across sectors. […] Working from the private space in the context of the historical dichotomies between the public and private sectors, could easily bring down the intended message of the need to create synergies among sectors, and lead to an insulated program with little effect. So it was decided to house the program at the UNESCO-IIEP, to take advantage of its reputation and tradition of working with both the public and private sectors (Gvirtz & Oria, 2008, p. 43).

The program was governed by a Board composed of the program coordinators, some of the business involved, and public officials. The role of this board was to sustain the alliance between the public and the private sectors and to oversee the development and implementation of the program. This board would meet every six months. The board participated in decisions related to budget, the incorporation of new provinces to the program, provided advice on investment decisions, and requested implementation reports from the program coordinators. All technical decisions related to the content and structure of the external support to schools were determined by the program coordinators and the technical team working at the central office of the program.

In 2012, the program coordinator was appointed as Minister of Education of the Province of Buenos Aires. From that position, she developed and implemented an external support program implemented directly by the Ministry that mirrored the BIC program in its general approach. The BIC program gradually began losing the financial support of the businesses, which had seen their involvement mostly as seed capital and
had committed to support the program only for a limited number of years. The program was eventually terminated in 2013, when the last cohort of schools to enter the program finished its four-year period (see below). A CEO of one of the businesses participating in the program describes this transition as follows:

And I think what makes BIC different is this kind of dedication to scale up within the public sector, to eventually implement it directly from the government. It is a program that had as a goal to be scalable, that is, although the program now is about 100 schools, all of us who are involved want to change more than 100 schools. We want to change 10,000 schools. So the trend towards the public sector, the trend towards making it scalable, was there from the beginning. […] For me, the project fulfilled its role, that is, to generate capacity that should remain in the public sector and promote that initiatives implemented from the ministries of education of the provinces follow the model of the program. The program was meant to be used as an example, saying "Look, here's an experience, an intervention, that was implemented from the side, but that could be incorporated into public policy and implemented directly from the government.” And then we, the businesses, move on to new things, other things. For example, we are now trying to build new initiatives in teacher training and early childhood education (Interview #14, member of the board).

Structure of program delivery

The BIC program relied on a multi-tiered structure to provide school support for instructional improvement. The program was managed by a program central office housed at the UNESCO-IIEP in the city of Buenos Aires. It had a central office technical team in charge of the development of program tools, instructional approaches, and
content, as well as the analysis of data and general management of the program. At the local level, the implementation of the program relied on local program coordinators and a team of local coaches (see Appendix F).

Program central office

The program central office was in charge of the general management of the program, fund-raising, the development of content and instructional approaches, and data analysis. The area dedicated to school support had two main teams. First, there was a team of central program coordinators, one for each locality where the program was being implemented. These central program coordinators were in charge of acting as liaisons between the local teams and the central program office. Their duties included monitoring the implementation of the program in their assigned locality, analyzing the data provided by the schools and providing feedback to the local team, and facilitating that resources (classroom libraries, science kits, etcetera) were delivered.

Second, there was a team of area specialists for each of the academic areas of the program (language arts, science, and mathematics) as well as the school management area. These teams were in charge of developing the program approach and materials described in the next section. In addition, these teams were in charge of providing support to the local coaches. They would function as a second layer of support: teachers and principals were provided support by the local coaches, who in turn were provided support by the central office area specialists. The central office area specialists would do this in two ways: they were in charge of organizing training workshops (described in the
next section), and they would travel to each locality monthly to meet with the local coaches in order to support them in the development of curriculum and materials (instructional sequences, learning activities, etcetera) and resolution of other issues arising from the local implementation of the program.

**Local implementation teams**

The local implementation of the program was carried out by a team of local coaches, coordinated by a local coordinator. The local coordinator was in charge of overseeing the implementation of the program in its locality, and acted as a liaison with the program central office as well as supervisors from government district offices.

The local teams were composed of a varying number of coaches who would regularly visit schools to provide school support to principals and teachers, as described in the next section. Each coach would receive training in his or her area (school management, language arts, science, mathematics), during year 1 of program implementation, and would receive continuous professional development from the central area specialists during years 2-4 of program implementation. During years 2-4 of program implementation, local coaches would visit schools every 15 days to hold professional development meetings with teachers (in the case of coaches in the language arts, mathematics, and science areas) and with principals (in the case of coaches in the school management area).
Direct and mediated (whole-district) delivery strategy

At the local level, the program had two different delivery mechanisms: a direct delivery strategy and a mediated one. The program began its implementation in 2006, using the direct delivery strategy, in which local program coaches directly hired by the central office of the program provided support to groups of four schools within a district. In 2008, program administrators saw the high teacher and principal turn-over as a major difficulty in the take up of the program by schools. They decided to work, in parallel to the direct delivery mechanism, with a mediated implementation mechanism, whereby school support was delivered to all schools in a district, and the implementation relied on local coaches that were integrated into the district structure.

That is, in the direct delivery mechanism, the program was implemented with the authorization of government district officers, but bypassing the government district offices’ structures of supervision and school support and providing direct support to schools. In the mediated delivery mechanism, in contrast, the program was delivered to all schools in a district. The local team of coaches was selected by the district supervisor among personnel (principals and teachers) already working at the district, in agreement with the local program coordinator. In the mediated delivery mechanism, the local implementation team was supposed to work closely with the government district office in the implementation of the program (see Appendix G). In the words of a program central office member,
In the district approach [the mediated delivery mechanism] the aim is to strengthen local capacity, much more than in the case of the *ramilles* [the direct delivery mechanism]. We therefore looked for teachers who were already in the system, who could leave their classroom position, go through a professional development program, and be ascribed to the local coach position in the district. The ultimate goal was that these people would stay in that position after the program ends, so that one of the deliverables of the program is to create and leave that team of local coaches (Interview #4, program central office staff).

In neither delivery strategy were schools able to choose whether to participate in the program or not. In the case of the direct delivery mechanism, schools were chosen to participate in the program based on indicators of student flow and district socioeconomic characteristics. In the case of the mediated delivery strategy, all schools in the participating districts would participate in the program. In both cases, principals were informed that a new program was going to be implemented in the school after the selection into the program had already taken place.

In terms of its design, the direct and mediated delivery mechanism differed mainly in one aspect: the focus on the whole district as the unit of improvement (rather than just the individual school) and the authority lines between the central program coordinators, the local team of program coaches, and the district supervisors. Regarding the first aspect, as the next section shows, there were no significant adjustments made to the general program strategy for school improvement. The contents of the professional development sessions and the supporting instructional tools developed by the program remained the same for the two delivery approaches.
Regarding the authority lines between the local program coaches, the government district office, and the program’s central office, in the direct delivery mechanism, the local program coaches were hired directly on temporary contracts by the program central office. Contracts could be terminated (and in fact were) at any time during program implementation. There was no contractual or hierarchical relationship between the local program coaches and the district government offices.

In the case of the mediated delivery mechanism, in contrast, local program coaches were district staff (tenured principals and teachers) who were ascribed to the position of program coaches during the duration of the program. There was no direct contractual relationship between the program central office and the local coaches in the mediated delivery mechanism. Since coaches were tenured professionals, they could go back to their previous positions as principals or teachers after the termination of the program. Thus, while local program coaches had a hierarchical dependency only from the program central office in the case of the direct delivery mechanism, coaches in the mediated delivery mechanism had a double hierarchical dependency: from the government district office (contractual and technical dependency) and from the central program office (technical dependency). I will come back to this issue in Chapter 6.

Program theory of change

The BIC program provided support for instructional improvement to public primary schools during a 4-year period, following a centrally-developed strategy. The theory of change of the program posited the external support as “scaffolding” that
operates for a period of four years. After such period, it was expected that schools and
districts would be able to sustain the attained improvements on their own:

The program acts as a 'scaffold': once implementation is over after four
years, stakeholders at the intermediate government level, technical
teams and school actors must be able to continue their improvement
process without scaffolding. In other words, the program aims to leave
enabling conditions and create capacities at the local level (Interview
#1. Program coordinator).

In terms of its support to school improvement, the BIC program was structured
around three improvement areas: district-wide capacity building, school management
with a focus on instructional leadership, and instructional improvement in the classroom
with a focus on curriculum development.² Appendix H provides a diagram of the
program’s theory of change, that is, the combination of the program’s implementation
theory (program activities) and the program theory (mechanism of change) (Weiss,
1998).

District-wide capacity building

One of the stated aims of the program was to develop capacity at the district level
to monitor the quality of education and to support improvement in schools. While both

² A fourth improvement area was student health. According to interviewees, this area was the
most underdeveloped arm of the program. In this dissertation, I focus the analysis on the
mentioned three improvement areas that were more explicitly connected to academic support to
school improvement.
the direct and the mediated implementation strategies had a focus on local capacity building (in both cases the program was implemented by local coaches), such focus was much stronger in the case of the mediated delivery approach. According to program officials, the focus on the districts was developed as a solution to the problem of high teacher rotation across schools within a district, on the one hand, as well as an answer to sustainability issues, on the other hand. It was believed that developing capacity for instructional support in local teams integrated with the district structure would ensure that the benefits of the program would be sustained after the end of the 4-year “scaffolding” period. As one of the program documents explains,

The district design prepares localities to implement the program themselves. It consists of an intervention that is applied over an entire school district, strengthening local capacity and commitment to educational quality and equity. The district design takes as the intervention unit the organization responsible for the local government of schools –the district—, the district supervisors, and other intermediate level actors. It is expected that local actors will develop the necessary capacity to improve schools in their localities. The program, thus, seeks to create a team of specialists capable of working with schools providing support in school management and on the academic areas. It is organized on a “train the trainers” basis, to ensure the continued deployment of teacher training policies (Document #16).

Thus, in this improvement area the intervention aimed to develop capacity at the local level to support school improvement. It did so mainly through two approaches: the development of a culture of data analysis to identify improvement needs, and the
development of a team of coaches that would support instructional improvement in schools.

Regarding the development of a culture of data use to support the analysis of improvement needs, the program aimed to make visible data about student flow and student results that districts in the country normally did not use. Here it is important to note a contextual consideration. In Argentina, the issue of the availability and use of data on student and school performance is a particularly thorny one. Even though there is a system of standardized student assessment (the Operativo Nacional de Evaluacion — ONE), such tests are taken only on a sample of schools. Data are only made available in aggregated form at the provincial level. It is forbidden by law to make student results public, even to schools or students themselves. Thus, there is no possibility for districts or schools to use this kind of achievement data to determine improvement needs.

The BIC program aimed to address this issue by developing mechanisms to gather data directly from schools, analyze these data, and provide feedback to schools and districts. The program developed a system to gather data on student flow and student achievement at the school level that would be filled out by school principals. Indicators considered in this system were the following: number of students by student characteristics, drop-outs, students repeating a grade, new students that transfer into the school in the middle of the academic year, student absenteeism, and percentage of students that pass or fail each academic area each trimester. These data would be collected by the school principal each trimester, and sent to the central program office to be analyzed. This analysis would then be shared by the local program coordinator with
the district supervisor (only in the case of the mediated delivery mechanism), the local program coaches, and with each participating school.

Regarding the second approach to develop capacity at the local level to support school improvement, that is, the development of a team of coaches that would support instructional improvement in schools, the BIC program implemented a training program for local program coaches. Such program consisted of approximately 10 four-hour long professional development workshops during the academic year, in which coaches were trained by central office staff in their specific area (management, mathematics, language arts, and science). During the second year of program implementation, these workshops would take place every two months, and during the third and fourth year of program implementation, once every trimester.

Interestingly, despite the program focus on creating capacity at the district level, there was no systematic approach to develop capacity in district supervisors. The focus of the program was set on the creation and training of the team of local coaches. District supervisors were acquainted with the program mostly through organizational meetings (for example, meetings to ensure that the district supervisor would not boycott the implementation of the program in the district), and through informal coaching from the local program coordinator (for example, through the discussion and analysis of the results of the data systematization performed by the central office of the program. I will come back to this issue in the next Chapter). As one of the program central office staff puts it,

There is no specific training for district supervisors. We do work with them indirectly through the coaching in management that we do for school principals and when we discuss district data with the district supervisors. The truth is that there is a range of district supervisors…
there are some that are highly qualified, and other than we need to work with so that they can understand the program and what we do, so that they can later on take it on by themselves. They do participate in the trainings we conduct for school principals, and thus they can understand the general approach (Interview #2, program central office staff).

School management with a focus on instructional leadership

In order to develop school capacity for improvement, the BIC program provided on-site professional development to school principals on instructional leadership, school organization, data use for monitoring improvement, and the design and monitoring of school improvement plans. According to program documents, the objective of this area of intervention was to

Improve school management practices by strengthening the role of the school principal as an instructional leader, and promoting that the school organization as a whole is focused on learning as a way to improve instructional practice (Document # 2).

The program did this in two ways. First, the central office staff developed a variety of tools to support principals’ instructional leadership. Among these tools were the following:

a. The aforementioned system to collect data at the school level (“Planilla de monitoreo de indicadores”), including the following indicators: number of
students by student characteristics, drop-outs, students repeating a grade, new students that transfer into the school in the middle of the academic year, student absenteeism, and percentage of students that pass or fail each academic area each trimester.

b. The *Agenda del Director*, a model schedule for school principals to plan their activities throughout the year, to ensure that there is an appropriate balance between administration and instructional leadership activities.

c. A template for the development of school improvement plans. This template provided school principals with categories to analyze school improvement needs. Similarly to the *Agenda del Director*, the purpose of this template was to ensure that school improvement plans were actually focusing on problems of practice that would lead to school improvement. The template required that principals focused on the academic, organizational, infrastructure, and community dimensions when analyzing school needs. In addition, it suggested that they used the data gathered through the *Planilla de monitoreo* as a source of information, as well as data from surveys to teachers, parents, and students (the templates for the surveys were also provided).

d. Guides for the implementation of organizational evaluation of the school, based on the improvement plan.

e. Guides to conduct a personalized follow up of students who are in danger of repeating a grade.

f. Guides for principals on the general approach used for each academic area (language arts, mathematics, and science) in the coaching of teachers.
g. Classroom observation tools to be used by school principals.

Second, the program aimed to develop instructional leadership capacity in school principals through coaching in the use of each one of these tools. Coaching sessions would take place at the school once every 15 days. During these sessions, the coach and the principal would review theoretical approaches to school leadership, discuss how to use the tools developed by the program, and analyze specific situations arising in the school. The goal of the coaching sessions was to develop skills for strategic planning, data analysis and use, instructional support to teachers, and strategies to conduct improvement cycles in the school.

In addition to the on-site coaching sessions, the local coordinators of the program were required to organize a monthly training seminar with the principals of all schools participating in the program in each district. These seminars were to follow a centrally-developed curriculum that was the same for both the direct and mediated delivery mechanism. Contents included: distributed leadership practices, how to promote and coordinate teamwork, strategic planning, data use to support decision-making, school climate and conflict resolution, and institutional evaluation processes.

*Instructional improvement in the classroom*

At the classroom level, the BIC program relied on a strategy that targeted teachers and their instructional practices, through the development of curriculum. Similarly to the case of school principals, the program developed tools in the areas of mathematics,
language arts, and science that could be used by teachers, and provided on-site coaching every 15 days and monthly workshops. In addition, the program provided schools with classroom libraries and science and mathematics kits.

The BIC program aimed to target the improvement of classroom instruction through the provision of tools that would scaffold teachers’ instructional planning. This approach was based on the idea that teachers needed scaffolding to be able to translate the curriculum framework into school curriculum and classroom level instructional sequences and activities. In order to develop the instructional tools provided to teachers, the program analyzed the curriculum frameworks of each of the participating provinces to determine common contents and skills. The developed tools targeted such shared content and skills.

None of the program tools was meant as prescriptive. That is, the program was implemented in the view that these tools were examples of practice that teachers would use as long as they found them useful. In the materials developed by the program such view was made explicit. All instructional tools were presented as suggestions, and it was said that teachers were expected to decide on how best to integrate these suggestions into their own planning and practice.

Among the instructional tools developed by the program were the following (see Appendix E for actual examples):

a. Suggestions for annual curriculum plans in each of the areas of focus of the program (mathematics, science, and language arts). The annual plans examples would be organized by grade/cycle level, taking into account the common elements in the curriculum frameworks of all the participating
provinces. It would disaggregate the contents and skills month by month, following an ordered sequence so that subsequent contents and skills build on the previous ones.

b. Suggestions for *secuencias didácticas* (instructional sequences) for several topics. These examples would provide teachers with examples of topics to address, main questions, examples of activities and experiments, how to organize the classroom, etcetera. These examples would organize content and skills around a specific topic of in the annual curriculum plan, in such a manner that the activities proposed would cover several classes. In general, each *secuencia didáctica* would take about two to three weeks to be implemented.

c. Suggestions on how to evaluate learning, with actual examples of evaluation questions and activities. These included annual evaluations, bi-monthly evaluations, and formative evaluations based on topics covered by the *secuencias didácticas*.

