The Quality of Education in Latin America and the Caribbean

Latin American Research Network

Proposal of DESARROLLO Institute

July, 2007

Paraguay
This proposal presents a plan for conducting an analysis of Paraguay’s educational system. Such an analysis is long overdue in Paraguay, and would add breadth and depth to efforts in the Latin American and Caribbean region to consolidate and exchange educational statistics, and promote a culture of educational policy formation backed by rigorous data analysis. Including Paraguay in regional and international efforts to evaluate and improve nations’ educational systems through coordinated and cooperative efforts is important because small and relatively poor countries like Paraguay tend to be underrepresented. Assistance from the IDB would allow for the completion of the analysis that this proposal details. We also expect that the study would lead to proposed pilot studies that would further illuminate and inform the policy issues raised by the study’s findings.

I. Introduction

Since the arrival of Paraguay’s democratic government in 1989, educational reform has consistently been one of the government’s top priorities (CONEC 2002). As is true elsewhere in Latin America, this priority is in part due to the persistent problems associated with an unequal distribution of income, to which a poor educational system contributes. Moreover in Paraguay, a high quality and equitable educational system plays an important role in the transformation of Paraguay’s political and economic institutions. During the 1980s, for instance, public expenditures on education in Paraguay as a fraction of GNP (1.5 percent), was the lowest in the region (IDB 2000, Table 5). Moreover, the educational system had failed to provide an adequate education for many segments of Paraguay’s diverse population. A series of educational reform laws passed since 1989 have sought to address these problems. As one indicator of this new commitment to education, by 1995 public spending on education in Paraguay as a share of GNP had nearly doubled (IDB 2000, Table 5), and now at 5 percent exceeds the regional average (UNESCO 2005). Recent evidence suggests that the educational gap may also be narrowing (SNEPE no date).

While Paraguay has undertaken significant reform of its educational sector over the last 15 years, little is known of their effects. With very few exceptions, key questions surrounding the efficiency, adequacy, and distribution of resources have not been addressed in a rigorous or quantitative way. Yet one important change since 1989 has been the collection of high quality data on the performance of the country’s educational system which provides an excellent opportunity to evaluate the association between educational inputs and outputs, and the distribution of both of these across the nation’s regions and socioeconomic groups.
With the assistance of financial and technical support of the IDB, we propose consolidating existing national data on student test scores and background characteristics, with information on the characteristics of the schools they attend. This would create a unique data set for Paraguay from which educational quality and equity could be evaluated. In particular we propose assessing the link between school- and classroom-level educational resources and student performance, and assessing the adequacy of the current educational system in providing a quality and equitable education for Paraguayans. Through this analysis, we will address the following important policy issues facing both Paraguay and other Latin American countries:

- What is the relationship between individual, classroom, and school-level factors in Paraguay, and 6th grade students’ math and language scores?

- Does the relationship between educational “inputs” (classroom and school-level resources) and “outputs” (test scores) vary for students from different socioeconomic backgrounds? To use the jargon of economists, do students with different background characteristics have different educational production functions?

- How do learning outcomes and the factors associated with learning outcomes in Paraguay, compare with other Latin American and Caribbean countries? How do they compare internationally?

- In what way (if any) has educational inputs, and the relationship between educational inputs and outputs, changed over the last few years in Paraguay? Is there any evidence that educational resources are being used more effectively, or more equitably?

- How do educational opportunities, measured both by inputs and outputs (test scores) compare across different social groups, regions, and language groups?

While the data available for this study somewhat circumscribes the ability to firmly establish causal relationships between education inputs and students’ performance in Paraguay, this limitation is characteristic of research on educational quality, particularly research at the national level. However, what limitations this study faces in making causal inferences is more than made up (in our minds at least) in the generalizability of the findings to the nation and the region. Moreover, a careful treatment of cross sectional student data, as well as the availability of a rich array of students’ background characteristics, will strengthen the validity of this proposed study’s findings.

II. Research Proposal
This section first provides some background on quantitative analyses of educational quality, and on the status of education and educational reform in Paraguay. It then provides detailed information on the data to be used in this study, as well as how this data will be analyzed to address the research questions highlighted above. Finally, it ends with a brief discussion of the relevance of this study to education policy both in Paraguay, as well as more generally in the Latin American/Caribbean region.

