

Abstract Title Page  
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Title:

Parental Empowerment in Mexico: Randomized Experiment of the “*Apoyos a la Gestion Escolar (Age)*” Program in Rural Primary Schools in Mexico

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Abstract Body  
*Limit 4 pages single-spaced.*

Background / Context:

*Description of prior research and its intellectual context.*

Parental participation in school affairs can be seen as a moderate form of school accountability, within school-based management (SBM) programs (Barrera, Fasih and Patrinos 2009; Bruns, Filmer and Patrinos 2011). In SBM programs responsibility and decision-making over some aspects of school operations is transferred to parents, who must conform to, or operate within, a set of centrally determined policies (Caldwell 2005).

The empirical literature points to some impact on enrollment, dropout rates, parental involvement and student achievement. Parental involvement appears to increase, although the evidence is not overwhelming (Jimenez and Sawada 2003, 1999; Di Gropello 2006; Drury and Levin 1994). El Salvador's EDUCO (Educación con participación de la comunidad) program gives parent associations the responsibility for hiring, monitoring, and dismissing teachers. Despite rapid expansion of EDUCO schools, education quality was comparable to traditional schools. In fact, parental participation was considered the principal reason for EDUCO's success (Jimenez and Sawada 1999, 2003). Evaluations of Nicaragua's Autonomous School Program found that the number of decisions made at the school level contributed to better test scores (King and Ozler 1998; Ozler 2001).

The evidence on student achievement is mixed and in most cases studies estimating the impact on this measure use weak designs. However, the few studies that use stronger methodological strategies find either improved student achievement in elementary schools or very modest to no differences in test scores. Students enrolled in Honduras' Community-Based Education Program (PROHECO) also appear to have higher test scores in science (Di Gropello and Marshall 2005). There is no statistically discernible PROHECO effect on math or language. For Nicaragua, King et al. (1999) found that having more autonomy over teacher-related issues does have a positive and significant effect on student achievement in primary and secondary schools.

Previous evaluations from Mexico are limited. The urban school-based management program, Programa Escuelas de Calidad (PEC), was analyzed using panel data regression analysis and propensity score matching (Skoufias and Shapiro 2006; Murnane et al. 2006). Participation in PEC is found to lead to decreases in dropout, failure and repetition rates. An evaluation of the rural parental empowerment program, Apoyo a la Gestion Escolar (AGE) using pre-program data over time and the phased-in introduction to construct an over-time difference-in-difference estimator, and controlling for fixed effects, shows a significant impact on reducing failure and repetition rates (Gertler, Patrinos and Rubio 2011).

Thus, while there is some evidence on the performance of SBM programs, little is known about their benefits in terms of learning outcomes. Even fewer studies are based on rigorous impact evaluation techniques or investigate the mechanisms through which SBM might affect student performance. It is also not clear in cases where the parental participation is funded through school improvement grants, whether the observed positive effects are due to the extra resources or the organization and empowerment of parents.

Purpose / Objective / Research Question / Focus of Study:

*Description of the focus of the research.*

In this paper, we contribute towards filling this gap with results from a three-year randomized evaluation of a parental empowerment program that provides resources and training to parents to improve rural schools in Mexico. The main questions addressed in this paper are:

- 1) What is the impact of doubling the financial resources that parent committees receive under the program in terms of intermediate school attainment measures such as repetition, dropout and failure rates, in terms of outcomes such as learning as measured from standardized tests?
- 2) What is the impact of training of parent committees on organizational issues in terms of schooling outcomes?
- 3) What is the impact of school committees when empowered with resources, training and both in terms of schooling outcomes?

Setting:

*Description of the research location.*

The study is conducted across a representative sample of 400 government-run rural primary schools in four states in Mexico: Chiapas, Guerrero, Puebla and Yucatan.