While the examples and suggestions of instructional tools developed by the program covered a significant part of the Province’s curriculum framework, not all topics were addressed. This was actually a design element of the program. It was expected that the local coaches would develop additional tools that would take into account the specificities of the provincial curriculum framework as well as local needs.

In addition to the development of tools, the program aimed to strengthen teachers’ instructional capacity through two support strategies: professional development
workshops and on-site coaching. A four-hour workshop would take place monthly, in which all teachers in all participating schools would participate. These workshops followed a centrally-determined syllabus, covering content and pedagogy that would be useful to teachers in all grade levels. For example, in the case of mathematics, topics included: teaching and learning in mathematics, problem solving, numbers and numbering systems, development of secuencias didácticas, addition and subtraction, mental calculations and algorithms, fractions, natural numbers, decimals, geometry, how to evaluate in mathematics, analysis of mathematics textbooks, among other topics.

In addition to the monthly workshops, coaches would provide on-site professional development to teachers. These sessions would take place at the school (sometimes in the classroom, sometimes outside the classroom while students were in physical education or at class and the classroom teacher was released from teaching) every 15 days. The focus of these sessions would be the analysis and development of the annual curriculum and the secuencias didácticas, the discussion of student work and specific issues that arise in the classroom, and the planning of evaluations. In addition, coaches were expected to model lessons for teachers. The coaching was structured so that each academic area (language, math, science) would work for a period of one year with each teacher. For example, in a given school, during year 2 of program implementation the first and second grade teachers would work with language arts, the third and fourth grade teachers would work with mathematics, and the fifth and sixth grade teachers would work with science. The areas would then rotate in year 3 and 4 of program implementation, so that each teacher would be trained in each academic area for a period of one year.
Chapter 6: The dynamics of school support in two delivery approaches: district-level analysis

As described in Chapter 5, the BIC program was originally designed with only one delivery mechanism, the direct delivery approach. The program sought to control internal coherence and fidelity of implementation in program delivery through the alignment of the academic and leadership support strategy, the careful selection and training of a team to implement such strategy, and the design of communication circuits that would facilitate adjustment and control of the implementation, both in terms of logistics (for example, making sure that materials were delivered in a timely manner) and in terms of content and substance. Regarding the latter, the program developed a communication circuit between the local teams and the central office academic specialists, to ensure that the central office academic specialists could monitor the quality of the program implementation in their assigned localities, and provide support to local teams to strengthen local capacity.

The BIC program, thus, was initially designed as a program that would work with public schools, but would do so mostly as a structure parallel to the rest of the public education system. However, much like the external support programs described in Cohen et al (2014), the BIC program was faced with the general challenges facing the public education system. The program could control its design, content, and team, but it could not control the systemic elements that affected the work of the schools in the public system.
One element of the context of public education in Argentina was of particular importance in terms of the challenges the BIC program found while applying the direct delivery mechanism. As described in Chapter 4, public schools in this province (much like in the rest of the country) suffered from a serious problem of principal and teacher turnover. Just as an example, in some of the schools that participated in the fieldwork for this study, the year before fieldwork took place there had been three different school leadership teams (the couple of principal and her assistant principal). Some classrooms had been without a teacher for as long as three months during the academic year, while the schools were unsuccessfully trying to be assigned a substitute teacher. Rotation was not only high across schools, but also within schools. Some schools would change a teacher from, for example, first grade to fourth grade during the academic year, as an attempt to cover teacher shortages.

During implementation of the program in the first cohort of schools, program officers noticed that principal and teacher turnover meant a significant challenge for the delivery of the program. Working with small groups of four schools within a district meant that often times a teacher or a principal would not go through the full year of training envisioned by the program. As program officers put it, these teachers and principals “were lost to the program, and we would need to start all over, time and time again”. This issue posited a major challenge for the fidelity of implementation of the program, as well as its sustainability.

The central program coordinators, then, decided to devise a new delivery strategy that would attempt at minimizing this challenge. They had noticed that, while principals and teachers would rotate across schools, the core of the problem was not an issue of
teacher shortages or teachers leaving the profession, but rather a problem with the administration of the teacher leave of absence policy and teacher tenure system. Teachers would “jump” from one school to another, but they would mostly stay in the same district. Considered as a unit, districts were not “porous”, that is, they were not losing staff. They were just very inefficient at assigning staff to schools.

The devised strategy, then, focused on the district as the intervention unit, rather than the school. This is the mediated delivery strategy I described in Chapter 5. The objective of the new strategy was two-fold. First, by targeting all schools within a district, even if school principals and teachers rotated from one school to another, they would still be reached at some point by the program, provided they stayed within the district. Second, program coordinators thought that this strategy had a higher chance of creating conditions for the sustainability of the improvements attained by schools during the four-year scaffolding period, as working with the whole district would purportedly help develop a new culture around school improvement in the locality.

The new strategy could present, nevertheless, new challenges to the program. Working with the whole district would change the political relationship with the public education system structure, and district supervisors might attempt to interfere with the program. The fidelity of program implementation might thus be compromised, “diluting” the strength of the external support provided to the school. Central program coordinators thought that the possible benefits outweighed the risks, and thus in 2008 they began whole-district implementation in a number of localities. As described in Chapter 5, the design of the core school improvement strategy of the program remained the same. What changed was the scale at which the improvement strategy was delivered (a whole district
versus a few schools within a district), and the hierarchical dependency of the local program coaches team.

This chapter focuses on the dynamics of the implementation of the BIC program in the two different delivery approaches: the direct delivery mechanism and the mediated (whole-district) delivery approach. The chapter is focused on the dynamics of the external support relationship at the district/systemic level. Chapter 7 focuses on the dynamics of program delivery at the school level.

**Structural differences in program delivery**

As described in Chapter 5, the design of the core school improvement strategy of the BIC program was fundamentally the same for the two different delivery strategies. The main difference, from the point of view of program design, was the level and scale at which the improvement strategy was delivered (a whole district vs. a few schools within a district), and the hierarchical dependency of the local program coaches teams (a double dependency from the district and the program in the case of the mediated delivery strategy and a direct dependency from the program in the case of the direct delivery approach). These variations in program design led to a number of differences in terms of the structure of program delivery. Appendix I summarizes the main differences and similarities between the two delivery approaches in terms of the structure of program delivery.

First, as described in Chapter 5, the process of incorporation of coaches into the program was different in each delivery strategy. While in the case of the direct delivery
mechanism local program coaches were directly hired by the BIC program, in the case of
the mediated delivery mechanism local program coaches were district principals and
teachers ascribed to the position of program coaches. In both cases the local program
coordinator and the program central office staff participated in the selection process.
However, while in the case of the mediated delivery mechanism the pool of possible
applicants to the positions was circumscribed to tenured teachers and principals already
working in the district and proposed by the district supervisor, in the case of the direct
delivery mechanism there was a wider range of applicants. As a program central office
staff describes,

In the case of the district approach [the mediated delivery
mechanism] we were using the ascription system. In the ramilletes [the
direct delivery mechanism] instead, we were using contracts managed
directly by the program. In the ramilletes it was easier to have a variety
of profiles than in the district approach. People would decide they
wanted to apply and there were no other conditions than being
interested and having the necessary qualifications. It was not the same
in the district approach. The pool was different because it was people
who were coming from within the system (Interview #3, program
central office staff).

Consequently, the background of the coaches differed between the direct and
mediated delivery mechanism. In the case of the mediated delivery approach, all coaches
were tenured principals, primary school teachers, or secondary school professors with
specialization in the content area. All of them had been working in the locality for quite
some time. The program coordinators were former school principals. In the case of the
direct delivery mechanism, coaches had a different background. Program coordinators were university graduates who had masters’ degrees. Academic area coaches were either secondary school professors with specialization in the content area, or former teacher trainers from the government’s central technical support teams (the ETRs described in Chapter 4). Thus, coaches in the direct delivery mechanism had less experience than coaches in the mediated approach working with students in grades 1-6, and were less integrated with the locality. But they had higher qualifications than coaches in the mediated delivery approach.

Second, the two delivery mechanisms differed in the ratio of schools to local program coaches, which was higher in the case of the mediated delivery mechanism. At the time of fieldwork, in District A (under the mediated delivery mechanism) the team of local school coaches was composed of two local program coordinators, five school management coaches, four science coaches, four language arts coaches, and six mathematics coaches. This meant a team of 19 coaches for a total of 22 schools, a ratio of 1.16 schools per local program coach. In District B (under the direct delivery mechanism), the team was composed of two local program coordinators who doubled as school management coaches, five language arts coaches, three mathematics coaches, and two science ones. This meant a team of 12 coaches for a total of 8 schools, a ratio of 0.66 schools per local program coach.

This situation was not a consequence of program design, but rather a consequence of the availability of personnel with the necessary background and experience. In the case of District A (under the mediated delivery strategy) the ascription system used to incorporate coaches to the program required that candidates had a tenured position in the
district. This requirement left out of the pool of possible candidates all those teachers and principals who had the necessary background and experience, but were working at the district on temporary contracts. Interviewees stated that they found it difficult to find sufficient candidates who had the required tenured status and the necessary qualifications.

In both delivery approaches coaches were required to visit schools for at least two hours every 15 days to work with teachers and principals, and be available through email the rest of the time. Interestingly, despite the higher school/coach ratio in the mediated delivery approach, coaches tended to spend more time in schools than in the direct delivery approach. In fact, instead of visiting schools for two hours at a time, coaches in the mediated delivery approach would stay for a full school shift (four hours). Additionally, the team of coaches in District A worked under a needs-based approach: they would spend more time in schools that were deemed to require additional support. As one of the coaches in District A describes,

I plan my school visits based on… Well, for example, in [school 4] you must have noticed the characteristics of the school. The principal is new, last year there were three different principals throughout the year. For me, as a coach, it is a challenge, because it means working round the clock. Although what is required is to visit the school every 15 days, we were not able to do that in this case because the situation required urgent support. We had to be there full-time, we had to provide the scaffolding the school leadership team needed. […] Now I am still visiting this school a lot, at least one a week and sometimes even more (Interview #20, coach in District A).
In contrast, coaches in District B (under the direct delivery approach) would stick to the required number of visits to the schools, and be available to teachers and principals virtually in between visits, but none of them stated providing additional support to schools based on specific circumstances of the schools. An extreme case was one coach in District A that used to live in a locality 60 km away from the district, and would travel to the district only to visit the schools on the specified school visit days.

Another structural difference between the two delivery approaches was a consequence of the whole-district approach in the mediated delivery mechanism. As described in the previous chapters, schools in the sample were double-shift schools. While school leadership teams were the same for the morning and afternoon shifts, some teachers would teach the morning shift in one school and the afternoon shift in a different school in the same district. This is a common practice in the province. In the case of the mediated delivery mechanism, this situation meant that some of the teachers would receive a “double dose” of training, given that the program targeted all schools in the district. Teachers would, for example, receive training on language arts in school X during their morning shift, and training in mathematics in school Y during the afternoon shift. This was not the situation in District B, under the direct delivery approach, because coaches would only visit schools in the program, which were a rather small subset of all schools in the district.

A final structural difference in program delivery between the two approaches was that the reason that motivated program coordinators to evolve from the direct delivery approach to the mediated one held true. Moving to the mediated delivery approach meant that no teachers would be “lost” to the program because of internal district rotation. If the
program did not reach them in school X, it would reach them in school Y after their transfer. Indeed, some of the teachers interviewed in District A had gone through that situation. Even though they had transferred from one school to another in the middle of the academic year, they were still receiving training. Depending on whether they transferred to the same grade in the new school or not, they would receive training in a different area (for example, a teacher that was receiving training in school X in mathematics in first grade would receive training in language arts in school Y in third grade). Despite the discontinuity in training that these transfers meant, teachers were nevertheless more exposed to the program in the mediated delivery mechanism than in the direct approach.

Therefore, moving from the direct to the mediated delivery approach meant a greater intensity of treatment in the case of the mediated delivery mechanism, in terms of the amount of time that teachers and principals were exposed to the support provided by the program. This greater intensity of treatment, however, came at the cost of a lower capacity of control by the program central office of the actual content delivered to schools, as the following section describes.

**Program delivery in action: district level dynamics**

The move from the direct to the mediated delivery mechanism meant much more than structural differences in terms of intensity of treatment. It meant a different type of relationship between the government district offices and the program, which in turn led to significant differences in terms of the relationships between actors (coaches, teachers,
central program officers, district supervisors) as well as the actual program contents and approach to school improvement. Appendix J summarizes the district level dynamics of program implementation in each of the delivery mechanisms.

Parallel vs integrated implementation

The direct delivery approach relied on a strategy that created a delivery structure parallel to the public education system governance. The relationship between the program and the school districts was kept to a minimum, and focused on gaining sufficient political support from district supervisors to ensure that program delivery would not be boycotted.

During year one of program implementation, the local coordinator with the support of the central program team would meet with the district supervisors to inform them about the fact that the provincial authorities had decided that the program would be implemented in their district, and to explain the general program approach and strategy. In the interviews with program officials in District B (under the direct delivery mechanism) district supervisors were seen as “gatekeepers” that held the key to a smooth implementation process; a process that was emphasized needed to be fully controlled by the program to ensure fidelity of implementation. In the words of a program official,

We had to implement the program as it was. To do that, we needed to keep the district officials and the provincial authorities happy, because they had the right to keep us out of the schools. We needed letters from the provincial authorities to be able to do anything, to enter the classrooms, to enter the schools. […] But our work was focused on the
school principals and teachers. The district supervisors... we had to pay them courtesy so that they wouldn’t boycott the program, so that they wouldn’t talk badly about the program in district meetings that could complicate matters for us with the principals and teachers. Whenever I visited schools, I would go to the district office to say hello, just to keep a good relationship with the district supervisors. (Interview #7, program officer, direct delivery mechanism).

During years 2 to 4 of program implementation, program officials sought to keep district supervisors informed of program developments through informal meetings and by inviting them to participate in the professional development workshops for school principals and teachers. Interactions, nevertheless, were scarce, as informed by research participants. The focus of these interactions was on keeping district supervisors informed, rather than on treating them as full partners in program implementation.

This approach generated a sense of competition between the program and the district in the direct delivery approach. District supervisors in District B valued enormously the fact that the program provided on-site professional development for teachers and principals in their district, as this was an important innovation with regard to the rather de-contextualized approach to professional development common in the province at that time. They saw the program as a resource that was worth having and making use of. Except they could not actually make use of it in a way that was integrated with their own district strategy and planning, because they lacked voice in decisions related to the program contents, approach, and implementation. A monitoring report by one of the program officials describes a situation in which this sense of competition is evident:
We need to devise some sort of damage control strategy. [The head district supervisor in District B] comes into the meeting as if she was [name of central program coordinator]. This is a meeting of the BIC program with teachers and principals, and everything came to a halt when she arrived. [...] She arrives and takes control of the meeting. I know that [local program coordinator] has been working for a while trying to gain her trust, so I don’t want to interfere because I don’t want to undermine our team’s authority in this locality. But clearly all the attention is now on [head district supervisor in District B] and her agenda rather than on our own agenda. (Internal program document).

In the case of the mediated delivery approach, instead, the political economy resulting from working with all schools in a district required a very different relationship between the program and district offices. Creating a “niche” of schools to work with within a district from an external parallel structure without taking into account the district office’s actions and perspectives was just not possible. As one program officer put it, “it’s not the same to meddle with all schools in a district than to meddle with just a few”. District supervisors in the mediated delivery mechanism had much greater leverage to affect program implementation than in the case of the direct delivery approach. Local coordinators in District A (under the mediated delivery mechanism) were aware of this, and thus they sought to integrate district supervisors into the delivery of the program. They would do this in a number of ways. Rather than merely inviting district supervisors to participate in the program’s professional development meetings for teachers and principals, they would co-organize these meetings with the district office. In some instances, as I explain below, this meant negotiating the contents of the professional development meetings with the district officers. Program officers would also share
information with the district office about the challenges schools were facing, and analyze
data jointly to identify improvement needs (see the following section).