A. Literature Review

A vast body of literature exists examining the relationship between educational inputs and the quality of education, as typically measured by test scores. The most difficult task in this research is distinguishing associations among variables from causal inferences. While associations among variables can be relevant to policy formulation—how do educational resources differ by socioeconomic groups, for instance—causal arguments provide for more compelling and effective policy prescriptions.

Without longitudinal data on students, however, it is very difficult to arrive at convincing causal statements. Unfortunately, longitudinal student data is difficult and expensive to obtain, and often as a consequence findings based on them are often of limited applicability. Most national studies and all international studies rely on cross-sectional student-level data, in which inferences must be drawn by comparing outcomes across students. One must be very careful in arriving at causal inferences from such data, however, as in such data it is difficult to disentangle the role of unobserved student characteristics from observed measures of educational resources. In consequence, the role of educational resources in student performance can be mismeasured.

Within countries, there is extensive research on the determinants of student performance and educational quality. Almost all studies show that student performance has a strong association with individual background characteristics (Hanushek and Luque 2003; Wößmann 2003). It is common to find that test score variation within schools is much larger than is test score variation across schools (Lee and Bryk 1989; Choi and Kim 2006). Exactly why learning among individual students is so variable is much harder to establish. In the U.S., research points to a causal role of family characteristics in explaining differences in performance (Ginther and Pollak 2004; Guo and Harris 2000; Lee and Burkan 2002).

Yet other research in the U.S. points to the link between socioeconomic status and the quality of school resources, including teachers (Carey 2004; Peske and Haycock 2006). That such inputs matter to learning is fairly well established. In the U.S., for instance, Lee and Smith (1997) found that school size mattered, while Ehrenberg and Brewer (1994) and Sanders and Rivers (1996) show that student performance is influenced by teacher characteristics. Some studies have also found a “peer effect”: learning is influenced by the general skill level and characteristics of the students. Hanushek, Kain, and Rivkin (2004) found that in the U.S. black students’ performance in math is negatively associated with the percentage of black students in the school.
Hoxby (2000) and Betts, Zau and Rice (2003) find that student achievement increases when peers have higher test scores.

In some countries, wide differences exist in students’ opportunities to learn a subject matter, and these opportunities can influence students’ performance. In the U.S., for example, math curriculum can be extremely variable (Cogan, Schmidt and Wiley 2001; Schmidt 2003). Variation in students’ opportunities to learn subject matter is also characteristic of many Latin American countries.

Some researchers have examined outcomes for specific groups within a country -- Jürges and Schneider (2004) and West and Wößmann (2005) differentiate students based on their TIMSS score. They find that differences in school, class size, teacher and student characteristics, or financial resources devoted to the school system help explain student achievement.

Internationally comparable databases on student outcomes (TIMSS, PISA and PIRLS) have permitted comparative analyses of student outcomes across nations. Such international comparisons are instructive because they provide greater variation on educationally-relevant policies. For instance, some studies have shown that the presence of central examinations and other organizational features of countries help explain differences among countries in student performance (Hanushek and Luque 2003; Jürges and Schneider 2004; Wößmann 2003). Wößmann (2004) provides an international comparison of the performance among countries’ disadvantaged students, and shows that countries differ in the extent to which disadvantaged children gain academic skills. It is for this reason that it is important to consider the performance of Paraguay’s educational system within the broader context of Latin America, because some features of Paraguay’s educational system will be experienced by all Paraguayan students, and their importance thus difficult to discern.

To date, however, very little is known about how educational quality and equity in Paraguay compares with other countries. Ten years ago, Paraguay participated in region efforts to assess the educational performance of its students (LLECE and SERCE). Based on a regional test administered in 13 Latin America countries in 1997, Paraguay’s 3rd and 4th graders scored below the regional average in math and language (OREALC 2001). However since 1997, little to nothing is known in a comparative sense, about the performance of Paraguay’s educational system. This said, the 1997 LLECE data, and studies generated from these data, can be used as a benchmark for making comparisons between this study’s findings, and other educational systems throughout the region.

