

# enGENDER IMPACT

WORLD BANK GROUP'S GENDER IMPACT EVALUATION DATABASE

## Leveling the Playing Field: Lessons from World Bank Group Gender Impact Evaluations on Education

Jennifer Parsons and Jennifer McCleary-Sills  
Gender Group, World Bank Group

*I know education is what separates a girl who is trapped in a cycle of poverty, fear, and violence from one with a chance at a better future.*

—Malala Yousafzai (July 13, 2014, *The New York Times*)

### Synopsis

Progress toward gender equality over the past two decades is most evident in education goals, as primary and secondary school enrollment rates are now the same for boys and girls in many countries. Yet structural, social, and financial barriers continue to prevent enrollment, attendance, and school completion for millions of young people around the globe. And gender imbalances persist. Improving access to and retention in primary and secondary education is a critical element in achieving development objectives, including targets for gender equality. Addressing education quality for all students is also critical. Drawing on lessons from 27 impact evaluations (IEs) supported by the World Bank Group (WBG), this brief highlights opportunities to improve education outcomes and suggests strategies to reduce gender disparities in this area. The findings indicate that strategies that combine structural interventions with individual and family level financial incentives show the greatest promise for improving education outcomes and leveling the playing field for girls.

### Background

The value of education is both intrinsic and instrumental. Educational achievement leads to improved health outcomes and improves economic earning potential in the short and long term. Recent research highlighted girls' education as a linchpin to promoting greater gender equality (World Bank Group, 2014). Around the world, better educated women are more able to make and implement decisions, even where gender norms are restrictive. Women with more education also tend to marry later and have fewer children (Raj, 2010; WBG, 2014). Lower fertility can increase women's life expectancy and has

intergenerational benefits: children of better educated women are more likely to receive an education and less likely to be stunted, as



educated mothers have greater autonomy in making decisions and more power to act for their children's benefit (WBG, 2014).

Yet, as recent World Bank Group research underscores, structural and systematic disadvantages, particularly access to education, are linked to deprivation of agency and constraints for women and girls (WBG, 2014). Three major domains of agency where this deprivation is connected to a woman's education level are: limited control over household resources, child marriage, and intimate partner violence. In addition, there is a clear divide among women's experiences based on the level of education they have attained. About nine in ten women with a primary education or less experience at least one of these deprivations and almost one in five experiences all three. This finding contrasts with almost seven in ten and one in twenty, respectively, of women with a secondary education or higher. Almost 1 in 5 rural women with a primary education experience all three deprivations compared with 1 in 100 urban women with a higher education (WBG, 2014).

Given the impact education has on health and economic outcomes for girls and women, evaluation of strategies aimed at increasing school enrollment, attendance, and retention is critical to promoting evidence-based investments in education.



## Evidence from the World Bank Group

In recent years, the World Bank Group has increased investments in gender-informed programs, research, and impact evaluation. Given the large investment and attention to education programming globally, numerous World Bank IEs measure progress in formal education. This brief explores the most commonly measured education outcomes across a large number of education initiatives: school enrollment, school attendance, and school retention rates (often measured by dropout rates). Eight of these programs targeted girls specifically, while the other 15 were provided for girls and boys. Programs that measured impact among girls and boys separately or included different programming components for girls and boys met our criteria for inclusion as gender IEs.

Based on these outcomes of interest, from the 161 IE papers within the enGENDER IMPACT (eGI) database, we identified 27 that met the inclusion criteria. These represent research in 16 countries across the six WBG regions—four in Latin America and the Caribbean (LAC), two in East Asia and the Pacific (EAP), three in South Asia (SAR), five in Africa (AFR), one in Europe and Central Asia (ECA), and one in the Middle East/North Africa (MENA). Details of each IE are discussed further below (see Table 1 for summary). Five of the identified IEs also measured test scores as a component of the evaluation. Given the mixed nature of the evidence regarding standardized tests as valid measures of education quality and student performance (Moon et al., 2003), that outcome is not discussed here. Two IEs identified in this search measured labor force participation as an outcome. However, as this outcome can be influenced by many individual- and community-level factors not directly linked to education attainment or accounted for in the evaluation, it is not included in this brief. There is growing evidence that education completion is protective against child marriage and early pregnancy, and a few IEs also looked at these outcomes. However, these topics are explored in a separate brief in this series: ***Preventing Child Marriage: Lessons from World Bank Group Gender Impact Evaluations.***