As a result of this approach, district supervisors in District A had a much more
positive view of the program than district supervisors in District B. Rather than
positioning themselves in competition with the program, they saw themselves as actively
participating in program implementation. In the words of a district supervisor in District
A,

I have kept working with schools as part of my role as district
supervisor. But I also work now with the girls [the local program
coaches]… for example in a specific area, like language arts. I work
with the coach, guiding her towards issues that need to be strengthened.
I also work with the management and school leadership coaches. I
know the schools very well, so we work jointly to identify in which
areas we need to provide more support to school principals. And it is
like that. We work together, but each of us keeps its own identity, the
program coaches and us, the district supervisors. Our roles are different,
but we can and should nevertheless support each other’s work
(Interview # 38, district supervisor, District A).

The “integrated” approach to program implementation in the mediated delivery
mechanism facilitated access to system actors. This strengthened the reach of the
program. Local program coaches in the direct delivery approach stressed how difficult it
was to convince teachers to participate in the professional development workshops
outside school hours. Teachers in fact had little incentive to participate in these
workshops. They were voluntary, often times held on Saturdays, and they did not provide
credit that teachers could use towards professional advancement in the teacher career ladder. In the mediated delivery mechanism, instead, the head district supervisor made the training workshops mandatory for all teachers and principals in the district. The workshops were co-organized between the program and the district office and topics were negotiated between both parties. Making the workshops mandatory helped incentivize teacher and principal participation. In the words of a local program coach in District A,

How did we manage to gain acceptance among principals and teachers?
The district supervisor played an important role in that. It had a lot to do with her stance towards the program. This year, the training workshops were directly requested by the district supervision. That means that they were mandatory, that everybody was required to attend. […] She [the head district supervisor] would attend the workshops herself. And people see that, they feel watched… she is going to ask me about it and I need to know. That pressure from the district supervision helped a lot to make teachers and principals more open to the program.

(Interview # 21, local program coach, District A).

Crafting systemic coherence

Both delivery approaches aimed at ensuring that there was enough internal coherence across the practices and perspectives of the actors involved in program implementation. The two approaches differed, however, in the implicit definition of what was the “system” that needed to achieve such internal coherence. In the case of the direct delivery approach, this system was understood as the program team. The focus of
practices aimed at achieving coherence was set on ensuring alignment across the 
practices of local program coaches and central office staff.

In the case of the mediated delivery approach, instead, the sense of ownership that 
district supervisors had about the program translated into a number of specific actions 
that meant a greater degree of program adaptation to local circumstances than in the 
direct delivery approach. These adaptations, however, also meant a greater degree of 
coherence between program and district practices. Thus, the system was implicitly 
defined as the program team plus the district office.

Therefore, in the direct delivery approach, the program was implemented as an 
island, an “add on” to existing district and school actions. In the mediated delivery 
approach, instead, there was a reciprocal relationship between the district and the 
program that led to a higher alignment of practices across the district and the program.

Developing communication circuits to align practices

As described in Chapter 5, the BIC program relied on central and local teams for 
its implementation. Central teams (the area specialists) were in charge of monitoring the 
quality of implementation and providing support to local teams. Local teams would visit 
the schools and send monthly reports to the area specialists describing the circumstances 
of the visit, the challenges they found, and their response to those challenges. For 
example, a language arts coach would report a situation in which a specific activity of a 
secuencia didáctica seemed too challenging for the students in a specific classroom. She 
would describe the teacher’s actions as well as the feedback she provided to the teacher.
The central program area specialist would then analyze the coach’s report and provide specific feedback on it. Depending on the actual situation, she could suggest different strategies to address the issue. Each academic area coach as well as the school leadership and management coaches had a specific central office area specialist to report to and from whom to receive feedback.

This reporting structure had a two-fold objective. On the one hand, it was meant as a support and professional development strategy for local program coaches. Central office area specialists would act as mentors to local program coaches. On the other hand, this communication circuit ensured that the central office maintained substantive control over the quality of program implementation. Central office area specialists would assist local program teams in matters that were open to interpretation, thus ensuring internal program coherence across localities.

The described communication circuit was common to both the direct and the mediated delivery approaches. The novelty in the mediated delivery mechanism was that this communication circuit needed to interact with the government district office practices. The communication circuit in the case of the mediated delivery approach had thus a more complex, albeit informal, structure that facilitated interactions between district supervisors and program teams.

In the case of the direct delivery mechanism, interactions between program officers and district supervisors were scarce. The two units (the district office and the program team) would function in a rather isolated manner. Actors within each unit would make use of internal lines of communication, but there was little cross-over between the two units. That is, local program coaches would not have direct
communication with the district supervisor, nor the other way around. As a district supervisor in District B explains,

I normally visit schools as part of my job. It is my role to monitor the quality of education in the district, to check which teachers are working well and which ones are not. If in one of my rounds I see a teacher that is not working as I would expect, I would want to take advantage of the fact that the school is participating in a teacher professional development program. I want to make sure that the teacher gets the support she needs, and it would be a good idea to use the BIC program for that. How would you let the program know that this teacher needs specific support? I tell the school principal. I don’t talk directly with the program coach, it’s not my role. I tell the school principal so that she can ask whomever is in charge of that in the program to provide the teacher with the support she needs. (Interview #65, district supervisor in District B).

In the case of the mediated delivery mechanism, instead, there was direct and fluid communication between the local program coaches, the local program coordinator, and the district supervisors. Communication topics included a range of issues: the organization of professional development workshops, the implementation of the program in the schools, the challenges teachers and principals were facing in their practice, the identification of schools or teachers that needed additional support, the organization of secuencias didácticas and their relationship with the provincial curriculum (the Diseño Curricular described in Chapter 4), among many others. Communication channels included both formal and informal instances.
This communication circuit was not in detriment of the direct technical support and authority line between central program area specialists and local program coaches. Local program coaches in the mediated delivery mechanism would still send their monthly reports to the central office area specialists, and receive feedback from them. But they were subject to a double communication circuit: they had to answer both to the district officer as well as the program central office staff. Therefore, the content of the communications was more often related to how to integrate district and program practices than in the case of the direct delivery mechanism.

An example of such situation arose in the case of District A. One of the school leadership and management coaches was trying to integrate guidelines on school organization developed by the Ministry of Education of the province. He had discussed the use of these guidelines with the district supervisor and the local program coordinator. But he sought additional support on how best to integrate those guidelines with the program’s approach to institutional organization. For this, he requested a meeting with the central office specialist in charge of the area of school leadership and management.

Using data to identify improvement needs

The use of data to identify improvement needs exemplifies the differences between the two approaches with regard to the communication circuits used and the actors that were involved in decision-making about program implementation at the local level. As mentioned earlier, the BIC program had devised a strategy for data collection, analysis and reporting to support the identification of school improvement needs. The communication circuit around data was supposed to work in the following way:
The schools have to input the data in the *Planilla de Monitoreo*. The local program coordinator has to collect all these data from the schools, and send it to us here, at the central office. We then analyze these data, and send the processed information to the local program coordinator for her to work with the data with each school principal. Our goal was to have a simple format to send back a “translation” of the indicators back to the schools, something the schools could find easy to make sense of. For example, we would show whether there was a specific grade or academic area in the school that had a larger percentage of kids failing to pass. Was it a 5 percent, a 50 percent? So that schools could use that information. So we send back the information to the schools through the local program coordinator, and she is supposed to work with the school principals analyzing the data. At the same time, I send the same information to the central office area specialists, to [name of language arts specialist at the central program office], to [name of science specialist at the central program office], and so on. This way they can work with it with the local coaches in each academic area, taking a look at where the problems are (Interview #3, central office program staff).

The communication circuit around data did in fact work this way in the direct delivery mechanism. Local program coaches would meet individually with school principals to analyze the processed data and identify improvement areas. Central office area specialists would in turn interact with the local program coaches to follow up on the results, and take them into consideration when providing specific feedback to individual coaches.

In the case of the mediated delivery mechanism, instead, the analysis of the processed data would be carried out by the whole local team, with the participation of the
local program coordinator and the district supervisor (see the following section). Project
data were then used not only to support decisions regarding program implementation, but
also to support decisions that were responsibility of the government district office. For
example, the head district supervisor would use the data from the program as an input
when evaluating school principals.

It is my role to evaluate school principals. I use a variety of information
for this. First, I use the information from the self-evaluation form that
principal need to fill out. I also interview them one by one. […] I use a
lot the information from the BIC program as an additional resource to
take into account during the interview with principals. I get the
program’s reports, so I know how each school is faring, and whether
the principals are focusing on the things that matter or not. For
example, I know from the program reports whether a school was having
problems in second grade, and whether they were for example using
this or that secuencia didáctica. So I can use that knowledge to ask
principals during the interview how they saw the problems, what
solutions they tried to implement, what were the results. (Interview #38,
head district supervisor, District A).

Developing a shared understanding

An unexpected result of the whole district approach in the mediated delivery
mechanism was the development of a community of practice with a shared understanding
of improvement priorities. This was not an intended program objective from the point of
view of program design as described in Chapter 5. Rather, it was a result of the
communication circuits developed between the program and the district office, and the
ownership that districts supervisors had of the program.
In District B (under the direct delivery mechanism) program coaches reported working in an isolated manner with regard to other local actors. When asked about who they interacted with in their work, in order of importance, they mentioned first the program central office area specialist, and then the local program coordinator. While references to the area specialists were related to the substantive aspects of their work as program coaches, references to the local program coordinator were mostly related to the coordination of logistics (“I call her to make sure that the school I’m working with receives the classroom library”). That is, the web of relationships in the direct delivery mechanism was mostly of a vertical nature, between the area specialists and the local program coaches.

In the case of the mediated delivery mechanism, instead, the web of relationships included both vertical and horizontal interactions. Local program coordinators would interact with the central office area specialists much like the coaches in the direct delivery mechanism did. But they also were involved in a large horizontal network at the local level. This network included the other program coaches as well as government district staff.

First, in District A (under the mediated delivery approach), local program coaches would meet regularly as a team. Coaches from the same academic area would meet to discuss instructional priorities in their schools, to plan secuencias didácticas, and to analyze student work. In addition, coaches from the different academic areas and coaches in charge of the school leadership and management area would meet once a week to discuss program implementation issues. This was not the case in the direct delivery
approach. Coaches worked in interaction with the central office area specialist, but did not interact much with the other program coaches in their district.

The fact that coaches in the mediated delivery mechanism shared information and planning with one another facilitated program sustainability at the school level. A challenge present in the case of the direct delivery approach was that there were no substitutes when a local program coach was not able to be present in the bi-weekly on-site professional development meeting. In the absence of the coach, the teacher would miss her training session. This seemed to be a rather widespread problem in District B. In District A, in contrast, the fact that coaches shared information and planning enabled informal substitutions to take place. If a coach was not able to attend a specific professional development session, another coach from the team could take her place.

The second network of relationships local program coaches were involved in in the case of the mediated delivery mechanism was with the government district staff. This network of relationships was absent in the case of the direct delivery approach. In District B (under the direct delivery approach), local coaches worked with teachers and principals, but did not interact with other district staff such as school orientation and school inclusion teams, special education teachers, psychologists, etcetera. This lack of interaction generated challenges to the implementation of the program in the classroom, as not all system actors were aware of the instructional approach of the program. For example, a local program coach in the direct delivery mechanism described a situation that arose in one of her schools. She had been working with a teacher on how to work with underperforming students for a specific secuencia didáctica. They had agreed to introduce specific changes to the secuencia to facilitate working with the
underperforming students. However, as part of the district structure of support, other district staff would also work with the same students. In particular, the special education teacher working with the school, who had neither participated in the general training workshops of the program, nor had discussed the approach with the local program coach. Thus, the teacher would receive two contrasting sets of suggestions on how to work with the same students.

The likelihood of misalignments like this one happening in the mediated delivery approach was much lower, as a result of the second web of relationships local program coaches participated in. District supervisors in District A would make a point of having all districts staff participate in the professional development workshops implemented by the program. In addition, the head district supervisor requested local program coaches to participate in district staff meetings. Thus, local program coaches were well aware of district policies and practices, and district staff was acquainted with the BIC program’s approach. A local program coach describes the development of this community of practice as follows:

The head district supervisor requires that we [the local program coaches] participate, for example, in the meetings with principals organized by the district. She is continually asking that we participate in all sorts of district meetings. And what happens in these meetings with the principals? For example, the district supervisor provides advice and trains the principals on issues such as evaluation, how to deal with disadvantaged students, school organization, many things. And she requests that we participate in the meetings. We thus know everything that is going on in the district, we know what the supervisor wants, what her view is of school needs… And then we take that
information into account when we are working with the principals within the program. (Interview #19, local program coach in District A).

Negotiating program contents

The greater synergies that were developed between the district and the program in the case of the mediated delivery mechanism came, however, at the cost of a loss of program fidelity. The more the program was integrated with district policies and practices, the less control the central program office had over the program contents and approach, and the more leverage district supervisors had to request program adaptations.

In the case of the direct delivery mechanism, the isolation of the program team from the rest of the public education system acted as a shield from external demands, maintaining central office control over the program contents and approach. As described in Chapter 5, the program had developed a sequenced curriculum to be implemented in the classrooms and on which teachers would receive mentoring during on-site coaching sessions, as well as a specific curriculum for teacher professional development workshops. The interview and observational data suggest that these program materials were actually used as originally intended by the program design.

With regard to the sequenced curriculum, coaches, teachers, and principals in District B in fact described the implementation of the program as parallel to the provincial curriculum framework (the Diseño Curricular). While contents were aligned with the curriculum framework (program coordinators had taken into account the common elements of curriculum frameworks of all participating provinces) there was not a one-to-one match. This created the appearance of a disconnect between the Diseño
Curricular and the district requirements, on the one hand, and the program curricular sequence, on the other. As one of the coaches in District B describes,

The activities felt as if they were a separate thing. There was little alignment with the requirements from the province. […] In some schools, there was a really crazy thing going on. The kids would work on BIC activities and they would actually have a separate section of their notebooks for BIC. Separate from the rest of the classroom activities. They would write “BIC” as the title and then they would have all our activities. And then, on a separate section, they would have the activities that the teachers presented to them outside of our planning. (Interview # 44, local program coach in District B).

Program activities were implemented faithfully in District B, but they were felt as foreign by system actors. In contrast, in District A (under the mediated delivery mechanism) program contents, sequence, and approach were negotiated with district authorities. District supervisors requested adaptations to the suggested sequence of contents to better align it with their interpretation of the provincial curriculum framework (the Diseño Curricular). Two examples were particularly salient in the interviews:

One of the areas was particularly complicated at some point. I personally discussed this with [central office program coordinator] and with [head of central office area specialists team]. Thankfully we came to an agreement. Because the area of Science was not really aligned with the new curriculum framework in the province (the Diseño Curricular). So, we were requesting schools to plan according to the Diseño Curricular, but then here was the BIC program providing them with a different sequence. There was a clash there. And even worse, we were running the risk of leaving some contents out. But thankfully we
managed to solve the issue. What did you do? How did you solve it? Well, what we did was to come to an agreement of making the program sequence follow the Diseño Curricular, because that’s the official thing and what we need to do. (Interview # 38, head of district supervision in District A).

There were some differences in the supervision and the program criteria in the area of Math. For example…? We had a sequence on geometry… and the district supervisor thought that the kids needed to have other skills before getting to that sequence. She though they were not ready for that sequence. So I organized a meeting between the district supervisor and the head of the area specialists in the program central office. I mean, it was a meeting over skype. In the district was the district supervisor, all the math coaches, and myself. And on the other side the area specialist. And what happened? They ended up coming to an agreement. The area specialist explained why that sequence was there in our planning. In the end everything worked out, but we had to convince the district supervisor. (Interview #9, local program coordinator at District A).

Negotiations between district supervisors and program coordinators were also usual in the case of the content and sequence of the professional development workshops that were held for all teachers in the district. As mentioned earlier, the program had developed a specific training program to be implemented during these workshops. However, in the case of District A, the content of the workshops was decided in agreement with the district supervisors. This meant rearranging the order of the original sequence in the training program, as well as introducing new contents altogether.
Chapter 7: The dynamics of school support in two delivery approaches: school-level analysis

The dynamics of implementation in the two delivery mechanisms described in the previous chapter had a correlate in the way the program reached the school level, and on how it was interpreted by school actors. The focus of this chapter is to analyze the dynamics of program implementation in each delivery mechanism while taking into account the level of school internal capacity (see Chapter 3).