B. Education and Education Policy in Paraguay

Recent educational reform in Paraguay can be traced to the establishment in 1990 of a National Commission for Reform, the mandate of which was to draw up a comprehensive plan for reforming Paraguay’s educational system (CARE 1992). This Commission set up the Advisory Board for Educational Reform (CARE), which in turn
set out the objectives of the Educational Reform and submitted them for national consultation during 1992 and 1993 (MEC 2000). The need for educational reform was widely recognized. It was acknowledged that the existing education model was deficient and the democratic transition that the country was experiencing required significant changes in the educational system. One result was that in 1994, a plan for educational curricula reform was implemented in the first grade of Basic School Education (EEB); thereafter it was extended to higher grades, which are structured in three cycles of three years each. By 2002, the reform had been completed throughout all three cycles.

Over the last ten years, several studies have examined the impact of Paraguay’s educational reforms. It is clear that the reforms have led to increased access of certain social groups that had previously been excluded from formal education. In particular, pre-school education (especially in rural areas) and participation in basic education (EEB) has increased significantly (MEC 2006).

There have also been advances in the organization of the Ministry of Education and in the collection of data for evaluating the educational situation in the country (Department of Planning and Statistics, National System for the Evaluation of Educational Progress) – advances that make the proposed study here possible. Most importantly, since 1996 Paraguay has administered a national test to students, the results of which provide an aggregate picture of the quality and equity of the nation’s educational system, as well as provide the data necessary for a rigorous analysis of the factors that contribute to or hinder educational progress.

Nevertheless, as in much of Latin America, the quality of Paraguay’s educational system remains low and inequitable. Data from the Paraguay’s National Evaluation System for the Education Process (SNEPE) national test reveals weak and uneven student performance. For example, in 2001 third graders averaged less than 60% correct on the topics tested, although test scores in 2004 were somewhat stronger. Sixth graders in 1997 averaged less than 50% correct, although again more recent test scores show some modest improvement (SNEPE, no date; SNEPE 2001). In 2004, 6th graders in some regions averaged less than 33 percent correct on SNEPE’s math test. Grade repetition remains high, especially in the first cycle of the EEB (11%) and in high school (12.7%) (Molinas, et al. 2004).

Reform of Paraguay’s educational sector has also not reduced the disadvantages and educational inequality facing some social groups. In 2004, third graders in the Boquerón region averaged only 45 percent correct on the SNEPE math test, while those in the Alto Paraguay region averaged over 62 percent correct (SNEPE, no date). During the 1990s, educational gaps between the poor and richest 21 year olds in the country remained one of the highest in the region (IDB 2000, Graph 2). Much work still needs to be undertaken to improve the quality of the nation’s educational system, and to redress the educational inequality facing certain social groups and regions. While the Ministry of Education has been implementing programs to meet the educational needs of these
groups, to date no evaluation has been undertaken to evaluate the impact of these programs (Molinas et al. 2004).

One persistent problem in Paraguay with respect to educational quality is the low quality of teacher training. A majority of the nation’s teachers lack both academic knowledge in their area and pedagogical skills (Molinas et al. 2004). An examination of the academic performance of teachers in basic education, carried out in the Institutes for Teacher Training, revealed that those students who are finishing their teacher training have a minimal conceptual grasp of basic subjects and in teaching methodologies (Molinas et al. 2004). Indeed, one of the few studies of educational quality in Paraguay concluded that student performance was lower in communities with higher rates of teacher certification (Molina 2002). Molinas (2002) concluded that improving Paraguay’s educational system hinged first on improving the quality of teachers, and second on providing schools with better resources, and finally on improving contact between schools and parents. While Molinas’ analysis was based on an examination of data similar to that proposed in this study (and explained below), his study was limited to student-performance and background variables aggregated to the school level. As discussed below, we propose using individual-level data which includes a rich set of individual-level data, allowing us to more accurately separate the role of individual-level characteristics from the role of class and school-level variables, in explaining student performance. Moreover, this allows us to test whether the education “production function” differs by student characteristics.

This is thus an excellent time to undertake an analysis of Paraguay’s educational system. The data for providing policy-relevant analyses exist but are underutilized. Not only has the educational system undergone much change over the last 15 years, but further change is political viable. Thus, the findings of a rigorous study such as proposed here would have a good chance of receiving an audience, and the results could influence the formulation of educational policies in the country. Moreover, the possibility of conducting a country-wide study within the context of a regional project would be an opportunity to discuss and exchange concepts and methodologies that would enable researchers and officials to improve subsequent analyses of the nation’s educational system.