The IEs discussed in this brief include 23 programs using nine different strategies aimed at improving education outcomes. Eighteen of the programs used individual or family-level strategies including cash transfers, school fee reduction, school vouchers, and nutrition and school feeding initiatives. Five of the programs were large-scale community- or country-level initiatives, such as public-private partnerships, school management reform, or infrastructure assessment, and analyzing labor demands determined their impact on school attendance rates. Three additional IEs focused on increasing vocational training and technical skills, but those are outside of the scope of this brief, which explores outcomes related to only formal education.

## Summary of Education Outcomes Measured by WBG Gender IEs

### School Enrollment

One of the most common outcomes for education programs is school enrollment, measured by 17 of the eGI evaluations. Measures of enrollment were drawn from a variety of sources, including household surveys and school census data, with school-based surveys often used to corroborate self-reported data from household surveys.

Among the eight IEs of programs targeting girls only, all were cash transfer programs contingent upon school attendance rates of between 80–90%. Programs in Bangladesh (7, 8), Cambodia (13), and Malawi (26, 27) targeted girls in secondary schools while the program in Pakistan (5, 6, 16) targeted primary as well as secondary education.

### School Attendance

School attendance is perhaps of more importance to education outcomes because it reflects the level of exposure to instruction rather than mere enrollment. However, measurement of school attendance faces methodological limitations. For example, in six of the included IEs (12, 13, 19, 20, 24, 27), evaluators performed random on-site checks to determine whether currently enrolled children were in attendance on a given observation

day. This method does not account for students who may have high attendance rates but happen to be out of school on the day of the observation. In addition, self-reported data were used in some IEs (1, 4, 17, 19, 22, 27) to assess attendance, a measure that is subject to social desirability bias.

Twelve of the IEs (1, 4, 12, 13, 17, 19, 20, 22, 24, 25, 26, 27) measured attendance, defined as the percentage of days the student was recorded as present during days the school was in session, or if a student was present in an eighth-grade class at the time of the visit by enumerators. Multiple methods were used and cross-referenced, including household surveys, school records and ledgers, and site visits to schools. It is unclear if the same validation was done for non-attendance. The single IE that assessed a program for girls and boys was in Kenya, where an intervention aiming to promote attendance and retention provided school uniforms to students free of charge (12). In addition, treatment schools received support in a variety of ways: a pair of nurses visited the school several times a year, agricultural representatives organized student clubs to grow crops, and each school received a grant for classroom construction.



### School Retention and Dropout

School retention is a third common measure of the impact of education programs, and it is frequently measured by its inverse, i.e., the rate of school dropout. In the included IEs, a variety of measures was used to assess retention and dropout rates, including household surveys, Multiple Indicator Cluster

Survey (MICS) data, and teacher reports. For five of the IEs (5, 21, 23, 26, 27), household surveys recorded whether children were still enrolled at the end of the school year after a program was implemented. In one evaluation (5), middle school completion, middle to high school transition, and high school completion were measured using pre- and post-intervention MICS data. Dropout was also measured by teacher-reported enrollment at the end of the program's two-year duration.

Eight IEs measured outcomes of retention, (5, 11, 14, 20, 21, 23, 26, 27). Three of these evaluated programs targeting girls only, all of which were cash transfer programs (5, 26, 27).

### So What Works? Implications for Future Programming

Multiple approaches and strategies were used across the 23 programs evaluated within the scope of this analysis to improve enrollment, attendance, and school completion. The following highlights programmatic components of interventions and their effect on education outcomes measured by the 27 IEs.

#### School Enrollment

All 17 of the IEs measuring school enrollment had a statistically significant positive impact for boys and girls at both the primary and secondary level, with increases ranging from 2% to 51% across the studies. Five IEs measured primary school attendance only (9, 15, 18, 20, 24), five measured secondary school attendance only (3, 7, 8, 13, 16), and seven measured both primary and secondary school attendance (2, 6, 10, 17, 25, 26, 27). Eight of these assessed programs that were for girls only (5, 6, 7, 8, 13, 16, 26, 27), and of the nine remaining IEs, two showed a stronger impact among girls than boys (10, 25).