Population / Participants / Subjects:

*Description of the participants in the study: who, how many, key features, or characteristics.*

Primary school students (~20,000) and parent associations (~400)

Intervention / Program / Practice:

*Description of the intervention, program, or practice, including details of administration and duration.*

The School Based Management was a component of the Compensatory Education Program. Apoyo a la Gestión Escolar (AGE) started in 1996 and consists of monetary support and training to parent associations (APF). The APFs can spend the money on the purpose of their choosing although spending is limited to small civil works and infrastructure improvements. The AGE financial support consists of quarterly transfers to APF school accounts, varying from \$500 to \$700 per year according to the size of the school. The randomized experiment creates an enhanced AGE where schools receive double the allocation (that is, on average \$600 per school) plus training. A third group of schools receive the training, but not the resources. Finally, there is a pure control group.

Research Design:

*Description of the research design.*

Randomized experiment.

## Data Collection and Analysis:

*Description of the methods for collecting and analyzing data.*

Official school census (administrative data) and official standardized learning assessment for primary school grades in Spanish and mathematics. For information on teacher, principal, parents and students behaviors, attitudes and participation, a series of surveys applied to = president of the parent association, principal, samples of teachers and students from third to fifth grades.

## Findings / Results:

*Description of the main findings with specific details.*

According to the evaluation results, there are some positive effects. At the school level, we find an impact for increasing scores in Spanish for 3rd grade significantly using both random and fixed effects estimates. The double-resourced AGE has increased Spanish test scores by up to 20 points, or about 0.25 standard deviations. Math for 3rd is significant only with random effects increasing about 0.22 standard deviations. At the individual student level we find positive effects, especially in third, fifth and sixth grades. In the third grade, the results for all students are 15 points in Spanish and 12.6 in mathematics, representing about 0.15 and 0.09 standard deviations. However, when using school fixed effects these results become insignificant. Separating by gender, we do not find significant results for females, while for males there are significant results in Spanish of about 28 to 33 points, or about 0.25 to 0.30 in standard deviations, and in mathematics 23 points, or 0.20 standard deviations, although not significant with school level fixed effects. For the fifth grade there are significant results for males and females together of about 12 to 13 points in Spanish, or about 0.12 to 0.15 standard deviations. For the sixth grade, results are significant in general for mathematics, increasing 8 to 18 points, or about 0.07 to 0.17 standard deviations. Results are also significant for females in mathematics of 15 to 41 points, or about 0.13 to 0.37 standard deviations.

## Conclusions:

*Description of conclusions, recommendations, and limitations based on findings.*

This experiment tries to measure the extent to which empowering parents has an impact on education outcomes. Preliminary evidence suggests that this type of program improves schooling outcomes, especially for those students who remain in the program the longest. There is a positive effect on outcomes, especially for indigenous schools, in terms of reduced repetition and failure rates, and increased test scores.

The program provides lessons on the use of school-based management. Such programs have the potential to improve outcomes for the poorest. However, to have an effect on education systems, they would benefit from enhanced accountability measures. For instance, the programs could provide more resources in the hands of school committees, and/or increase the level of decision-making at the school, for example, by allowing school committees to have a say in hiring and firing of teachers.

Appendices  
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Appendix A. References