C. Data and Data Analysis

To analyze students’ performance, we will use the results of national tests in language and mathematics, called the National Evaluation System for the Education Process (SNEPE). The SNEPE was first developed in 1995 as a tool to evaluate Paraguay’s educational system, and to generate reliable information on student performance and the contextual variables that influence this performance. Between 1996 and 2005, the SNEPE has been given to a nationally-representative sample of about 14,000 third graders (1997, 1999, 2001 and 2004), 12,000 sixth graders (1996, 1998, 2001 and 2004), ninth graders (1997, 1999) and secondary students (1998 and 2000). In
addition, tests have been given to students of teacher institutes (institutos de formación docente) (2003 and 2004) in order to assess new teachers’ academic competencies.

In 1997 Paraguay participated in a regional evaluation effort sponsored by UNESCO (LLERC), from which comparative data from 13 Latin American countries were generated on math and reading scores among each nation’s 3rd and 4th graders. However this data is already 10 years old and given the changes that have occurred in Paraguay over the last 10 years, they do not reflect the current educational system. For this reason, student-level data from the SNEPE are best for assessing the nation’s educational system. The existence of regional data from LLERC allows us to place our results in a comparative perspective.

In this study, we will draw on results from 6th grade students from the last SNEPE test administered (2004). We consider that the sixth grade is a key point in the educational system to assess its effectiveness: students have been in school for at least six years, they have likely attended a single school (which as discussed below is important), students should be developing more sophisticated academic skills that present a better assessment of educational quality, and finally student responses on the background questionnaire (discussed below) will be more reliable than will the responses of third graders. In addition, it is possible to get data from 2001 as well. This will allow us to do analyses of trends over a three year period, which will provide information on trends in as well as overall quality and equity.

SNEPE student-level data includes not only students’ test scores, but information from a detailed questionnaire that students fill in prior to taking the test (the questionnaire can be found in Appendix C). In addition to their test score, we also know each student’s age, their sex, and characteristics of their home environment. Among the many questions asked of students on this questionnaire are questions about the educational level of their parents, the employment status of their parents, the language spoken at home, the number of books at home, and their educational aspirations.

This student level data will be merged with data from the General Direction of Educational and Cultural Planning (DGPEC), which will provide us with information on the school context such as the school type (public or private), the size of the school, average class size, and the school’s location (urban, rural). DGPEC also contains detailed information on the school’s teachers and principals, such as on their average academic attainment, years teaching, and the educational attainment of the school’s directores. All of this information can be linked to the individual student.

The analytical study will thus examine the association between measures of the student’s characteristics and family background, the characteristics of the students’ classroom and school, and the students’ academic performance on both the language and math SNEPE. Below we summarize the data we can obtain each 6th grade student that took the 2004 SNEPE tests.
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**Outcome Variable: Academic Performance:**

Individual 6th grade math and language SNEPE score.

**Independent Variables:**

**Student Characteristics.** Sex, age, grade retention, preschool attendance, attendance records, self-perception, satisfaction with school, educational expectations

**Family Characteristics.** Parents educational attainment, parents employment status, parents educational expectations for student, number of books in the home, language spoken in the home, academic encouragement provided.

**Classroom Characteristics.** Classroom resources (from student questionnaire), teacher characteristics and class climate (from student questionnaire)

**School Characteristics.** Type of school (public or private), school size, number of teachers, location of school (urban, rural), average academic achievement of teachers and principals, years of service of teachers and principals, and the existence of parents association in the school. We will also attempt to attain or construct average school scores as a measure of the general academic competency of students in the school.

The data analysis strategy will involve multivariate regression analyses, possibly using hierarchical linear modelling (HLM) or some other technique that takes account of the clustering of students in schools in non-random ways. The coefficients on the independent variables will provide an indication of the importance of the variable (all else the same) in explaining students’ acquisition of academic skills. We will also conduct disaggregated analyses based on region and student’s background characteristics to test if some variables are more important than others, depending on the characteristics of the student. If time permits, we will also compare data from 2001 with that from 2004 to look at trends over the last 3 years. At the least, we intend to do this for students with the lowest indicators of socioeconomic status.