Two IEs had greater programmatic impact among girls. The first was a public-private partnership program in Pakistan, where private entrepreneurs were paid by the government per student enrolled, and given the task of establishing and running primary schools offering free enrollment for children ages 5 to 9

(10). The second was a nutritional program in Burkina Faso that provided free lunch to all primary school children and nutritional subsidies to girls who had 90% attendance rates (25).

#### School Attendance

Eleven of the 12 IEs that measured attendance were shown to have increased attendance rates overall. Three of those IEs were connected to programs for girls only (13, 26, 27), and of the eight remaining IEs, only one showed a stronger impact among girls than boys (12).

The programs targeting girls and that were effective in increasing attendance rates were all cash transfer programs, contingent upon school attendance rates of between 80–90%. In one arm of a cash transfer program in Malawi (26), a significant increase in school attendance was seen only among girls in the *conditional* cash transfer (CCT) arm, but not in the *unconditional* arm, compared with control groups. This indicates that the transfer alone may be insufficient to help families overcome other social barriers to girls' regular attendance and eventual school completion.



An IE in India assessed a program focused on school management and found the increase in school attendance was greater among boys than among girls (4). While the IE of a nutrition-based program in Burkina Faso (25) found an increase in enrollment (greater among girls), it also found a decline in school attendance for both boys and girls who received the intervention. These findings

suggest that there are other factors more influential in family decisions to send a child to school beyond simply the cost of education and the provision of food. For example, absenteeism increased in households with fewer children available for child labor, while absenteeism decreased for households with a relatively large number of children. These results are consistent with documented child labor practices in Burkina Faso at the time of the intervention.

### School Retention and Dropout

Eight IEs measured outcomes of retention, all of which showed improvement as a result of the program (5, 11, 14, 20, 21, 23, 26, 27). Three of those programs (5, 26, 27) targeted girls only and were all CCT programs contingent on school attendance rates of between 80–90%.

Of the five remaining IEs, one evaluation of a program in Uruguay (21) showed that providing pre-school education had a larger effect on reducing dropout rates and increasing primary and secondary school completion rates for boys than for girls, although the difference was not statistically significant. An evaluation of a program in the Philippines provided a package of macro-level educational investments, including school construction and renovation; textbooks; teacher training; school-based management; and other facility and equipment support. This strategy was shown to improve completion rates overall, with a greater impact among girls (23).

Conditional cash transfers, school vouchers that can be used in public or private schools, and investment in school infrastructure were all components of programs that were effective in increasing retention rates and decreasing school dropout rates for primary as well as secondary school students. Results from the included IEs suggest that a combination of improving schools' physical infrastructure, providing school supplies to students, as well as incentivizing attendance through cash transfer programs is the most effective way to keep students in school and reduce dropout.

### Components of Effective Programming

Impacts of programs on education vary depending on the outcome measured, as well as whom the intervention targets. Across the three outcomes included in this analysis, CCT programs targeted at girls only had significant impacts on school enrollment, attendance, and retention. Programs that provided unconditional cash transfers, even when paired with the suggestion that the money be used for education, did not have the same effect, indicating that the *conditionality* of a cash transfer is a key part of incentivizing girls' enrollment and continued participation in school. Transfer payments in CCT programs went to the girl's parents (5, 6, 13, 16), to the girl directly (7, 8), or were split between the two (26, 27). All of these programs had a positive impact on their intended education outcomes, regardless of the direct recipient of the cash transfer.



For programs in which improved education outcomes were greater for girls than boys, a number of additional programming components were present. Through public-private partnerships, newly established schools provided additional space for girls and boys to attend at no cost, increasing access to education for many families and resulting in higher enrollment. Providing uniforms and supplies in addition to school vouchers or CCTs increased attendance and retention, as did provision of meals and medical care at school. Investing at the macro level (training teachers, improving school infrastructure and materials, and increasing accountability of

schools to the Ministry of Education) all improved rates of attendance and retention, especially among girls. This suggests that sustained impact on education—from higher rates of enrollment to increased attendance and lower dropout rates—requires multi-level programs. Interventions should invest in school infrastructure and personnel in addition to using CCTs or voucher programs to incentivize individual families or girls to attend through secondary school completion.