*References are to be in APA version 6 format.*

- Caldwell, B.J. 2005. *School-based Management. Education Policy Series*. The International Institute for Educational Planning and The International Academy of Education. Paris and Brussels.
- Di Gropello, E. 2006. "A Comparative Analysis of School-Based Management in Central America." World Bank Working Paper No. 72. Washington D.C.
- Di Gropello, E. and J.H. Marshall. 2005. "Teacher Effort and Schooling Outcomes in Rural Honduras," in E. Vegas, ed., *Incentives to Improve Teaching*. Washington, D.C.: The World Bank.
- Drury, D. and D. Levin. 1994. "School-based Management: The Changing Locus of Control in American Public Education." Prepared for the Office of Educational Research Office of Research, US Department of Education, Washington D.C.
- Excelsior. 2007. "Regresa violencia a Oaxaca y amenaza a la Guelaguetza." Tuesday, 11 July 2007 ([www.nuevoexcelsior.com.mx](http://www.nuevoexcelsior.com.mx)).
- Gertler, P., H.A. Patrinos and M. Rubio-Codina. 2011. "Empowering Parents to Improve Education: Evidence from Rural Mexico." *Journal of Development Economics* (forthcoming).
- Hall, G. and H.A. Patrinos (eds.). 2006. *Indigenous Peoples, Poverty and Human Development in Latin America*. London: Palgrave MacMillan.
- Hess, A. 1999. "Understanding Achievement (and Other) Changes under Chicago School Reform." *Educational Evaluation and Policy Analysis* 21(1): 67-83.
- Jimenez, E. and Y. Sawada. 2003. "Does community management help keep kids in schools? Evidence using panel data from El Salvador's EDUCO program." CIRJE Discussion Paper.
- Jimenez, E. and Y. Sawada. 1999. "Do Community-managed Schools Work? An Evaluation of El Salvador's EDUCO Program." *World Bank Economic Review* 13(3): 415-41.
- King, E.M. and B. Özler. 1998. "What's Decentralization Got To Do With Learning? The Case of Nicaragua's School Autonomy Reform." Development Research Group, World Bank.
- King, E.M., B. Özler and L.B. Rawlings. 1999. "Nicaragua's School Autonomy Reform: Fact or Fiction?" World Bank Working Paper Series on Impact Evaluation of Education Reforms 19.
- Leithwood, K. and T. Menzies. 1998. "Forms and Effects of School-Based Management: A Review." *Educational Policy* 12(3): 325.
- Lewis, M. 2006. "Decentralizing Education: Do Communities and Parents Matter?" Mimeo. Center for Global Development, Washington D.C.
- Lopez-Calva, L. F. and L. D. Espinosa. 2006. "Efectos diferenciales de los programas compensatorios del CONAFE en el aprovechamiento escolar," in *Efectos del Impulso a la Participación de los Padres de Familia en la Escuela*, CONAFE, México.
- Manski, C.F. 1990. "Nonparametric Bounds on Treatment Effects." *American Economic Review* 80(2): 319-323.

- Murnane, R. J., J. B. Willet, and S. Cardenas. 2006. "Did Participation of Schools in Programa Escuelas de Calidad (PEC) Influence Student Outcomes?" Working Paper, Harvard University Graduate School of Education, Cambridge, MA.
- Ozler, B. 2001. "Decentralization and Student Achievement: The case of Nicaragua's School Autonomy Reform." Working Paper on Impact Evaluation of Education Reforms. Washington, DC: World Bank.
- Ramirez, A. 2006. "Mexico," in G. Hall and H.A. Patrinos, eds., *Indigenous Peoples, Poverty and Human Development in Latin America*. London: Palgrave MacMillan
- Santibañez, L. 2006. "School-Based Management Effects on Educational Outcomes: A Literature Review and Assessment of the Evidence Base." World Bank.
- Shapiro, J. and J. Moreno. 2006. "Compensatory education for disadvantaged Mexican students: an impact evaluation using propensity score matching." World Bank.
- Skoufias, E., and J. Shapiro. 2006. "The Pitfalls of Evaluating a School Grants Program Using Non-experimental Data." World Bank Policy Research Working Paper No. 4036.
- Valdes Cuervo, A., Martín Pavón, M. and Sanchez Escobedo, P. A. (2009). Participación de los padres de alumnos de educación primaria en las actividades académicas de sus hijos. *Revista Electrónica de Investigación Educativa* 11(1)  
<http://redie.uabc.mx/vol11no1/contenido-valdes.html>.
- World Bank. 2008a. *What is School-Based Management*. Washington DC: World Bank.
- World Bank. 2008b. *What do We Know about School-Based Management*. Washington DC: World Bank.