I thus analyze: a) whether there are systematic differences in program implementation between the direct and mediated delivery mechanisms that are common to schools of all capacity levels (low, medium, high), and b) whether there are specific interactions between the level of school internal capacity and each delivery mechanism. In a) I focus mostly on describing program dynamics that were characteristic of all types of schools (low, medium, and high ICAP level) in either the direct or the mediated delivery mechanism. I do this in order to tease out school level dynamics that are characteristic of one or the other delivery mechanism and that are common to all types of schools. In b), I describe those cases in which program dynamics across the two delivery mechanisms differed based on varying levels of schools’ internal capacity. I analyze, for example, whether program implementation in the direct and mediated delivery approach was different in low capacity schools and in high capacity schools. Did coaches in the direct delivery mechanism act differently from coaches in the mediated delivery mechanism when they were interacting with low or high capacity schools?3

3 A third possible approach to analyzing the relationship between the level of school internal capacity and external support could be to focus on themes that are common to
The chapter is organized around three main themes emerging from the interviews and observations (opening the classroom, focusing on pre-determined activities or on pedagogic approach, and the externalization of the principal leadership role). For each theme, I describe the differences between the two delivery approaches in the dynamics at the school level, and whether these dynamics played out differently in schools with different internal capacity. Appendix K provides a summary of the program dynamics at the school level, for all schools and for schools of different internal capacity levels. The details of this description are explained in the following sections.

**School-level dynamics based on program delivery approach**

*Opening the classroom*

The BIC program meant a significant innovation in the way teacher professional development was provided in the province. As described in Chapter 4, there were no on-site teacher professional development programs in the province at the time of fieldwork. Moreover, teacher professional development programs were normally provided following a large group workshop or seminar approach. The one-on-one relationship between either low, medium, or high capacity schools irrespective of whether they are in the mediated or direct delivery approach. For example, a theme that appeared in the analysis was that in low capacity schools there was lacking an integrated approach to curriculum, as compared to high capacity schools. This was an issue common to both the direct and mediated delivery approach. Since the main focus of the chapter is the relationship between the delivery approaches and schools’ internal capacity (rather than what happens in schools of varying capacity irrespective of the delivery approach), I do not report in this chapter findings such as the above example.
program coaches and teacher mentees that was at the core of the BIC program was particularly innovative, a “luxury”, as most interviewees described it.

In order to work, however, this type of coach-mentee relationship required that teachers were amenable to the idea of opening their practice to external scrutiny and support. Teachers were used to having school principals or district supervisors observe their practice. However, the BIC program approach meant a significant deviation from the type of classroom observations that were common in the province. As teachers described them, principal and district supervisors’ observations of practice were seen as evaluative, rather than as a source of learning and support. Most teachers would dread the time the district supervisor visited their classrooms.

As noted in Chapter 5, the BIC program required coaches to hold a professional development session every 15 days with their assigned teachers. This session was to take place at the school, but outside the classroom. Despite this, and despite some initial resistance, most coaches had been eventually invited by teachers to enter their classrooms. Coaches entered the classroom to observe teachers teaching and to model classes for them. In terms of program design, this was a recommended but not required practice. Nevertheless, it was a practice widespread across the two types of delivery mechanisms and across low, medium, and high ICAP schools.

From the point of view of local program coaches, entering the classroom gave them the opportunity to provide more contextualized support for the teachers. It would allow them to model the method for teacher mentees and to observe them teaching using the methods of the program. As a local program coach in District B describes,
When we began the implementation of the program, we thought “How are we going to get teachers interested in learning this method?” So I thought I would ask [central office area specialist] if I could begin by teaching a first few classes myself. I mean, to show the teacher how it’s done with this new method. Teachers were used to students just reading the theory from a book, making summaries and answering very specific questions. So, when I talked to teachers about the critical exploration method in science, they would look at me like saying “What are you talking about?” Because it meant a double challenge. Teachers had to know the theory very well, and also the method. So I asked them if they would let me into their classrooms to do a demonstration. And that’s how we started modeling classes. In my mind, if I didn’t model the class for the teacher, if they didn’t see for themselves how this thing is done, they were never going to understand what I was talking about. (Interview #61, local program coach in District B).

In order to be able to enter the classroom, coaches had to be perceived as non-threatening by the teachers. They would seek to distinguish themselves and their practice from the district and the principals’ supervision, emphasizing their role as mentors and peers, and trying to avoid their presence being considered as an evaluation. This was a practice that was common to both delivery approaches and all types of schools.

We always tried to enter the classroom to provide support to the teachers. This year, one of the teachers in this school allowed us to visit her classroom right away, the other one didn’t want us to go into her classroom. We had to work hard in order to do it. The pedagogic approach in this program is very different to what teachers are used to. Not going into the classroom is wasted time… you can work with the teacher during the meetings, but it is not the same if you are not
observing what she does, and you can show to her how it’s done. […] Some teachers saw this as an invasion. They thought at the beginning that our goal was to evaluate them, to give them a grade. And observing their practice also meant that we would see their weaknesses. In fact, we did see their weaknesses, that was the whole idea. But we kept them to ourselves. When teachers saw that we were not there to control, to evaluate, everything was easier. I ended up being like one more teacher in the school, a colleague. (Interview #44, local program coach in District B).

*How do you convince a reticent teacher to let you go into their classroom?* We focus on supporting them with a focus on a specific activity. You bring a topic or an activity, and you tell the teacher that you want to try out the approach and see how it works with her students. […] So teachers at the beginning would say “great, I’ll just watch what she does and I don’t need to teach for that hour”. The first time, you let it slip through. The second time, you ask questions so that she is forced to participate in the class. The third time, you tell her that it’s her turn to teach the class while you take care of the kids that need extra help. So, basically, you change the roles so smoothly that she will hardly notice. (Interview #31, local program coach in District A).

While program coaches attempted to position themselves as peers, as colleagues that “were there not judge but to help”, there was a stark difference between the two delivery approaches in the way program coaches were perceived by the teachers. As described in Chapter 6, program coaches in the direct delivery approach had in general higher qualifications than in the mediated delivery approach, as a result of the hiring practices in each type of delivery mechanism. They were also often times from outside the public system in the district. In the mediated delivery approach, in contrast, all
program staff, including the local program coordinator and the coaches, were teachers or principals who had until the previous year been practicing in the schools in the district.

These differences in background led to differences in the way coaches were perceived by school actors. Coaches in the mediated delivery approach were seen as colleagues, as “critical friends” with whom it was easy to share one’s practice. The relationship between coaches and teacher mentees in the mediated delivery approach was then of a horizontal nature. As one of the teachers in District A described it,

I participated in several trainings, because I changed schools last year, so I had the chance to see it from different angles. It is a very positive thing for the district, this program. Besides, it is great because the coaches are people you already know. They are your colleagues; you know them, you taught with them, you run into them on the street… you can trust them. […] And they are always saying that they themselves learn from us. Everybody learns… (Interview #33, Teacher at school 5).

In contrast, in District B (under the direct delivery approach), coaches were seen as outsiders. They were outsiders to the district, but also outsiders to the practice in elementary schools. Besides the fact that coaches in general had higher qualifications than in District A, a structural difference between the two delivery approaches was that in the direct delivery mechanism central office area specialists visited schools in the district. There was direct contact between teachers and the central office area specialists, who were all university graduates with master or doctoral studies in their field of specialization. This was not a common practice in the mediated delivery mechanism.
As a result, the relationship between coaches and teacher mentees was much more asymmetrical than in the mediated delivery approach. Teachers would talk about “taking what is provided to you”, rather than about co-constructing knowledge and practice as they did in the case of the mediated delivery mechanism. As one teacher put it,

We had training with all these great people, with eminences in their field. They came for the professional development workshops. [...] And then there were the coaches. They have a vast knowledge of all the topics, they are really well qualified. They have qualifications that we are really just little bugs compared to them... But they could not really ground the approach to our school context. (Interview #54, Teacher at School 1).

Indeed, teachers in the direct delivery approach would describe the support provided by local coaches as de-contextualized, more focused on the academic content than on actual teaching strategies to reach elementary school students. In the words of teachers from District A,

I think the program is good... but there are some things I would change. What things, for instance? I would change the coaches. They were knowledgeable, but they were not really coaches in the sense that they could really show you how to teach with this kind of students. (Interview # 51, teacher at School 3).

The coaches would already come with their sequences and activities ready. They would bring the materials and work with us. And if you had specific doubts? How did it work? Well... there were some differences between the coaches. The Science coach was actually pretty open. But
the Math coach… she would bring her materials and insist and insist. It seemed to me that she was too used to teaching at university level. It was hard for her to contextualize to the problems we have here in fourth grade. (Interview #52, teacher at School 3).

*Give a man a fish or teach a man to fish?*

The differences in the way teachers saw program coaches (as peers or knowledgeable outsiders) were also related to the way the academic support tools developed by the program were used by coaches at the school level.

As mentioned earlier (see Chapter 4), the official curriculum framework (the *Diseño Curricular*) had a rather open approach that required a significant amount of planning and curriculum development on the part of the teachers. Most of the teachers interviewed found this planning challenging, both on the account of not having enough experience and knowledge to adequately integrate content and pedagogy to address the required skills, and on account of the significant amount of time that such planning required. The academic support tools developed by the program aimed at improving teacher practice by addressing this challenge. They thus provided teachers with examples of yearly curriculum plans, *secuencias didácticas*, and specific classroom activities.

Local program coaches were expected to work with the teachers using these program materials. They would meet with the teacher every 15 days at the school, but outside the classroom, to go over the planning, analyze the *secuencia didáctica*, adapt it if necessary, and discuss specific issues related to teachers’ knowledge of the contents of the *secuencia*. The teacher would then use these materials in her practice. In the
following session, she and the coach would analyze the challenges the teacher found while implemented the instructional activities in the classroom. As one of the coaches describes,

For example, a teacher would come to the professional development session saying “the students cannot do this thing of the descriptive text”. I would then check what she had done… I would ask “Did you do first the reading out loud to the students? Did you work with them on how to describe a character in a story orally? Did you then ask them to describe a character in writing?” “No”, she would answer. So, my work is to help her see that if she missed first building the previous necessary skills, the students will never get to writing more complex descriptive texts. [...] So we would spend most of the session discussing what exactly she had done in her class, why she had done it, and what she would do differently after our discussion. (Interview #31, coach in District A).

While the program approach to coaching at the school level was the same for both the direct and mediated delivery mechanisms form the point of view of design, there were important differences in the way this approach was translated into actual coaching practice in the two delivery approaches. In the case of the direct delivery approach, the focus of the coach-mentee relationship was set mostly on controlling fidelity of implementation, ensuring that program materials were used as intended. In contrast, in the mediated delivery approach coaches would prioritize integrating the BIC approach into the schools’ curriculum planning based on the Diseño Curricular. The focus was set on controlling that the general instructional (constructivist) approach was well understood
and applied by the teachers, with less attention being paid to complying with the actual sequencing and activities provided in the BIC materials.

Indeed, teachers in the direct delivery approach would talk about the program instructional tools as “activities” that were provided for them to implement. They saw these activities as scripted, as this teacher describes,

The coach would explain to me, step by step, how I had to do it. [...] For example, in science, she brought each class all ready, all planned. She even brought the questions I had to ask, everything. For me, it was just getting to the classroom and doing what she had planned for me. I would use her planning as a guide, and the class would come out wonderfully. (Interview #51, teacher at School 3).

Lack of adaptation seems to have been a common practice in the direct delivery mechanism, common to schools in all ICAP levels. Coaches’ attention seems to have been focused on ensuring that the materials developed by the program were used as intended. As one teacher described it,

As a teacher, I would tell the coach about my students. I would come and say “look, I have this kid, he has serious reading difficulties… what would you suggest?” And she would reply “try and find what new strategy you can implement”. I mean, I was asking for help and I would end up trying to find a strategy on my own. The thing is sometimes you just don’t know what else to do. [...] So I would ask the coach, and she would still reply “try and find something else”. She wouldn’t contribute with any ideas. [...] Honestly, I would forbid the phrase “try and look for a new strategy”. It’s just useless if they come to your classroom but then cannot give you specific ideas. To give me something to
implement one week and then to come back in two weeks, without giving me specific ideas…. Is that really what coaching is? (Interview #54, teacher at School 1).

Coaches would in turn focus on controlling whether the activities had been implemented in the classroom in between professional development sessions. As one local program coach put it, “I would go into the classroom to check the students’ workbooks, to see whether my planning proposal and activities had been used” (Interview #63, local program coach in District B).

While valuing the support provided by the coaches, teachers in the direct delivery mechanism saw the “activities” as stand-alone pieces, separated from the rest of their practice. This was common in schools of all ICAP levels. A difference between schools with different levels of capacity was that in the medium and high-ICAP schools in the direct delivery mechanism teachers mentioned making an effort to integrate the “activities” with their own planning based on the Diseño Curricular. This did not happen in the case of low-ICAP schools, in which there was no mention at all of the Diseño Curricular. But even in these cases, the integration took place in a disjointed manner: the program “activities” would be included as discrete pieces into their planning, rather than in an integrated manner. An extreme example of this lack of integration is the recourse to a “double-notebook” (one for the BIC program and one for the teacher regular instructional practices) described in the previous chapter.

In the mediated delivery approach, in contrast, the focus of the coach-mentee relationship in all three schools was set on adapting the program materials to fit each
teacher and school’s own planning, based on the Diseño Curricular. Coaches would prioritize substance over form, that is, they would prioritize developing teachers’ skills to teach with the new instructional (constructivist) approach as well as planning. They would focus on how to structure a secuencia didáctica appropriately (and following the program’s approach to developing secuencias didácticas), rather than on insisting that specific secuencias didácticas or program activities were implemented. In the words of one of the coaches in District A,

The BIC sequences and activities are all ready to be used. But we use them mostly as models. We design our own sequences with the teachers, based on the characteristics of the kids, and also based on the characteristics of the teacher. Because we need to see her level of knowledge of the contents, and her teaching experience. [...] So we mostly design the sequence together, and then we check how it works with the students” (Interview #31, local program coach in District A).

The teachers would often develop their own secuencias didácticas based on the Diseño Curricular and discuss them with local program coaches. The focus on the Diseño Curricular as the guiding axis for curriculum development was present in schools of all ICAP levels. However, there were differences across schools in the level of autonomy teachers had with regard to coaches’ proposals. In the low-ICAP school in the mediated delivery mechanism, teachers and coaches would focus on developing secuencias didácticas jointly. Teachers would then implement these sequences in the classroom and discuss them with the coach. In the high-ICAP school, teacher planning was much more coordinated across teachers. Planning was a collective activity in the school (teachers from the same grade level would plan their sequences jointly, and check
with other grade levels to ensure that there were smooth transitions from one grade to the next). As a result, coaches in this school would focus mostly on providing feedback to the sequences developed by the teachers.

**Principal instructional leadership**

As mentioned earlier, coaching for principals focused on developing instructional leadership skills, including analyzing data to identify improvement needs, organizing school activities, mentoring teachers in their work, observing classroom instruction and developing school improvement plans. While in both delivery approaches the coaching of principals had the same stated goals, there were important differences between the direct and mediated delivery mechanism that were common to schools of all internal capacity levels.

The main difference between the two delivery approaches was that in the case of the direct delivery approach, the focus of the coaching relationship was mostly set on approaches to leadership and the use of data and the *planillas de monitoreo*. There was little or no focus on analyzing with the school principal the challenges individual teachers were facing when implementing the instructional sequences. This may have been due to the fact that in the direct delivery approach there was no direct interaction between the local academic area coaches and the school principal. In addition, as described in Chapter 6, the interaction between local program area coaches and the program coordinator (who doubled as management coach) was mostly based on program logistics.
In contrast, in the mediated delivery approach, while local academic area coaches did not interact directly with the principals either, they did work as a team with the management coaches. As described in Chapter 6, local program area coaches and management coaches would meet weekly to discuss the implementation of the program in each school, specific challenges faced by each teacher, and how the principals were responding to those challenges. Thus, management coaches learned about individual teacher needs and were able to incorporate this knowledge into their work with the principals during their coaching sessions. As a consequence, the approach to principal mentoring in the mediated delivery mechanism was more focused on specific instructional challenges than in the case of the direct delivery approach.

The difference between program delivery mechanisms described above was seen in schools of all capacity levels. Another difference between the two program approaches was related to the level of school internal capacity. In the case of the low capacity school in District A (under the mediated delivery mechanism) program area coaches were required by the principal to substitute their instructional leadership role. The principal expected the coaches to provide support to teachers given that she, as a new principal, was at that point focusing on issues related to school organization and did not have enough time or skills to adequately support teachers from an instructional point of view. And she requested the management coach to take care of the instructional aspects of principal leadership. As described by one of the coaches,

At [school 4], when principals see that teacher is not performing well in language arts, they right away say “call the BIC program coach”. She expects you to supervise the teacher… I’ve been in many situations in which the school principal would call me to her office, show me a
student workbook and say “what is going on here? Look at this workbook”. I try to explain them that my role is to work with the teacher, try to help her improve. But it is not my role to supervise the teacher, or supervise the work of the students. I can provide suggestions to the teacher that would help her improve, but monitoring quality is the role of the school principal, not mine. (Interview #32, local program coach in District A).