One finding in an IE of a CCT program in Bangladesh (8) shows the complexity of measuring the impact of education initiatives in the context of labor supply and demand. The outcome measured was school attendance, specifically in areas where garment factories were present. Introduction of a garment factory in a community resulted in increased school enrollment for girls ages 5 to 16, while enrollment for girls ages 17 and 18 decreased. This may indicate that younger girls begin enrolling in school to prepare themselves for jobs, while older girls leave school to work in the factories. These findings highlight the need to consider labor supply and demand in the context of analyzing school enrollment and completion.

### Limitations

While these findings point to what works to improve education outcomes, there are some limitations to this analysis. One limitation within the IEs is the data sources for some of the indicators measured, as discussed above. The universe of IEs included in this analysis is

limited to only those carried out or supported by the World Bank Group and subsequently included in the enGENDER IMPACT database. The IEs selected for this database apply a gender lens to either the programming content or the data analysis and evaluation process. We therefore acknowledge that it is not inclusive of all evaluations conducted on all educational programs and interventions, which may also offer valuable lessons.

### Conclusion

To achieve gender equality and other key development objectives, programs must seek to improve access to and retention in both primary and secondary education. And they must address persistent issues with the quality of education, including by promoting more gender-responsive schools and curricula. This is essential for girls, who face persistent gendered structural and social barriers that prevent many girls around the world from attending and completing school. In addition, families' decisions around education are made within the context of financial struggles and labor market factors. Based on the results of these eGI evaluations, we see that strategies combining structural and systematic interventions with individual and family-level financial incentives are most effective in improving education outcomes and narrowing the education gap between boys and girls. These findings also highlight the importance of improving how educational attainment and quality are measured. Governments should do everything they can to ease the financial burdens families face to ensure higher levels of school completion among all children. Particular emphasis should be given to eliminating the gender gap, as girls' educational achievement leads to improved health and development outcomes in their adult lives and in the lives of future generations. Given the large number of programs and interventions designed to improve education outcomes, more rigorous evaluations are needed to determine which components of programs are most effective in increasing school enrollment, attendance, and retention, particularly among girls.

## enGENDER IMPACT

enGENDER IMPACT is an online gateway for Gender-Related Impact Evaluations. At [www.worldbank.org/engenderimpact](http://www.worldbank.org/engenderimpact) you will find profiles summarizing key information about World Bank Group funded gender-related impact evaluations. These profiles are organized around priority areas for policy action, including: reducing health disparities, shrinking education and skills gaps, increasing economic opportunities, boosting voice and agency, and addressing gender-based violence. enGENDER IMPACT aims to share knowledge from previous evaluations and encourage more and better evaluations in key gender topics.