Our strategy will be to analyze the relationship between student outcomes (test scores) and the individual, family, and school/classroom characteristics. There are two significant shortcomings of this study design, in terms of arriving at a causal explanation. First and foremost, 6th graders’ test scores are the outcomes of about 11 years of learning. School (and some family) inputs, on the other hand, are measured for a single year. Unfortunately, we have no data on individual students’ performance a year prior; there is thus a mismatch between the time period of our dependent variable, and that of some of our independent variables. For this reason, our strategy is to interpret the school-level variables as proxies for the average level of school- and classroom-level resources that the student has been exposed to since beginning school. This is a reasonable strategy if school and classroom characteristics in 2004 are highly correlated with those in previous years (6th grade students in Paraguay typically attend the same school from 1st
through 9th grade); and if students do not migrate between schools. The first assumption can be checked by comparing school characteristics in 2004 with those of 2001. The second assumption can be examined through use of county-level 2002 Census Data on household migration. Through this we can identify counties where the fewest households immigrated from out of the county over the prior 5 years. We can then check the results from the pooled data of students throughout the nation, with those results obtained from a subset of students in the most stable counties. If they are similar, we will be more confident that student migration between schools does not weaken our ability to measure the link between student performance and school-level resources.\footnote{Although this check does not address the possible problem of student migration between the public and private school system. As a check for this, we will also examine separately counties with few private school options.} At any rate, the coefficient on school-level resources should be interpreted as the marginal impact of changes in a resource over the entire prior period of the student’s education, not just the effect on changes over one year.

A second shortcoming of the study design, in terms of being able to make causal inferences from the results of the data analysis described above, is that a complicated array of factors explain the test scores of 11th graders, and inevitably some of these factors will be left out of the study (unobservables). This leaves open the possibility that differences in 6th grade students’ performance may be explained by such unobservables, which in turn may be correlated with school characteristics. If true, then the study may not adequately disentangle the importance of individual from school characteristics in explaining student performance. This problem is endemic to any cross-sectional study of student achievement. The most convincing way to address this problem is to use longitudinal data on student performance (often called growth models), so that such “unobservable” characteristics of students can be eliminated (or at least significantly reduced) and the effect of the school can be more successfully separated from the effect of unobservable student characteristics. Unfortunately, longitudinal data in Paraguay do not exist. In the case of the SNEPE data base that we propose using, we believe that the problem of student unobservables is minimized by the rich array of information available on the student and the student’s family characteristics (Appendix C). This means that in measuring the relationship between school-characteristics and student performance, we can control for this rich assortment of student and family characteristics, and thus our ability to make causal claims from the data will be stronger.

D. Policy Implications

1. Paraguay

Should this proposal be funded, the completion of the project will contribute to national efforts to place the focus of education policy on issues of quality and equity. The study’s results will point the way towards policies that will improve student performance overall, that will result in more cost-effective resource usage, and that will
improve equity without compromising the performance of the highest-performing students. We also expect that the study would lead to proposed pilot studies that would further illuminate and inform the policy issues raised by the study’s findings. An example of this might be the proposal for longitudinal studies in select communities throughout the nation, which could allow for examining an expanded scope of variables.

Another issue that this study would shed light on is the comparative performance of Paraguay’s private versus public schools. Paraguay, like a number of other Latin American countries such as Chile, Colombia, and the Dominican Republic, has a large private educational sector (OREALC, 2001) where students typically outperform their public counterparts (SNEPE, no date). It will be instructive to assess student performance in the public versus private sector, controlling for student characteristics, to examine if there is any systematic difference between the two sectors.

Finally, the project would help strengthen the methodological and technical capacities of Paraguay officials and researchers so as to promote a more fluent interchange with researchers and research centers in Europe and North America.

2. The Latin American Region

Should this proposal receive financing from the IDB, it would aid in the consolidation and expansion in Latin America of a network of researchers and institutions that are researching education in the region. It would also complement the efforts of the SERCE project, the members of which work primarily with representatives of the ministries of education, to expand its network to include independent institutions and academics. To better understand and evaluate educational systems in Latin America and the Caribbean, we believe it is important to include small and relatively poor countries like Paraguay as these tend to be underrepresented in regional and international comparisons.