Despite the opposition described in the above quotation, coaches did indeed in the case of the low capacity school in District A function as substitutes for the principal instructional leadership role. They did this both in their interaction with the teachers and, in the case of the management coach, in their interaction with the principal. The coaches took on responsibilities such as mentoring of teachers, developing the school annual curriculum plan, solving disagreements among staff, etc. As described in Chapter 6, the management coach in charge of this school spent considerable amounts of time scaffolding the role of the school principal, performing actions that were the principal’s responsibility, mentoring her in her practice, and gradually stepping back.

Well, for example, in [school 4] you must have noticed the characteristics of the school. The principal is new, last year there were three different principals throughout the year. For me, as a coach, it is a challenge, because it means working round the clock. Although what is required is to visit the school every 15 days, we were not able to do that in this case because the situation required urgent support. We had to be there full-time, we had to provide the scaffolding the school leadership team needed. We organized the school calendar, we took care of discipline and relationship issues, we helped her plan the annual
curriculum, we helped her decide which teachers to appoint in which classrooms, you name it. (Interview #20, coach in District A).

This type of scaffolding was not present in the case of the low capacity school in District B. Indeed, coaches in this school would describe the difficulties faced by the principal, but they saw their role as less involved than in the case of the District A school, limiting their actions to the frame provided by the coaching sessions.
Chapter 8: Conclusions, further research, and implications for practice

In the previous chapters, I analyzed the structural challenges that the BIC program faced, the institutional choices that were made to address those challenges, and the way actors involved in the implementation of the program (in the providing or receiving end of the support relationship) acted as a result of those institutional choices. The analysis shows that the institutional choices made throughout program implementation (that is, the specific organizational arrangements in the direct and mediated delivery mechanisms) affected the way the program was delivered at the local level and in the schools.

At the local level, the two delivery approaches differed mainly in the extent to which the program acted as a parallel structure (in isolation from the rest of the public education system), or integrated with district current policies. As described earlier, the decision to implement the program through the mediated delivery mechanism was developed as a response to contextual challenges, namely, the high teacher and principal turnover rates. From the point of view of program designers, no significant changes were necessary in the program theory of action in the new institutional arrangement.

However, the new organizational structure brought about significant changes in the way the program interacted with district policies and practices, as well as with the schools. From the point of view of the structure of program delivery, even though the ratio of coaches to schools was lower in the mediated delivery approach, coaches tended to spend more (and better quality) time in schools. They were also more accessible to teachers outside their formal coaching sessions. In terms of their background, they were more similar to their teacher mentees, which facilitated the development of a sense of trust and approachability in their work.
These differences in the structure of program delivery led to important differences in the dynamics of the external support program at the district level. Instead of working in isolation from the public education system structure, program coaches had to work collaboratively with district staff. An unexpected result of the whole district approach in the mediated delivery mechanism was the development of a community of practice with a shared understanding of improvement priorities. This was not an intended program objective from the point of view of the original program design. Rather, it was a result of the communication circuits developed between the program and the district office, and the ownership that districts supervisors had of the program. School needs were discussed with district staff, the data produced by the program was used to identify strengths and weaknesses in the district, district supervisors relied on program information to evaluate principals, curriculum plans and instructional sequences were integrated with the district’s priorities. This meant a much closer integration between the program activities and the already existing district policies, which was not envisioned by the original program design.

At the school level, while in the direct delivery strategy the program emphasized the correct implementation of scripted classes as a way to control the improvement of instructional practice, in the mediated delivery approach the program emphasized generating an understanding of the broad instructional approach and developing teachers’ skills for autonomous planning. External support to principals’ instructional leadership was also different between the two program organizational approaches: in the case of the mediated delivery mechanism, this support was more comprehensive and integrated with perceived school needs, as a result of the fact that coaches worked as a team rather than
individually as in the direct delivery approach. Interestingly, the differences at the school level appear to be more related to the way the program was assimilated into the public education system structure (through the direct or the mediated delivery mechanism) than to the varying level of capacity of the schools to which it provided support, as described in Chapter 7.

The greater synergies that were developed between the district and the program in the case of the mediated delivery mechanism came, however, at the cost of a loss of program fidelity. The more the program was integrated with district policies and practices, the less direct control the central program office had over the program contents and approach, and the more leverage district supervisors had to request program adaptations. In both organizational approaches the program staff aimed to achieve coherence and alignment of practices.

However, there was an important difference in the strategy followed to achieve coherence. While in the case of the direct delivery mechanism program staff aimed to achieve fidelity of implementation, in the case of the mediated delivery approach program staff aimed for integrity of implementation. Fidelity of implementation refers to doing exactly what the program design stipulates should be done, and controlling that program practices reflect as accurately as possible the intended design. Integrity of implementation, in contrast, prioritizes doing what matters most, while integrating what works best for the local circumstances and specific needs (see Bryk et al 2015). The focus of the coach-mentee relationship was then set mostly on controlling fidelity of implementation, ensuring that program materials were used as intended. In contrast, in the mediated delivery approach coaches would prioritize integrating the BIC approach
into the district policies and practices. They took the “spirit” of the program, using program materials as examples and developing additional materials adapted to local conditions.

Thus, in the direct delivery approach, the focus of the coach-mentee relationship was then set mostly on controlling fidelity of implementation, ensuring that program materials were used as intended. This was the case in the local program coach-teacher relationship, as well as in the case of the central office area specialist-local program coach relationship. In contrast, in the mediated delivery approach coaches would prioritize integrating the BIC approach into the district policies and practices. They took the “spirit” of the program, using program materials and designed processes as examples and developing additional materials and processes adapted to local conditions.

This difference in focus regarding what “good implementation” meant (that is, implementing as exactly as possible the central office’s design vs. adapting processes and tools while remaining faithful to the core principles) appears to have been due to the constraints imposed by the organizational arrangement in the case of the mediated delivery mechanism. It seems to have been more an unintended consequence of the need to interact with the public education system structure than a theoretical stance embraced by program developers. In this sense, this analysis supports Cohen et al (2014) and Bold et al’s (2013) insights regarding how external support programs or NGO-developed programs are constrained in their implementation processes and effects by the type of organizational relationship they have with the public education system structure. It also supports the hypothesis stated in Chapter 2 that, when integrated into the public education system structure, external support programs may compete with existing district policies.
and practices. As described in Chapter 8, the main topics of negotiation and integration were in fact those areas in which the district already had a policy in place, such as teacher professional development and curriculum development.

**Limitations and implications for research**

There are several limitations to this study. First, it is an exploratory study, and thus the specific results cannot be generalized beyond the boundaries of the case under analysis (Maxwell, 2005; Stake, 2005). Moreover, the results cannot be generalized to other districts in the BIC program in other provinces. Given that the two districts in which schools were selected for the analysis were in the same province, it is not possible to conjecture how the described relationships would have unfolded in a province that had different public education system structures and policies. Nevertheless, the analysis does provide hypotheses that could be tested with other methods and contribute to the development of a more nuanced theory of the school support and improvement process.

Second, my interest in this study was focused on describing the dynamics of the external support relationship, rather than assessing the relative effectiveness of mediated and direct support strategies in changing instructional practice. The analysis suggests that the mediated delivery approach may be more sustainable, and thus, more likely to influence practice in the long run than the direct delivery approach. This is due to the fact that the practices developed by the program were more coherently integrated with existing district and school practices. However, if such integration comes at the cost of
lower quality practices, the mediated delivery approach may not be as effective in improving practice. This analysis would require a different research strategy that was beyond the scope of this study.

A third limitation of this research is the fact that the study relies mostly on participants’ accounts of their participation in the program, and, to a lesser extent, on the observation of professional development sessions. I did not conduct classroom observations where independent teacher practice could be observed, and thus, the study did not provide any information on the extent to which teacher practice was different between the two delivery approaches. In addition, the fact that data was collected at only one point in time prevents from assessing whether the external support translated into improved instructional practice.

Possible extensions of this research lead in several directions that would provide evidence to further support policy choices regarding the design and implementation of external support programs. First, a possible focus of further analysis would be to study program effectiveness associated to each type of delivery mechanism. Which type of delivery mechanism fares better when it comes to measuring teacher effectiveness and student learning? That is, did the “diluted” version of the BIC program present in the mediated delivery mechanism have lower impact on teacher practices than in the direct delivery approach? Or, rather, did the fact that practices in the mediated approach were more integrated existing practices in the district make for a more coherent, and thus higher quality, teacher practice?

A second extension of this research might focus on analyzing the sustainability issue. After its four-year implementation period in each district, how much do new
practices stick and how fast (if at all) do teachers go back to their former practices? Are there any differences between the two delivery mechanisms with regard to this issue? The analysis above suggests that sustainability may be higher in the case of the mediated delivery approach as a consequence of a more integrated district practice, but this is a testable hypothesis that would need to be analyzed.

A third and final avenue for further research would be to analyze the process of transfer of this program into public policy. As mentioned in Chapter 5, it was a design feature of the BIC program to provide support for four years and then leave the district. The program was meant to have a temporary lifespan. However, many features of the BIC program were transferred to the public education structure when the program coordinator resigned in order to take office as Minister of Education of one of the provinces participating in the program and created a similar program that was to be delivered fully from the public education system structures. Analyzing this process would provide further insights into how institutional choices affect program implementation and sustainability.

**Implications for practice**

Governments in Latin America are increasingly promoting external support programs as a way to foster much-needed school improvement. Some of these programs are implemented directly through government structures, or through public-private partnerships, such as the program analyzed in this dissertation. There is still scarce evidence as to whether these types of external support programs are effective in
improving instructional practice in a developing country context. Moreover, little is known about the mechanisms through which such partnerships operate. This dissertation aims to contribute to filling this second gap in knowledge, providing hypotheses about how different institutional arrangements may affect program implementation, and, eventually, program results.

The study calls attention to the multiple and unintended adaptations that the initial program design underwent as a result of different institutional arrangements for program implementation. The mediated delivery approach allowed for greater program reach, but it came at the “cost” of program assimilation to existing district practices. Whether this outcome affected positively or negatively teacher effectiveness is beyond the scope of this study, but the lesson remains: education systems are hard to change, and given the chance, they tend to assimilate external inputs into already existing structures and practices. In the direct delivery approach, instead, the structure of program delivery shielded it from district demands. Fidelity of implementation to the initial program design was higher, but the cost was isolating the program from the rest of teacher and district practice, generating incoherent “add-ons”.

Although likely not intentional, the integrity of implementation approach embraced in the mediated delivery mechanism may eventually make for more sustainable changes in practice. However, this would only be true if there are mechanisms in place to systematically and cyclically analyze whether the adapted processes and practices can actually drive improvement and eventually help achieve program goals.
Appendix A: Internal Coherence Assessment domains, factors, and indicators included in the ICAP teacher survey

(Developed by Elmore and Forman (2011)).

**Dimension 1: Leadership**

*1.1. Instructional leadership*

The principal at this school understands how children learn

The principal communicates a clear vision for teaching and learning at our school

The principal makes clear to the staff his or her expectations for meeting instructional goals

The principal at this school carefully tracks students’ academic progress

The principal actively monitors the quality of teaching at this school

The principal at this school knows what is going on in my classroom

The principal at this school uses assessment data to give teachers feedback about instruction

The principal at this school considers my students’ learning outcomes as part of my evaluation

The principal at this school makes systematic and frequent visits to classrooms
1.2 Modeling public learning

The principal at this school invites input from faculty in discussions
The principal at this school asks probing questions
The principal at this school listens attentively
The principal at this school encourages multiple points of view
The principal at this school acknowledges his / her own limitations with respect to knowledge or expertise
If you make a mistake in this school, it’s often held against you

1.3 Creation of a learning environment

In this school, teachers feel comfortable experimenting with untried teaching approaches, even if they may not work
In this school, it’s easy to speak up about what’s on your mind
People in this school are usually comfortable talking about problems and disagreements
People in this school are eager to share information about what does and does not work
If I am learning a new teaching technique I can get help at this school
Struggling teachers receive strong instructional guidance and support here
1.4. Professional development

My professional development experiences this year have been closely connected to my school’s improvement plan.

My professional development experiences this year have included enough time to think carefully about, try, and evaluate new ideas.

My professional development experiences this year have helped me build new skills to better meet the learning needs of my students.

My professional development experiences this year have been designed in response to the learning needs of the faculty, as they emerge.

My professional development experiences this year have included follow-up support from leaders as we implement what we've learned.

Dimension 2: Efficacy beliefs

2.1. Collective efficacy

Teachers in this school are able to get through to difficult students.

Teachers in this school are confident they will be able to motivate their students.

Teachers in this school have the skills needed to produce meaningful student learning.

Teachers in this school have the skills to deal with student disciplinary problems.

If a child doesn’t learn something the first time, teachers here will try another way.

Teachers in this school believe that students are motivated to learn.

Teachers in this school are skilled in various methods of teaching.
Teachers in this school explore new instructional approaches to help underperforming students meet standards

2.2. *Individual Efficacy*

How confident are you that you can motivate students who show little interest in schoolwork?

How confident are you that you can craft good questions for your students?

How confident are you that you can keep a few problem students from ruining an entire lesson?

How confident are you that you can provide appropriate challenges for very capable students?

How confident are you that you can establish routines to keep classroom activities running smoothly?

How confident are you that you can respond to difficult questions from your students?

How confident are you that you can gauge individual students’ comprehension of what you have taught?

If one of my students couldn't do a class assignment, I would be able to assess accurately whether the assignment was at the correct level of difficulty
**Dimension 3: Organizational Processes: whole school level**

3.1. *Teachers’ collective work*

Teachers in this school work collectively to plan school improvement

Teachers in this school work collectively to select instructional methods and activities

Teachers in this school work collectively to evaluate curriculum and programs

Teachers in this school work collectively to determine professional development needs and goals

Teachers in this school work collectively to plan professional development activities

Teachers in this school work collectively to determine student discipline policy

Teachers in this school work collectively to communicate with parents

Teachers in our school visit one another's classrooms to observe instructional practice and student learning

3.2. *Internal coherence*

We focus our whole-school improvement efforts on discrete, measurable steps

Once we start a new program or initiative at our school, we follow up to make sure that it’s working

Curriculum, instruction and learning materials are well coordinated across grade levels at our school

The programs or initiatives we implement connect clearly to our school improvement plan
As a full faculty, we work toward developing a shared understanding of effective instructional practices.

Teachers in our school visit one another's classrooms to observe instructional practice and student learning.

As a full faculty, we regularly revisit and revise our thinking about the most effective instructional practices we can use with our students.

As a full faculty, we use student data to inform our discussions about most effective instructional practices.

Decisions made by the faculty about most effective instructional practices influence my curricular decisions.

Our school is committed to the faculty’s ongoing learning about the most effective instructional practices.

3.3. Teacher satisfaction (reverse coded)

We have too many programs / initiatives running at once in our school.

In this school teachers’ stress levels prevent them from doing their best work.

I think I would have a more satisfying professional experience if I taught at another school in the district.
Dimension 4: Organizational processes – team level

4.1. Support for team

The principal at this school provides teacher teams with the right balance of direction and independence

The principal at this school gives teacher teams a clear and meaningful purpose for their time together

The principal at this school provides adequate time for teacher teams to meet

The principal at this school provides team members with training on how to work effectively as a group

The principal at this school ensures that teacher meeting time is protected and maintained consistently throughout the year

The principal at this school holds teacher teams accountable for following through on instructional decisions made by the group

Team members collect and use student data to inform our team’s thinking about the most effective instructional practices

The work we do on our team helps teachers develop the skills needed to produce meaningful student learning

4.2. Shared understanding of effective practice

How often have you worked with members of your team to discuss teaching decisions based on student work or assessment data?
How often have you worked with members of your team to discuss curricular or assessment materials?

How often have you worked with members of your team to discuss lesson plans or specific instructional practices?