### Included Impact Evaluations:

- Angrist, J., Bettinger, E., and Kremer, M. (2006). Long-Term Educational Consequences of Secondary School Vouchers: Evidence from Administrative Records in Colombia. *The American Economic Review*, 96(3), 847-862.
- Baez, J. E., Alam, A., and Del Carpio, X. V. (2011). Does Cash for School Influence Young Women's Behavior in the Longer Term? Evidence from Pakistan.
- Baird, S., McIntosh, C., and Özler, B. (2011). Cash or condition? Evidence from a cash transfer experiment. *The Quarterly Journal of Economics*, 126(4), 1709-1753.
- Baird, S., Chirwa, E., McIntosh, C., and Özler, B. (2010). The short-term impacts of a schooling conditional cash transfer program on the sexual behavior of young women. *Health economics*, 19(S1), 55-68.
- Barrera-Osorio, F., Blakeslee, D. S., Hoover, M., Linden, L. L., and Raju, D. (2011, April). Expanding Educational Opportunities in Remote Parts of the World: Evidence from a RCT of a Public Private Partnership in Pakistan. In Third Institute for the Study of Labor (IZA) workshop, "Child Labor in Developing Countries," Mexico City.
- Barrera-Osorio, F., Linden, L., and Urquiola, M. (2007). The Effects of User Fee Reductions on Enrollment Evidence from a quasi-experiment. <http://www.leighlinden.com/Gratuidad%20Draft%202007-01.pdf>
- Benhassine, N., Devoto, F., Duflo, E., Dupas, P., and Pouliquen, V. (2013). "Turning a Shove into a Nudge? A 'Labeled Cash Transfer' for Education".
- Berlinski, S., Galiani, S., and Manacorda, M. (2008). Giving children a better start: Preschool attendance and school-age profiles. *Journal of Public Economics*, 92(5), 1416-1440.
- Blimpo, M. P., and Evans, D. K. (2011). School-based management and educational outcomes: Lessons from a randomized field experiment. Unpublished manuscript.
- Chaudhury, N., and Parajuli, D. (2010). Conditional cash transfers and female schooling: the impact of the female school stipend programme on public school enrolments in Punjab, Pakistan. *Applied Economics*, 42(28), 3565-3583.
- Duflo, E., Dupas, P., Kremer, M., and Sinei, S. (2006). Education and HIV/AIDS prevention: evidence from a randomized evaluation in Western Kenya. World Bank Policy Research Working Paper.
- Evans, D., Kremer, M., and Ngatia, M. (2008). The Impact of Distributing School Uniforms on Children's Education in Kenya.
- Ferreira, F. H., Filmer, D., and Schady, N. (2009). Own and Sibling Effects of Conditional Cash Transfer Programs. World Bank Policy Research Working Paper, (5001).
- Filmer, D., and Schady, N. (2008). Getting girls into school: evidence from a scholarship program in Cambodia. *Economic Development and Cultural Change*, 56(3), 581-617.

- Hasan, A. (2010). Gender-targeted conditional cash transfers: enrollment, spillover effects and instructional quality. World Bank Policy Research Working Paper (No. 5257).
- Heath, R., and Mobarak, A., (2012). "Does Demand or Supply Constrain Investment in Education? Evidence from Garment Sector Jobs in Bangladesh".
- Jalan, J., and Glinskaya, E. (2003). Improving primary school education in India: An impact assessment of DPEP-Phase I. Indian Statistical Institute (New Delhi) and The World Bank.
- Kazianga, H., De Walque, D., and Alderman, H. (2009). Educational and health impacts of two school feeding schemes: Evidence from a randomized trial in rural Burkina Faso. World Bank Policy Research Working Paper No 4976.
- Khandker, S., Pitt, M., and Fuwa, N. (2003). Subsidy to promote girls' secondary education: the female stipend program in Bangladesh.
- Khandker, S. R., Bakht, Z., and Koolwal, G. B. (2009). The poverty impact of rural roads: evidence from Bangladesh. *Economic Development and Cultural Change*, 57(4), 685-722.
- Kremer, M., and Vermeersch, C. (2005). School Meals, Educational Achievement and School Competition: Evidence from a Randomized Evaluation.
- Lokshin, M., and Yemtsov, R. (2004). Combining longitudinal household and community surveys for evaluation of social transfers: Infrastructure rehabilitation projects in rural Georgia. *Journal of Human Development*, 5(2), 265-277.
- Macours, K., and Vakis, R. (2009). "Changing Households' Investment and Aspiration Through Social Interactions: Evidence from a Randomized Transfer Program in a Low-Income Country" World Bank Policy Research Working Paper No. 5137.
- Martinez, S., Naudeau, S., and Pereira, V. (2012). The promise of preschool in Africa: a randomized impact evaluation of early childhood development in rural Mozambique.
- Oosterbeek, H., Ponce, J., and Schady, N. (2008). The impact of cash transfers on school enrollment: Evidence from Ecuador. World Bank Policy Research Working Paper Series, Vol.
- Ravallion, M., and Wodon, Q. (2000). Does child labour displace schooling? Evidence on behavioural responses to an enrollment subsidy. *The Economic Journal*, 110(462), 158-175.
- Yamauchi, F., and Liu, Y. (2013). Impacts of an early stage education intervention on students' learning achievement: evidence from the Philippines. *The Journal of Development Studies*, 49(2), 208-222.