III. Research Team

Rodolfo Elías has a masters degree in Applied Social Psychology, and has taken courses in a PhD Program in Canada (University of Guelph). He has also taken courses in a masters program in Educational Policy (Universidad Alberto Hurtado, Santiago, Chile) and in the Licenciature in Psychology (Universidad Católica, Asunción, Paraguay). He is presently working as the coordinator of a national evaluation of preschool education in Paraguay, for Paraguay’s Ministry of Education (MEC), and also works as a researcher at the Instituto Desarrollo, Capacitación y Ciudadanía (Paraguay). Mr. Elías is also the national coordinator for the International Civic and Citizenship Educational Study (ICCS) organized by the Internation Association for the Evaluation of Educational Achievement (IEA).
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Katie Baird is an economist at the University of Washington Tacoma, specializing in public finance and education policy. Her research on education policy has been published in respected journals such as the Journal of Education Finance, the Journal of Higher Education, and the Journal of Student Financial Aid. She has recently completed a longitudinal study of mathematics performance among Washington State 10th graders. This study developed a growth model of math performance among 44,000 Washington students using Hierarchical Linear Modelling (HLM) software. Dr. Baird is also an investigator on a $1.5 million U.S. Department of Education grant evaluating the effectiveness of a behavioral intervention strategy in a large Washington State School District. Dr. Baird recently attended a three-day training workshop on international databases (TIMSS, PIRLS, and PISA) sponsored by the U.S. Department of Education.

César Cabello is specialist in information systems, economics and mathematics. He has a masters degree in Statistics, as well as in Operations Research from Miami University, and has taken courses toward a PhD in Agricultural Economics and Operations Research at Pennsylvania State University. He is a member of the teaching staff at Instituto Desarrollo, as well as instructor in the Computer Engineering departments of the Universidad Nacional de Asunción and Universidad Católica. Mr. Cabello is currently director of analytic technologies for Cytera Systems, Inc., based in Minneapolis, Minnesota, which develops systems of decisions support and efficiency analysis for Fortune 500 companies and large healthcare providers.

Jorge Corvalán is an economist at the Instituto Desarrollo in Asunción, Paraguay. With a masters degree in Policy Economics from University of Illinois Urbana-Champaign and Economics Licenciature from the Universidad Nacional de Asunción, his specialty is international monetary and financial policy. After 21 years working for the Banco Central de Paraguay and a stint in the Ministry of Industry and Commerce, Mr. Corvalán is currently coordinating Instituto Desarrollo’s project fortifying social capital in the communities of Carapeguá and Ñemby. Structured around the United Nation’s Millennium Development Goals, this project is financed by the government of Japan and co-administered by the World Bank.

Mirna Vera is a specialist in education policy. She has graduate degrees in Population and Development, and Socio-demographic Research as well as Licenciature in Mathematics from the Universidad Nacional de Asunción. In 1999 she was awarded the Kelloggs Foundation Scholarship to get a further graduate degree in Planning and Formulation of Educational Policy from IIPE-UNESCO in Buenos Aires. She is currently a consultant in Statistics to the Paraguayan Ministry of Education and Culture’s Educational Reform Program, with emphasis in High School education and instructor in Educational Statistics at the Paraguayan Institute of Technology and Science of Education. Ms. Vera has worked with the Ministry of Education and Culture since 1993.
IV. Schedule of Activities

July 23 – 31
Access and consolidate data sources from SNEPE and DGPEC, and prepare data for analysis.

August 1 – 15
Adjustment of the design and methodology, preliminary data analysis.

August 15
Preliminary report with an annotated outline of the research paper, data sources, preliminary version of required statistics and methodology to be used in the study.

August 28 -29
Videoconferences

October 3:
First Draft

October 18-19
Discussion Seminar

December 19
Second Draft

January 10-11:
Discussion Seminar

February 6
Final version

V. Diffusion Strategy
Since a key objective of this proposed study is to provide the MEC and officials in other Latin American countries with policy-relevant analyses, it is crucial that we
disseminate our findings. After completing the study, we anticipate holding workshops with key actors in Paraguay’s educational sector (from the Ministry of Education and NGOs) to present the results and discuss their implications for educational policy. Such workshops would be organized by the Instituto Desarrollo. The final report will also be translated into Spanish, and the Instituto Desarrollo will distribute it to officials. We also hope to publish the study’s findings in language and in a venue accessible to those involved with education policy throughout Latin America.
References


Appendix A: Budget

Appendix B: CVs of Proposed Research Team

Appendix C: SNEPE Questionnaire for 6th Graders