As a team, we work toward developing a shared understanding of effective instructional practices

Teachers on our team visit one another's classrooms to observe instructional practice and student learning

As a team, we regularly revisit and revise our thinking about the most effective instructional practices

Team members collect and use student data to inform our team’s thinking about the most effective instructional practices

Our team’s decisions about effective practices influence my curricular decisions

Our team is committed to ongoing, shared learning about the most effective instructional practices

4.3. Team processes

Our team meetings have an agenda which we do our best to follow

There is always someone who has the responsibility of guiding or facilitating our team discussions

When our team makes a decision, all teachers on the team take responsibility for following through

Our team meetings include productive debate
Appendix B: Interview guides for semi-structured interviews

Interview guide for members of the program central office

Introduction

• Please tell me about yourself. For how long have you been a member of the BIC team? What did you use to do before coming to work for this program?

Program characteristics and history

• Could you describe how the BIC program was developed? How were the main characteristics of the program decided? (Probe: organizational characteristics, and theory of action).

• Could you describe the role of the following actors in the design and development of the program? Central office administrators, board members (probe for business representatives and government representatives).

• Why was the program organized as a public-private partnership? What advantages and disadvantages did the central team see in this type of organization in the early stages of the program? What advantages and disadvantages do you see now?

• What have been the main challenges associated with the scaling-up and sustainability of the program? (Probe: relationship with local governments, relationship with businesses, internal organization of the program, funding).
Organizational structure and processes

- Could you describe your role in the BIC program? How does a typical day at work look like? What are your responsibilities? What are the main challenges you are faced with? (Probe: request to describe what happened the day before the interview takes place).

- On a typical week, who do you have to coordinate your work with here at the central office? What does that coordination consist of? Can you provide an example? What are the main challenges you are faced with? (Probe: distribution of responsibilities between central office administrators and members of the board; distribution of responsibilities between central office and local teams).

- On a typical week, who do you have to coordinate your work with locally? What does that coordination consist of? Can you provide an example? What are the main challenges you are faced with? (Probe: distribution of responsibilities between government district offices and local program teams at the local level; role of local BIC coaches, local governments, local businesses, district-level supervision and administrators, principals and teachers).

Theory of action of program and school support strategies

- What specific changes does the central office expect will take place in schools as a result of their participation in the program? What practices are schools participating in the program expected to develop? (Probe: central office’s definition of school improvement).
• Could you describe what strategies does the central office put in place to support school improvement? Why were these specific strategies chosen instead of other possible ones?

• Have school support strategies changed over time? In what ways? What motivated the change?

• What aspects of school management does this program expect to address to support institutional improvement in schools? How were those aspects selected? What specific actions (strategies, tool development, etc.) does the central office put in place in order to address issues related to school management?
  
  (Probe: data use at the school level, data tools for principals, principals’ instructional leadership, school internal coherence)

• What aspects of instructional practice does this program expect to address to support instructional improvement in schools? How were those aspects selected? What specific actions (strategies, tool development, instructional materials, etc.) does the central office put in place in order to address issues related to instructional improvement?
  
  (Probe: teacher professional development, principals’ instructional leadership, teacher efficacy beliefs, school internal coherence).

• What challenges has the program faced so far with regard to the implementation of the school support strategies? (Probe: scale, time constraints, local politics, relationship with government district offices, challenges from teachers and principals).

• The program has two different delivery systems to provide support to schools: direct and mediated. Why were these two different structures developed? How was it
determined which schools receive support under the direct structure and which ones under the mediated structure?

- What differences and similarities are there between these two ways of providing support to schools?

Probe:
- Strategies and tools used by the central office to provide school support
- Role of local BIC coordinator and local BIC coaches
- Relationship with government district offices and local businesses
- Scale issues
- Time constraints
- Turn-over in personnel
- Capacity/background/experience of local coaches.
- Possible tensions or synergies between local coaches and district supervision structure.

Closing up

- What are the main lessons learned from this program? If you had the chance to implement the program again from scratch, what aspects would you keep the same and which ones would you change? (Probe: public-private partnership, school improvement approach, scale, support strategies and tools).
Interview guide for BIC local program coordinators

Introduction

- Please tell me about yourself. For how long have you been a member of the BIC team? What did you use to do before coming to work for this program?

Organizational structure and processes

- Could you describe your role in the BIC program? How does a typical day at work look like? What are your responsibilities? What are the main challenges you are faced with? (Probe: request to describe what happened the day before the interview takes place).

- On a typical week, who do you have to coordinate your work with? What does that coordination consist of? Can you provide an example? What are the main challenges you are faced with? (Probe: local team, government district offices, central office, school principals, teachers, local businesses).

- Who do you receive support from in your daily work? When you are faced with a challenge in your work, who do you reach out to? (Probe: BIC central office administrators, BIC members of the board, government district officers). In what issues have you needed the most support? What did the support you received consist of? Could you give me an example?
• As a local coordinator, you are in charge of overseeing the implementation of the program in how many schools? What does this oversight consist of? What strategies do you put in place to monitor how the program is being implemented in each school?

• To what type of data on schools in this district do you have access to? What is the source of these data? Do you use specific software to check data on schools? What types of indicators do you take into account? Why do you consider those indicators instead of others?

• As a local coordinator, you are in charge of managing how many school coaches? Did you participate in the selection of these school coaches? What characteristics were taken into account for the selection of these people?

• How would you describe your role vis-à-vis the school coaches? Do you provide specific supports for them? What do these supports consist of? Do you evaluate their performance? What indicators do you take into account to evaluate the quality of the work of a school coach?

• As a local coordinator, do you need to work together with government district officers? Who do you work with? What does this work consist of?

• How would you describe the distribution of responsibilities between the local program coordinator of the BIC program and the government district officers? Who is in charge of what regarding the provision of school support?

• How would you describe the distribution of responsibilities between the program coaches and district supervisors?

Theory of action and strategies for school support
• What specific changes do you expect will take place in schools as a result of their participation in the program? What practices are schools participating in the program expected to develop?

• Could you describe what strategies does the local team put in place to support school improvement? What was the source of these strategies? Why were these specific strategies chosen instead of other possible ones? Who participated in this decision?

• Have school support strategies changed over time? In what ways? What motivated the change?

• What aspects of school management do you expect to address to support institutional improvement in schools? How were those aspects selected? What specific actions (strategies, tool development, etc.) does the central office put in place in order to address issues related to school management?
  (Probe: data use at the school level, data tools for principals, principals’ instructional leadership, school internal coherence)

• What aspects of instructional practice do you expect to address to support instructional improvement in schools? How were those aspects selected? What specific actions (strategies, tool development, instructional materials, etc.) does the central office put in place in order to address issues related to instructional improvement?
  (Probe: teacher professional development, principals’ instructional leadership, teacher efficacy beliefs, school internal coherence).

• What challenges have you faced so far with regard to the implementation of the school support strategies? Probe:
  - Scale
  - Time constraints
- Resources
- Turn-over of personnel
- Inadequate capacity and experience of personnel
- Local culture of public sector
- Local politics
- Relationship with government district offices
- Challenges from teachers and principals

- As a local coordinator, do you visit schools? What happens during a typical visit? How often do you visit schools? How long do these visits last? What do you in preparation of your visit? What do you do during your visit? What do you do afterwards? (Probe: request to describe the last school visit and provide specific examples).

- I understand that the program provides support to principals on instructional leadership and data use, and to teachers on instructional improvement in Mathematics, Language, and Science, through coaches who visit schools regularly. Could you describe your role, as a local program coordinator, regarding the following?
  - Decisions on contents and strategies for professional development activities. How is it decided what strategies to use and what content to cover during the professional development sessions?
  - Strategies and tools to support principals and teachers. How is it decided what strategies and tools to use?
  - What is the role of the following actors in these decisions? Program central office team, government district officers, local program coordinator, school coaches, principals and teachers.

- Do all schools that are being supported through this program in this district receive the same type of support? If not, what are the reasons why schools are not receiving
the same support? How is it decided what adaptations to make? Who participates in such decision?

- In your experience so far coordinating the implementation of the program in this district, do schools require adaptations of the support strategies? What do these adaptations consist of? (Probe: ask to provide specific example). Do you find differences between schools that require the adaptation of strategies and schools that do not?

Closing up

- What changes, if any, have you noticed in the schools you work with before and after their participation in the program? Could you provide examples? (Probe for both positive and negative changes).

  Changes in the principal’s role

  Changes in teacher practice and student evaluation

  Changes in management and school internal organization and processes (teacher collaboration, use of data)

- If you had the chance to implement the program again from scratch, what aspects would you keep the same and which ones would you change? (Probe: public-private partnership, school improvement approach, scale, support strategies and tools).
Interview guide for government district officers

Introduction

• Please tell me about yourself. For how long have you been working in this government district office? What did you use to do before working for the district? Could you describe your role as an administrator in this district?

Organizational structure and processes

• Could you describe your role vis-à-vis the implementation of the BIC program in this school district? How does a typical day at work look like? What are your responsibilities? What are the main challenges you are faced with? (Probe: request to describe what happened the day before the interview takes place).

• Besides your role in the implementation of the BIC program, how would you describe your role in this district? How does a typical day at work look like? What are your responsibilities? What are the main challenges you are faced with? (Probe: request to describe what happened the day before the interview takes place). How does the implementation of the BIC program affect this role?

• On a typical week, who do you have to coordinate your work with? What does that coordination consist of? Can you provide an example? What are the main challenges you are faced with? (Probe: local program team, other government offices, central program office, school principals, teachers).

• Who do you receive support from in your daily work regarding the implementation of this program in this district? When you are faced with a challenge in your work, who do you reach out to? (Probe: BIC central office administrators, BIC members of the board, BIC local coordinator, other government offices). In what issues have you
needed the most support? What did the support you received consist of? Could you give me an example?

- Could you describe the distribution of responsibilities regarding the implementation of this program between you and the local program coordinator? How did you agree on that specific distribution of responsibilities?

- How does your role as government district officer interact with your role regarding the implementation of the program?

- As a government district officer, do you participate in overseeing the implementation of the program in schools? What does this oversight consist of? What strategies do you put in place to monitor how the program is being implemented in each school?

- As a government district officer, do you have a role in the selection, coordination, evaluation, and support to school coaches? What does this role consist of?

- How would you describe the distribution of responsibilities between the program coaches and district supervisors?

- To what type of data on schools in this district do you have access to? What is the source of these data? Do you use specific software to check data on schools? What types of indicators do you take into account? Why do you consider those indicators instead of others?

**Theory of action and strategies for school support**

- What specific changes do you expect will take place in schools as a result of their participation in the program? What practices are schools participating in the program
expected to develop? How are these changes similar or different from what you would expect to happen without the existence of the program?

- Could you describe what strategies does the local team put in place to support school improvement? What was the source of these strategies? Why were these specific strategies chosen instead of other possible ones? Who participated in this decision?

- Have school support strategies changed over time? In what ways? What motivated the change?

- What aspects of school management does the program expect to address to support institutional improvement in schools? How were those aspects selected? What specific actions (strategies, tool development, etc.) does the central office put in place in order to address issues related to school management?
  (Probe: data use at the school level, data tools for principals, principals’ instructional leadership, school internal coherence)

- What aspects of instructional practice does the program expect to address to support instructional improvement in schools? How were those aspects selected? What specific actions (strategies, tool development, instructional materials, etc.) does the central office put in place in order to address issues related to instructional improvement?
  (Probe: teacher professional development, principals’ instructional leadership, teacher efficacy beliefs, school internal coherence).

- What challenges have you faced so far with regard to the implementation of the school support strategies? Probe:
  - Scale
  - Time constraints
  - Resources
- Turn-over of personnel
- Inadequate capacity and experience of personnel
- Local culture of public sector
- Local politics
- Relationship with local program coordinator
- Challenges from teachers and principals

- As a government district officer, do you visit schools? What happens during a typical visit? How often do you visit schools? How long do these visits last? What do you in preparation of your visit? What do you do during your visit? What do you do afterwards? (Probe: request to describe the last school visit and provide specific examples).

- I understand that the program provides support to principals on instructional leadership and data use, and to teachers on instructional improvement in Mathematics, Language, and Science, through coaches who visit schools regularly. Could you describe your role, as a government district officer, regarding the following?
  - Decisions on contents and strategies for professional development activities. How is it decided what strategies to use and what content to cover during the professional development sessions?
  - Strategies and tools to support principals and teachers. How is it decided what strategies and tools to use?
  - What is the role of the following actors in these decisions? Program central office team, government district officers, local program coordinator, school coaches, principals and teachers.

- Do all schools that are being supported through this program in this district receive the same type of support? If not, what are the reasons why schools are not receiving the same support? How is it decided what adaptations to make? Who participates in such decision?
• In your experience so far, do schools require adaptations of the support strategies? What do these adaptations consist of? (Probe: ask to provide specific example). Do you find differences between schools that require the adaptation of strategies and schools that do not?

Closing up

• What changes, if any, have you noticed in the schools you work with before and after their participation in the program? Could you provide examples? (Probe for both positive and negative changes).
  
  Changes in the principal’s role

  Changes in teacher practice and student evaluation

  Changes in management and school internal organization and processes (teacher collaboration, use of data)

• What changes, if any, have you noticed between schools that participate in the program in this district and schools that do not? Could you provide examples?

• If you had the chance to implement the program again from scratch, what aspects would you keep the same and which ones would you change? (Probe: public-private partnership, school improvement approach, scale, support strategies and tools).
Interview guide for local program coaches

Introduction

• Please tell me about yourself. For how long have you been a member of the BIC team? What did you use to do before coming to work for this program?

Organizational structure and processes

• Could you describe your role in the BIC program? How does a typical day at work look like? What are your responsibilities? What are the main challenges you are faced with? (Probe: request to describe what happened the day before the interview takes place).

• On a typical week, who do you have to coordinate your work with? What does that coordination consist of? Can you provide an example? What are the main challenges you are faced with? (Probe: local coordinator, government district offices, program central office, school principals, teachers, local businesses).

• Who do you receive support from in your daily work? When you are faced with a challenge in your work, who do you reach out to? (Probe: BIC central office administrators, BIC members of the board, BIC local coordinator, government district officers). In what issues have you needed the most support? What did the support you received consist of? Could you give me an example?

• How would you describe the distribution of responsibilities between the program coaches and district supervisors? Are there any differences between your role and the role of district supervisors?
• What differences, if any, do you see between the role of the local program coordinator and the government district officers in this district? (Probe: is there consistency/coherence in the role of each of these actors from the point of view of program coaches?)

• As a school coach, you are in charge of providing support to how many schools? How often are you in touch with schools? What mechanisms do you use to keep in touch with schools (probe: school visits, use of specific software, email, phone, etc.)?

Theory of action and strategies for school support

• What specific changes do you expect will take place in schools as a result of their participation in the program? What practices are schools participating in the program expected to develop?

• Could you describe what strategies do you use to support school improvement? Why were these specific strategies chosen instead of other possible ones?

• Have school support strategies changed over time? In what ways? What motivated the change?

• What aspects of school management do you expect to address to support institutional improvement in schools? How were those aspects selected? What specific actions (strategies, tool development, etc.) does the central office put in place in order to address issues related to school management?
  (Probe: data use at the school level, data tools for principals, principals’ instructional leadership, school internal coherence)

• What aspects of instructional practice do you expect to address to support instructional improvement in schools? How were those aspects selected? What
specific actions (strategies, tool development, instructional materials, etc.) does the central office put in place in order to address issues related to instructional improvement?

(Probe: teacher professional development, principals’ instructional leadership, teacher efficacy beliefs, school internal coherence).

- What challenges have you faced so far with regard to the implementation of the school support strategies? Probe:
  - Scale
  - Time constraints
  - Resources
  - Turn-over of school level personnel
  - Support from government district office and/or local program coordinator
  - Relationship with government district offices
  - Challenges from teachers and principals

- Please describe what happens during a typical school support visit. How often do you visit schools? How long do these visits last? What do you in preparation of your visit? What do you do during your visit? What do you do afterwards? (Probe: request to describe the last support visit).

- I understand that the program provides support to principals on instructional leadership and data use, and to teachers on instructional improvement in Mathematics, Language, and Science, through coaches who visit schools regularly. Could you describe your role, as a program coach, regarding the following?
  - Decisions on contents and strategies for professional development activities. How is it decided what strategies to use and what content to cover during the professional development sessions?
  - Strategies and tools to support principals and teachers. How is it decided what strategies and tools to use?
- What is the role of the following actors in these decisions? Program central office team, government district officers, local program coordinator, school coaches, principals and teachers.

- What type of data do you collect about schools? What is the source of these data? Do you use specific software to check data on schools? What types of indicators do you take into account? Why do you consider those indicators instead of others?

- What mechanisms do you use to monitor the ways in which schools are (or are not) improving?