### Additional References Cited:

- Moon, T. R., Callahan, C. M., and Tomlinson, C. A. (2003). *Effects of state testing programs on elementary schools with high concentrations of student poverty-good news or bad news?* *Current Issues in Education*, 6(8). Available at <http://cie.ed.asu.edu/volume6/number8/>
- Raj, A. (2010). When the Mother Is a Child: The Impact of Child Marriage on Health and Human Rights of Girls," *Archives of Diseases in Childhood* 95, 931–35.
- World Bank Group (2014). *Voice and Agency: Empowering Women and Girls for Shared Prosperity*.

### Photo Credits:

1. Lessons in a rural school. Uzbekistan. **Photo: Matluba Mukhamedova**
2. School Lets Out. Bangladesh. **Photo: Scott Wallace**
3. Pupils in a school canteen, having a break from classes. Moldova. **Photo: Michael Jones**
4. Girls during lunch break at school. Romania. **Photo: Flore de Préneuf**
5. Children listen to their teacher in Villa Nueva, Guatemala. **Photo: Maria Fleischmann**
6. School children attending parade. South Africa. **Photo: Trevor Samson**

**Table 1:**  
**Summary of Education outcomes measured by WBG Gender IEs**

			<i>Outcomes of Interest</i>			
			<i>School Enrollment</i>	<i>School Attendance</i>	<i>School Retention</i>	
<i>Program Title</i>	<i>Country</i>	<i>Intervention Category</i>				<i>Impact Evaluation References</i>
Atención a Crisis	Nicaragua	Cash Transfer		✓		1.Macours and Vakis, 2009
Bono de Desarrollo Humano	Ecuador	Cash Transfer	✓			2.Oosterbeek et al., 2008
<b>Cambodia Education Sector Support Program</b> Scholarship Program	Cambodia	Cash Transfer	✓			3.Ferreira et al., 2009
District Primary Education Program	India	School Management		✓		4.Jalan and Glinskaya, 2003
Female School Stipend Program (as a part of the Punjab Education Sector Reform (PERSP))	Pakistan	Cash Transfer	✓		✓	5.Baez et al., 2011 6.Hassan, 2010
Female Secondary Stipend Program	Bangladesh	Cash Transfer	✓			7.Khandker et al., 2003 8.Heath et al., 2012
Food For Education Program	Bangladesh	School Fee Reduction	✓			9.Ravallion and Wodon, 2000
Gratuidad	Colombia	School Fee Reduction	✓			10.Barrera-Osorio, 2007
ICS-Africa, Child Sponsorship Program (CSP)	Kenya	School Supplies		✓	✓	11.Duflo et al., 2006 12.Evans et al., 2008
Japan Fund For Poverty Reduction Scholarship Program	Cambodia	Cash Transfer	✓	✓		13.Filmer and Schady, 2008
PACES Program	Colombia	School voucher			✓	14.Angrist et al., 2006
Promoting Low Cost Private Schooling in Rural Sindh	Pakistan	Public Private Partnership	✓			15.Barrera-Osorio, 2011
Punjab Education Sector Reforms Programme	Pakistan	Cash Transfer	✓			16.Chaudhury and Parajuli, 2010
Rural Infrastructure Rehabilitation	Georgia	Infrastructure Projects	✓	✓		17.Lokshin and Yemtsov, 2004
Save the Children Early Child Development Program	Mozambique	Early Childhood Development	✓			18.Martinez et al., 2012
School Meals	Kenya	School Feeding		✓		19.Kremer and Vermeersch, 2005
Tayssir	Morocco	Cash Transfer	✓	✓	✓	20.Benhassine, 2013

The program implemented by the ANEP (Administración Nacional de Educación Pública)	Uruguay	Preschool			✓	21.Berlinski et al., 2008
The Rural Development Project and the Rural Roads and Markets Improvement and Maintenance Project	Bangladesh	Infrastructure		✓		22.Khandker et al., 2009
Third Elementary Education	Philippines	Education			✓	23.Yamauchi and Liu, 2013
Whole School Development	The Gambia	School Management	✓	✓		24.Blimpo and Evans, 2011
World Food Programme: School Meals and Take Home Rations	Burkina Faso	Nutrition	✓	✓		25.Kazianga et al., 2009
Zomba Cash Transfer Program	Malawi	Cash Transfer	✓	✓	✓	26.Baird et al., 2011 27.Baird et al., 2010