Adaptation of school support strategies to specific school contexts/needs

- When you start working with a new school, how do you decide what type of support to provide?

- Have you needed to change your strategy/ approach to school support in any of the schools you are working with? Why did that happen? What changes did you make? How did you decide what changes to make? (Request to describe details of the last time the event occurred).

- Do all schools that are being supported through this program in this district receive the same type of support? If not, what are the reasons why schools are not receiving the same support? How is it decided what adaptations to make? Who participates in such decision?

- In your experience so far, do schools require adaptations of the support strategies? What do these adaptations consist of? (Probe: ask to provide specific example). Do
you find differences between schools that require the adaptation of strategies and schools that do not?

Closing up

• What changes, if any, have you noticed in the schools you work with before and after their participation in the program? Could you provide examples? (Probe for both positive and negative changes).

  Changes in the principal’s role

  Changes in teacher practice and student evaluation

  Changes in management and school internal organization and processes (teacher collaboration, use of data)
Interview guide for school principals

Introduction

• For how long have you been a principal in this school? For how long have you been a principal? What were you doing before coming to work at this school?

• Could you describe what a typical work day looks like? What are your main responsibilities?

School’s internal capacity (internal coherence, complements the ICAP teacher survey)

• How would you describe the students in this school? The teaching staff? The administrators?

• How are decisions made in this school about what to teach and how to teach it every day? What resources are used?

• What types of opportunities are there for staffs’ professional learning? How would you describe these opportunities? (Probe: external teacher professional development provided by the government, internal teacher professional development organized by the school, professional development organized within the BIC program).

• Do administrators and teachers in this school collaborate around instructional improvement or curriculum planning? Could you describe what happens during these meetings? Could you describe what happened during the last meeting?

• When was the last time you spoke with a teacher about her teaching? What did you talk about? What did you do after the conversation?
• Who do you receive support from in your daily work? When you are faced with a challenge in your work, who do you reach out to? (Probe for internal school resources, BIC coaches, government district administrators). Could you describe an instance where you needed support, how you went about obtaining support, what the support consisted of, and what you did afterwards?

*BIC support to schools*

• Could you describe the main characteristics of the BIC program?

• Since when does this school participate in BIC? Were you already working at this school when the school was incorporated to the program? If so, could you describe for me what the incorporation process was like? What changed after the school was incorporated to the program?

• How is it decided what type of professional development/support strategies will be used in this school within the BIC program?

• Have you received professional development within the BIC program? Could you describe what this professional development consisted of? (Probe: data use, instructional leadership, planning, development of improvement plans).

• Could you describe what happens in a typical visit by local BIC coaches? (Probe: frequency of visits, length of stay, activities, participants, materials, use of specific software). Could you describe the last visit you received?
• What types of resources do BIC coaches provide you with? Could you provide an example?

• What do you do with the resources provided by BIC coaches after they finish their visit? Could you provide an example? (If principal mentions unused or modified resources, ask why).

• Are there any issues on which you have requested specific support from BIC coaches? How did you decide on those issues? What happened when you requested the support? What did you do afterwards?

• What is similar and what is different between the BIC support and other teacher professional development activities you have participated in (for example, the ones organized by the public system)?

• As part of the BIC program, does this school receive information about its improvement process? What type of information is it? Do you use that information? How?

• Does this school have an improvement plan? How was it developed? What issues or problems does the improvement plan in this school address? Why were these issues chosen? What actions are planned in order to tackle these problems? How were these actions chosen? (Probe: did the school receive support from BIC to develop the improvement plan? Did the school receive support from other sources, such as government district supervisors?).

*Relationship between BIC program and government district offices*
• Does this school receive visits from government district officers or supervisors, in addition to BIC program coaches? What differences and similarities do you see between the two types of visits? What types of resources are you provided with within the frame of each type of visit? What do you do with these resources?

• In another case I have been analyzing (in Peru), I noticed that some schools were finding it difficult to coordinate demands and supports from the government district offices and from the external support program. Has anything like that happened in this school? Could you describe, providing specific examples, what happened?

• I understand the BIC program provides this school with instructional materials and teacher guides in Mathematics, Language Arts, and Science. How well aligned have you found those materials are with the local curriculum? Has this school faced any difficulties in using those materials?

• I understand the BIC program provides the school principal with software to collect data at the school level. How aligned are the indicators included in that software with indicators you regularly need to collect and report information on for government district offices?

• Does the school receive support and/or information about its improvement process from the government district office, in parallel from the information provided by the BIC program? Has the school faced any difficulties integrating the two sources of information in order to make instructional improvement decisions?

Closing

• What changes, if any, do you see in the school before and after its participation in the program? (both positive and negative changes)
Probe (ask for examples):

Changes in the principal’s role

Changes in teacher practice and student evaluation (Probe: how do you measure this?)

Changes in management and school practice (teacher collaboration, use of data)

- This school will soon be “graduating” from the BIC program. Once the program leaves the school, what do you think the school will have learned? What issues will the school still need to work on?
Interview guide for teachers

Introduction

• For how long have you been a teacher in this school? For how long have you been a teacher? What were you doing before coming to work at this school?

• Could you describe what a typical work day looks like?

School’s internal capacity (internal coherence, complements the ICAP teacher survey)

• How would you describe the students in this school? The teaching staff? The administrators?

• How do you make decisions on what to teach and how to teach it every day? What resources do you use? Do you work with the school principal? Do you work with colleagues? Do you work with anybody else? Who?

• What types of opportunities do you have for professional learning? How would you describe these opportunities? (Probe: external teacher professional development provided by the government, internal teacher professional development organized by the school, BIC coaches).

• Do you collaborate with other teachers in this school around instructional improvement or curriculum planning? Could you describe what you did during your last meeting with your colleagues?

• When was the last time to spoke with the school principal about your teaching? What did you talk about? What did you do after the conversation?
• Who do you receive support from in your daily work? When you are faced with a challenge in your work, who do you reach out to? (Probe for internal school resources –principal and colleagues, BIC coaches, government district administrators). Could you describe an instance where you needed support, how you went about obtaining support, what the support consisted of, and what you did afterwards?

**BIC school support**

• Could you describe what happens in a typical visit by local BIC coaches? (Probe: frequency of visits, length of stay, activities, participants, materials, tools, etc.). Could you describe the last visit you received?

• What types of resources do BIC coaches provide you with? Could you provide an example? (probe for: teacher guides, instructional materials, mentoring, analysis of classroom practice, modeling, networking with other teachers, etc).

• What do you do with the resources provided by BIC coaches after they finish their visit? Could you provide an example? (If teacher mentions unused or modified resources, ask why).

• Are there any issues on which you have requested specific support from BIC coaches? How did you decide on those issues? What happened when you requested the support? What did you do afterwards?
• What is similar and what is different between the BIC support and other teacher professional development activities you have participated in (for example, the ones organized by the public system)?

Relationship between BIC program and government district offices

• Do you receive support from government district officers or supervisors, in addition to BIC program coaches? What differences and similarities do you see between the two types of support? What types of resources are you provided with within the frame of each type of visit? What do you do with these resources?

• In another case I have been analyzing (in Peru), I noticed that some teachers were finding it difficult to coordinate demands and supports from the government district offices and from the external support program. Has anything like that happened to you? Could you describe, providing specific examples, what happened?

• I understand the BIC program provides this school with instructional materials and teacher guides in Mathematics, Language Arts, and Science. How well aligned have you found those materials are with the local curriculum? Have you faced any difficulties in using those materials?

• Have you received information about the quality of your work, either from government district officers or from BIC coaches? Have you faced any difficulties integrating the two sources of information in order to make instructional improvement decisions?

Closing
• What changes, if any, do you see in your practice before and after your participation in the program? (both positive and negative changes). And in the school?

   Probe (ask for examples):

   Changes in the principal’s role

   Changes in teacher practice and student evaluation (Probe: how do you measure this?)

   Changes in management and school practice (teacher collaboration, use of data)

• This school will soon be “graduating” from the BIC program. Once the program leaves the school, what do you think will the school have learned? What issues will the school still need to work on?
Professional development meeting observation protocol

(Adopted from City, Elmore, Fiarman, and Teitel (2009)).

**Observation guiding questions**

- What objectives are being stated for the professional development meeting?
- What resources are being used? (Curriculum, teacher guides, instructional materials, textbooks, specific software, etc.)
- What are BIC coaches doing/saying?
- What are teachers/principals doing/saying?
- What is the task participants are engaged with?
- What kinds of adaptations are principals/teachers requesting BIC coaches make for their specific needs? What reasons are being provided to request such adaptations?
- How are BIC coaches reacting to the adaptations requested?

**Debrief with BIC coaches after meeting**

- Please tell me about what I observed today.
- How did you decide what to focus today’s professional development session?
- What resources have you drawn from to plan today’s session?
- Could you tell me more about the resources or people who influence your instructional decisions?
- What role, if any, did the general strategy of the BIC program and the centrally-developed materials play in your actions today?
- What role, if any, did the requirements from the government district office play in your actions today?
Appendix C. List of documents analyzed

**Government documents**


**Program documents**


38. Escuelas del Bicentenario (no date) Experimentos para hacer en casa. Experimento 3 (mimeo, internal program document).
41. Escuelas del Bicentenario (no date) Experimentos para hacer en casa. Experimento 6 (mimeo, internal program document).
42. Escuelas del Bicentenario (no date) Grilla de observación de aula para directores (mimeo, internal document).
43. Escuelas del Bicentenario (no date) Planilla de monitoreo de indicadores (mimeo, internal document)

**School documents**

School improvement plan for each of the six schools participating in the study

*Planilla de monitoreo de indicadores* for each of the six schools participating in the study

*Secuencias didácticas*

*Agenda del Director* for each of the six schools participating in the study
Appendix D. Businesses and institutions participating in the BIC program

International organizations:
UNESCO-IIPE

Government:
National Ministry of Education

Provincial Ministries of Education of the following provinces:
- Chaco
- Córdoba
- Corrientes
- Tucumán
- Santa Cruz
- Buenos Aires.

The municipalities of:
- Campana
- Ensenada
- San Nicolás
- Carlos Casares
- Gobernador Virasoro
- Barranqueras
- Vilelas
- Las Heras
- Caleta Olivia

Health Ministries of:
- Provincia del Chaco
- Provincia de Corrientes
- Provincia de Tucumán
- Provincia de Santa Cruz.

**Businesses and foundations:**

Asociación Empresaria Argentina (AEA)
Accenture
Aique
Allianz Group
Ángel Estrada
Avina
Banco Galicia
Banco Hipotecario
Bosques del Plata
Cámara de Comercio, Industria y Servicios de Carlos Casares
CIPPEC
Coca-Cola
Ejes de Comunicación
Deutsche Bank
Fundación Arcor
Fundación Bunge y Born
Fundación Hermanos Agustín y Enrique Rocca
Fundación Irsia
Fundación La Nación
Fundación Lúminis
Fundación MAPFRE
Fundación Mundo Sano
Fundación por Pilar
Fundación Victoria Jean/Las Marías
Fundación YPF
Grupo Clarín
Grupo Los Grobo
Liberty Seguros
MBA-Lazard
Mercedes Benz
Muchnik, Azurralde, Jasper & Asoc.
Pampa Energía,
Price Water House
Pump
Roggio
San Miguel
Santillana
Telecom
Tenaris
Ternium Siderar
Tinta Fresca
TN & Platex
Tomás Hermanos
Zurich

Academia
Universidad de San Andrés
Appendix E. Examples of BIC program instructional tools


<table>
<thead>
<tr>
<th>Mes</th>
<th>Números</th>
<th>Operaciones</th>
<th>Espacio y Geometría</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marzo</td>
<td>- Interpretación de información numérica contenida en diferentes soportes. Funciones de los números.</td>
<td>- Problemas iniciales de suma y resta en contextos.</td>
<td>- Ubicación espacial en una hoja. Representación gráfica con relación a puntos de referencia.</td>
</tr>
<tr>
<td></td>
<td>- Sucesión escrita del 1 al 10.</td>
<td>- Transformaciones en el campo activo. Inicio en el uso de los signos + y -.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Registro de cantidades y estrategia de cuantificación. Comparación de cantidades.</td>
<td>- Interpretación de recorridos en un plano sencillo.</td>
<td></td>
</tr>
<tr>
<td>Abril</td>
<td>- Sucesión numérica hasta el 30. Trabajo con agendas.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Serie numérica escrita hasta el 100.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Organización de colecciones con el fin de contar sus elementos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Interpretación de la información numérica contenida en una imagen.</td>
<td>- Construcción de un repertorio activo memorizado: complementos a 10.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Uso de la calculadora.</td>
<td>- Uso de la calculadora.</td>
<td></td>
</tr>
<tr>
<td>Junio</td>
<td>- Serie numérica escrita hasta el 100. Análisis de sus regularidades.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Julio</td>
<td>- Reconocer y ubicar números a partir de ciertas regularidades que caracterizan el sistema de numeración.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Trabajo con dobles y mitades en relación con una colección dada o construida.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Construcción de un repertorio memorizado de sumas y restas, dobles y mitades. Registro escrito de ese repertorio.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Situaciones problemáticas en relación con los repertorios activos.</td>
<td></td>
</tr>
<tr>
<td>Setiembres</td>
<td></td>
<td>- Diferentes formas de resolución de cálculos. Reflexión y validación de los diferentes recursos de cálculo.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Cálculos &quot;fáciles&quot; puestos al servicio de la resolución de otros &quot;dificiles&quot;.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Elaboración de tablas que registren la incorporación de nuevos cálculos memorizados, incluyendo sumas de iguales, sumas y resta de 10, complementos a 10.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Estimación de resultados en situaciones problemáticas del campo activo: diferencias en la estrategia de resolución con respecto al cálculo exacto.</td>
<td></td>
</tr>
<tr>
<td>Octubre</td>
<td></td>
<td>- Resolución de problemas en el contexto del uso del dinero. Comparación de cantidades de billetes en relación con la cantidad de dinero. Obtención de una cantidad dada con billetes diferentes.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Análisis de las semejanzas en la regularidad de la denominación de los billetes y en la serie numérica escrita.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Contar de billetes iguales: escalar.</td>
<td></td>
</tr>
<tr>
<td>Noviembre</td>
<td></td>
<td>- Incorporar a las situaciones problemáticas habituales diferentes sentidos de la suma y de la resta: agregar, asentar, poner o quitar, retroceder, sacar.</td>
<td></td>
</tr>
<tr>
<td>Diciembre</td>
<td></td>
<td>- Elaboración de situaciones problemáticas a partir de un cálculo dado.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Producción colectiva de tablas que registren la incorporación de nuevos cálculos memorizados de restas.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Representaciones gráficas de diferentes espacios y desde diferentes puntos de vista. Relaciones entre bi- y tridimensional.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Inicio del trabajo con medidas. Medida de longitud. Necesidad de uniformar la unidad de medida.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Escritura y ordenamiento de números grandes. Inicio en el registro del valor posicional. Escritura de números. Exploración de la relación entre la escritura y la lectura del número.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Ampliación de los registros de cálculos memorizados que incluyen los números grandes.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Inicio del trabajo multiplicativo en relación con sumas sucesivas del mismo número.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Descripción e interpretación de diferentes recorridos en un plano. Inicio del trabajo con expresiones sencillas de plantas en los que se indica un recorrido simple.</td>
<td></td>
</tr>
</tbody>
</table>
Operaciones del campo aditivo en el contexto del uso del dinero

Contenidos
- Resolución de problemas en el contexto del uso del dinero.
- Comparación de cantidades de billetes en relación con la cantidad de dinero.
- Obtención de una cantidad dada con billetes diferentes.
- Conteo de billetes iguales: escalas.

El contexto del uso del dinero suele facilitar la operatoria debido a dos factores principales:
- Los billetes representan números “redondos”.
- La frecuencia de uso de parte de los niños.

Es por esa razón que este contexto permite el acercamiento a números grandes, a operaciones aditivas que, fuera de él, resultarían más complejas.

Esta planificación está pensada para ser trabajada en grupos de 3 o 4 niños y para ser llevada a cabo en una semana de 3 bloques de 80 minutos. En cada uno de ellos, se trabajará con 2 problemas para dar tiempo al despliegue y puesta en común de estrategias al interior de cada grupo de trabajo y para su explicitación ante el grupo grande.

CLASE 1 (módulo de 80 minutos)
Se les propondrán a los alumnos problemas como los siguientes:

1. Mirta tiene estos billetes:

¿Cuánto dinero tiene?

2. Agustín debe $57 en el almacén. ¿Le alcanza con estos billetes que tiene para pagar la deuda?

a) ¿Le sobra dinero? ¿Cuánto?
b) ¿Le falta dinero? ¿Cuánto?
A continuación, se propiciará un debate en torno a los modos de resolver que desplegaron los niños. Se trata de poner en evidencia la relación entre la escritura de la cantidad de dinero y los billetes que permiten obtenerla.

Es esperable que algunos alumnos confundan la cantidad de dinero con la cantidad de billetes. Las intervenciones docentes deberían propiciar esta distinción.

**CLASE 2 (módulo de 80 minutos)**
Se les ofrecerán a los alumnos los siguientes problemas:

1. Marcos tiene que pagar la boleta del gas, que son S 76. Dibújá los billetes que tiene que llevar para pagar justo.
   ¿Hay una sola posibilidad?

2. Laura tiene ahorrados los siguientes billetes:

   ![Imagen de billetes]

   ¿Cuánto dinero tiene?

Al finalizar estos problemas, el docente puede promover un debate en torno a los procedimientos que usaron los alumnos, apostando a identificar aquellos que se apoyan en el conteo y los que se basan en cálculos.

**CLASE 3 (módulo de 80 minutos)**
Se les podrá proponer a los alumnos el siguiente problema:

1. Juan tiene S 37. Su hermano Esteban tiene guardados estos billetes:

   ![Imagen de billetes]

   ¿Quién de los dos tiene más dinero?
2. Usando billetes de $10, de $20 y de $50, formen las cantidades que aparecen en los cuadros de dos maneras diferentes.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$80</td>
<td>$130</td>
</tr>
</tbody>
</table>

Se trata, en estos casos, de que los alumnos recuperen lo realizado en las clases anteriores y empiecen a reconocer explícitamente que si una cantidad de dinero es, por ejemplo $37, es posible armarla con 3 billetes de $10.

El docente podrá extender este análisis al uso de billetes de $20 o de $50. Es decir, para alcanzar determinadas cantidades, es conveniente recurrir a ciertos billetes.

3. Usando billetes de $10 y de $100 formen las cantidades que aparecen en el cuadro de dos maneras diferentes.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$80</td>
<td>$130</td>
</tr>
</tbody>
</table>


5. Para pagar $45, Paula llevó un billete de $50. Dibujá de dos formas diferentes el vuelto que le deben dar.
Suggestion for an end-of-year evaluation. Mathematics, first grade. Source: Document #29, pages 33 and 34

A continuación, se propone una selección de problemas que podrían servir como ejemplos para la elaboración de una prueba de fin de 1.º grado. Puede ser utilizada total o parcialmente, o implementada en más de un día, dada su extensión.

1. En este cuadro, hay tres números que están mal ubicados. Encontralos.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th>6</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>14</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>40</td>
<td>34</td>
<td>38</td>
<td>47</td>
<td>51</td>
<td>58</td>
</tr>
<tr>
<td>60</td>
<td>63</td>
<td>71</td>
<td>85</td>
<td>68</td>
<td>79</td>
</tr>
<tr>
<td>90</td>
<td>93</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Martín tenía 27 bolitas y en el recreo perdió 13. ¿Con cuántas bolitas se quedó? Rodea el cálculo con el que creas que se resuelve este problema y resuelvelo.

\[
\begin{align*}
27 + 13 & \quad 27 - 13 & \quad 20 + 7 + 13 \\
\end{align*}
\]

3. Marca con color cuáles de estos problemas podés resolver sin escribir cuentas.
   a) María compró 18 chupetines y repartió 8 en el recreo. ¿Con cuántos se quedó?
   b) Felipe llenó 15 páginas del álbum de figuritas. Tiene 10 páginas incompletas. ¿Cuántas páginas tiene el álbum?
   c) En un mercadito, Vero compró 12 latas de tomate y 14 de arvejas. ¿Cuántas latas llevó?
   d) Catarina tenía 26 pulseritas de plástico y les regaló 15 a sus amigas. A la tarde la tía, le compró 6 más. ¿Cuántas tiene ahora?
   e) Martín ahorró $47 desde enero hasta octubre. En noviembre, ahorró 12 más. Si no gastó nada, ¿cuánto dinero tiene a fin de noviembre?

4. Escribí los resultados de los problemas que marcaste y resuelve los que no marcaste.
5. Malena está leyendo un libro de 64 páginas. Hoy llegó a la mitad del libro.
   a) ¿En qué página está? 
   b) ¿Cuántas páginas le faltan para terminarlo?

6. Paula y Diego fueron al cine. Cada entrada costó $24, y compraron un balde de pochoclo de $15. ¿Cuánto dinero gastaron?

7. Dibuja tu aula como si la estuvieras viendo desde una ventana.

8. Pedro tiene que cubrir esta caja con papeles de colores como los que aparecen dibujados más abajo.

¿Cuántos papeles de cada uno de estos necesita para cubrir la caja?
Example of annual planning. Language Arts, first grade. Source: Document #26, pages 32 and 33.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fichas de información. Canciones, bajo, tablas</td>
<td>Escuchar leer al maestro. Fichas técnicas, notas de escripción, infografías, localizar información específica.</td>
<td>Escritoras en torno a los libros: Copiar datos de los textos fuente consultados. Listar términos de vocabulario específico, tomar notas, reducir títulos y epígrafes.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix F. Program delivery structure: central and local teams
Appendix G. Direct and mediated delivery mechanisms in the BIC program

Direct delivery mechanism

Central level

Program coordinators
Management and implementation
Head specialist + one area specialist per locality

Mathematics
Head specialist + one area specialist per locality

Language Arts
Head specialist + one area specialist per locality

Board
Science
Head specialist + one area specialist per locality

Local level

Local program coordinators
Local coaches team:
Management
Mathematics
Language arts
Science

District supervisors
District staff

Schools
Mediated delivery mechanism

Central level

Program coordinators
- Management and implementation
  - Head specialist + one area specialist per locality
Mathematics
  - Head specialist + one area specialist per locality
Language Arts
  - Head specialist + one area specialist per locality
Science
  - Head specialist + one area specialist per locality

Board

Local level

Local program coordinators

District supervisors
- District staff
  - Local coaches team:
    - Management
    - Mathematics
    - Language arts
    - Science

Schools
Appendix H. Program theory of change (implementation and program theory)

Implementation theory: program actions (in regular font)

Program theory: mechanisms of change (in italics)
## Appendix I. Structural differences in program delivery

<table>
<thead>
<tr>
<th></th>
<th>Direct delivery mechanism</th>
<th>Mediated delivery mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coach selection</strong></td>
<td>External applicants directly hired by central office.</td>
<td>Ascribed to the position, in agreement with district office.</td>
</tr>
<tr>
<td><strong>Coach background</strong></td>
<td>External applicants.</td>
<td>Tenured teachers and principals from the district.</td>
</tr>
<tr>
<td><strong>Local program coordinator background</strong></td>
<td>University graduates with master’s degrees.</td>
<td>Former school principals from the district.</td>
</tr>
<tr>
<td><strong>Coach previous experience</strong></td>
<td>Secondary school professors and former teacher trainers. Little experience working with students grade 1-6. Combination of local and external to the area.</td>
<td>Primary school principals, classroom primary school teachers and secondary school professors. Experience working with grade 1-6 students. Local.</td>
</tr>
<tr>
<td><strong>Ratio of schools to program coaches</strong></td>
<td>0.66 schools per coach (12 coaches for 8 schools)</td>
<td>1.16 schools per coach (19 coaches for 22 schools).</td>
</tr>
<tr>
<td></td>
<td>Local program team: 2 local program coordinators and school management coaches 2 science coaches 5 language arts coaches 3 mathematics coaches</td>
<td>Local program team: 2 local program coordinators 5 school management coaches 4 science coaches 4 language arts coaches 6 mathematics coaches</td>
</tr>
<tr>
<td><strong>Coach time in school</strong></td>
<td>2 hours every 15 days</td>
<td>Full school shift every 15 days. Additional time in schools with greater need.</td>
</tr>
<tr>
<td><strong>Teacher exposure to coaching</strong></td>
<td>Lower intensity due to high teacher turnover. Teachers rotating to other schools were “lost” to the program.</td>
<td>Higher intensity due to whole-district approach. If a teacher rotated from one school to another, she would still receive training in the new school.</td>
</tr>
</tbody>
</table>
### Appendix J. Program delivery in action: Description of district-level dynamics

<table>
<thead>
<tr>
<th></th>
<th><strong>Direct delivery mechanism</strong></th>
<th><strong>Mediated delivery mechanism</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>District staff participation in program</strong></td>
<td>District supervisors seen mostly as gatekeepers by program staff.</td>
<td>District supervisors are integrated into the delivery of the program.</td>
</tr>
<tr>
<td></td>
<td>Informal meetings between program and district staff.</td>
<td>Formalized relationship between program and district staff.</td>
</tr>
<tr>
<td></td>
<td>District supervisors are invited to participate in professional development workshops.</td>
<td>District supervisors participate in decision-making about program activities.</td>
</tr>
<tr>
<td><strong>Focus of district staff – program staff relationship</strong></td>
<td>Contact between district offices and local program coordinator/ local program coaches focused mostly on: - logistics - information about program activities.</td>
<td>Contact between district offices and local program coordinators/local program coaches focused on: - logistics - information about program activities -program contents (for example, the decision of the content of professional development workshops) - data analysis.</td>
</tr>
<tr>
<td><strong>Program reach</strong></td>
<td>Professional development workshops were voluntary, and district supervisors did not encourage teachers to attend. Workshops organized solely by program staff.</td>
<td>Professional development workshops were made mandatory by district supervisors. Workshops organized by program staff and district supervisors.</td>
</tr>
<tr>
<td><strong>Communication circuits between central office and local program staff</strong></td>
<td>Each local program coach has a central office specialist to report to. Monthly formal reports and informal meetings via telephone.</td>
<td>Each local program coach has a central office specialist to report to. Monthly formal reports and informal meetings via telephone.</td>
</tr>
</tbody>
</table>
| Communication topics between central office area specialists and local program coaches | - Program implementation issues  
- Coaching from central office specialist to local program coach  
- Coaching on specific secuencias didacticas developed by the central office  
- Questions about adaptations to specific students. | - Program implementation issues  
- Coaching from central office specialist to local program coach  
- Coaching on specific secuencias didacticas developed by the central office  
- Questions about adaptations to specific students.  
- Review of secuencias didacticas developed by local program coaches.  
- Review of school curriculum annual planning developed by schools.  
- Suggestions on how to integrate program activities to district practices. |
| Communication topics between local program coaches and local program coordinator | Mostly logistics (delivery of classroom libraries, science kits, etc). | - Logistics  
- Data analysis for improvement needs  
- Curriculum development  
- Coordination of activities with district staff. |
| Communication circuits between local program staff and district staff | No direct relationship between local program coaches and district supervisors. | Fluid communication between local program coaches, the local program coordinators, and district staff.  
Topics included:  
- Content of professional development workshops  
- Program implementation in schools  
- Identification of school needs  
- Data analysis |
<p>| Use of data to identify improvement needs | Schools input data in the <em>planilla de monitoreo</em>. Local coordinator collects data and sends it to central office. Central office processes the data and sends back to local program coordinator and to central office area specialists. Central office area specialists work with the data to identify needs together with local program coaches. Local program coaches work with individual teachers and principals. Data used only to support program decisions. | Schools input data in the <em>planilla de monitoreo</em>. Central office area specialists work with the data to identify needs together with local program coaches. Local program coordinator and local program coaches work as a team to discuss schools’ needs based on the data, together with district supervisors. Local program coaches work with individual teachers and principals. Data used to support program decisions as well as government district office’s decisions (for example, as an input for principal evaluation). |
| Local communities of practice | Local program coaches work in isolation from one another. Individual visits to schools. | Local program coaches work as a team. They meet weekly at district offices for collective planning (area-based and across areas). |</p>
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum development</td>
<td>No substitutes in case of coach absence. No contact with principals from other schools or district support staff (school orientation and inclusion teams, social workers, special education teachers).</td>
<td>When a coach is not able to visit a school, another can take her place. Local program coaches participate in district staff meetings, thus gaining awareness of district initiatives and coordinating their work with district staff.</td>
</tr>
<tr>
<td>Professional development workshops</td>
<td>Instructional sequences were mostly used as developed by the central program office. Instructional sequences used as “stand-alone” activities. Two notebooks: one for the program’s instructional sequences and another for teacher-developed activities. Instructional sequences and school curriculum plans not discussed with district staff.</td>
<td>New instructional sequences were developed by teachers and coaches at the local level. Central office area specialists oversaw that new sequences were aligned with the program instructional approach. Program instructional sequences integrated with the school curriculum. Instructional sequences and school curriculum plans were discussed with district staff. Adaptations and new sequences were developed. Contents were negotiated with district staff, while central office specialists oversaw that new content was aligned with the program instructional approach.</td>
</tr>
</tbody>
</table>
## Program delivery in action: Description of school-level dynamics

<table>
<thead>
<tr>
<th>Teacher coaching</th>
<th>Direct delivery mechanism</th>
<th>Mediated delivery mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Common to all types of schools</strong></td>
<td><strong>Common to all types of schools</strong></td>
</tr>
<tr>
<td></td>
<td>Outside and inside the classroom.</td>
<td>Outside and inside the classroom.</td>
</tr>
<tr>
<td></td>
<td>Coaches tried to differentiate their role as mentors from the evaluation role that district supervisors and principals may have.</td>
<td>Coaches tried to differentiate their role as mentors from the evaluation role that district supervisors and principals may have.</td>
</tr>
<tr>
<td></td>
<td>Coaches positioned themselves as peers.</td>
<td>Coaches positioned themselves as peers.</td>
</tr>
<tr>
<td></td>
<td>Coaching focused more on academic content knowledge than on instructional strategies.</td>
<td>Coaching focused both on academic content knowledge and on instructional strategies.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Curriculum development</th>
<th>Direct delivery mechanism</th>
<th>Mediated delivery mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Common to all types of schools</strong></td>
<td><strong>Common to all types of schools</strong></td>
</tr>
<tr>
<td></td>
<td>Coaches used instructional sequences as developed by the central office, and trained teachers on the implementation of the sequences.</td>
<td>Coaches developed together with teachers new instructional sequences based on the school’s annual curriculum plan.</td>
</tr>
<tr>
<td></td>
<td>Focus of coaching set on walking teachers through the implementation of predetermined instructional sequences.</td>
<td>Focus of coaching set on learning to develop an instructional sequence and understanding constructivist approach.</td>
</tr>
<tr>
<td>Principal instructional leadership</td>
<td>BIC instructional sequences mostly seen by teachers as add-ons to their annual planning.</td>
<td>BIC instructional sequences seen as teachers as integrated with their annual planning.</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Specific to schools’ internal capacity</td>
<td>In medium and high ICAP schools, teachers tried to integrate BIC instructional sequences into their planning.</td>
<td>Specific to schools’ internal capacity</td>
</tr>
<tr>
<td>Integration of instructional sequences to school annual planning was done in all schools.</td>
<td>In the low capacity school, teachers worked with coaches to jointly develop instructional sequences. The focus of the coaching was set on scaffolding the teachers through the development of the instructional sequence.</td>
<td>In the high capacity school, planning was done as a team by the teachers, and coaches mostly focused on providing feedback to the instructional sequences developed by the team of teachers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Principal instructional leadership</th>
<th>Common to all types of schools</th>
<th>Common to all types of schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coaching for principals focused on developing instructional leadership skills (analyzing data to identify improvement needs, mentoring teachers in their work, observing classroom instruction).</td>
<td>Coaching focused mostly on: - theoretical approach to leadership styles - implementation of the planillas de monitoreo.</td>
<td>Coaching focused mostly on: - Approaches to leadership - data analysis and implementation of planillas de monitoreo - solving specific school issues.</td>
</tr>
</tbody>
</table>
Local academic area coaches did not interact at all with school principals.

Specific to schools’ internal capacity
There were no differences in the role of coaches regarding principal leadership in schools of different internal capacity level.

Problems, such as teacher turnover, discipline, etc.

Local academic area coaches did not interact directly with the principals, but worked as a team with the management coaches. Thus, management coaches learned about individual teacher needs and were able to incorporate this knowledge into their work with the principals.

Specific to schools’ internal capacity
In the school with low internal capacity, program coaches were required by the principal to substitute their instructional leadership role.
References


Cardenas Denham, S. (2009) *Is the class schedule the only difference between morning and afternoon shift schools in Mexico?* A thesis presented to the faculty of the Graduate School of Education of Harvard University in partial fulfillment of the requirements for the degree of Doctor of Education.


