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## In pursuit of sex parity: are girls becoming more educated than boys?

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eaders of 189 countries, including the Philippines, gathered in 2000 for the Millennium Summit and committed to achieving Millennium Development Goals (MDGs) by 2015. These goals include the completion by all boys and girls of a full course of primary schooling (MDG2) and the elimination of gender disparity in primary and secondary education (MDG3). These MDGs on education are part of the goals of the Education for All (EFA) global initiative that seeks to bring the benefits of education to every citizen in every society.

For the Philippines, the trends in education indicators suggest that it is not likely to meet the targets for MDG2 and MDG3. Various assessments show instances not only of the country's overall state of education being far from achieving the target but also of a regression from the targets (Luz 2008; Maligalig and Albert 2008).

Net enrolment ratio (the ratio of the total number of children attending school to the total number of children in the same age group), for instance, declined by 12 percent from 2002 to 2005 in the elementary level (Caoli-Rodriguez 2007; Maligalig and Albert 2008). A survey on functional literacy, education, and mass media in 2003 also reveals that the number of students whose age is mismatched with their school level is quite high: 7.3 percent of children in the 6–11 age

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group are still attending primary school; 33 percent of those in the 12–15 age group are still in elementary; and 15.4 percent of students in the 16–24 age bracket are still in high school (Caoli-Rodriguez 2007).

A related problem that has recently surfaced in the Philippine education system is a marked sex disparity problem in enrolment, dropout rates, and achievement levels, with boys becoming less educated than their female counterparts. The gap between males and females in most of the education outcome indicators appear to have become wider and more pronounced through the years. The Gender Parity Index (GPI) of female to male from 1999 to 2005 is consistently greater than 1.0 in net enrolment, cohort survival, and completion (Caoli-Rodriguez 2007). Males' completion rates compared to females are lower by 10 percent in the elementary level and by a larger 16 percent in the secondary level (Department of Education, Philippines). Failure and dropout rates also showed that males are disadvantaged in both elementary and secondary levels. Achievement scores for both mathematics and science in recent years further support the idea that boys have been underachieving as compared with girls (Quimbo 2003).

As a result of greater dropout rates among males in public schools, there is a greater benefit incidence accrued to females in public spending in education (Manasan 2005). Between 1997 and 2002, while there was a larger proportion of boys than girls in public elementary schools, the reverse is true in secondary schools. Data from the 1999 Annual Poverty Indicator Survey (APIS) conducted by the National Statistics Office (NSO) provide further evidence of greater school participation among girls than boys, particularly among those who are of secondary level age (11% higher school participation among girls). The gap is present among households in the upper-income distribution and even sharper among households in the lower-income distribution.

Are our boys falling behind on education? This *Policy Note* discusses the mounting evidence in growing sex disparity in the public school system, with girls consistently outperforming boys not only in completion rates but also in achievement. It also discusses the potential contributory factors for the underperformance of boys and the possible implications on policy of this trend.

**Disparities in education outcomes** In 2006, the Department of Education (DepEd) officially adopted the Basic Education Social Reform Agenda (BESRA) as the country's basic education master plan. The BESRA consists of a number of policy reforms meant to systematically improve conditions affecting the provision, access, and service delivery of basic education to the citizenry. As was pointed out in Maligalig and Albert (2008), monitoring primary and secondary education outcomes visà-vis the objectives of the BESRA, the EFA initiative, and MDGs may be done through an examination of the trends on education indicators sourced from the DepEd administrative reporting systems as well as from

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the sample surveys conducted by the NSO. Sexdisaggregated statistics provide a sense of how we fare as far as gender equality is concerned.

While the DepED has been compiling a number of education indicators across the years, the development of the Basic Education Information System (BEIS) systematized the collection of performance indicators starting in school year 2002–2003. Prior to the development of the BEIS and the efforts to monitor MDG/EFA indicators, the DepEd was already compiling a number of education indicators nationally and regionally. Some of the indicators were also disaggregated by sex. Trends in many of these indicators (Tables 1 and 2) suggest disparities in education outcomes in favor of girls. In Table 1, for example, for about a decade, dropout rates, failure rates, and repetitions may be observed to be all nearly twice higher for boys than for girls at the primary school level. Table 2 shows the disparities to be even higher at the secondary level, with males having repetition rates three times that of females. Gross enrolment rates are slightly lower for boys than for girls in secondary schools while the corresponding rates at the primary school level are practically comparable between boys and girls. Between six and seven out of ten children who enter primary school complete their education, but cohort survival rates are lower for boys than for girls. For the secondary education level, around five to seven out of ten youth who enter secondary school complete their fourth year of secondary education, with the cohort survival rates of boys between threefourths to ninety percent of the corresponding rates for girls.

Table 1. Selected primary school annual performance indicators by sex, school years 1996–1997up to 2008–2009

Primary School	School Year 1996–1997		School Year 1999–2000		School Year 2002–2003		School Year 2005–2006			School Year 2008–2009					
Performance Indicators	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Gross enrolment ratio	1.078	1.080	1.076	1.192	1.185	1.198	1.004	1.012	0.996	0.932	0.939	0.924	0.911	0.923	0.899
Net enrolment ratio	0.872	0.882	0.861	0.970	0.968	0.972	0.833	0.826	0.840	0.773	0.764	0.782	0.756	0.750	0.761
Cohort survival rate to grade 6	0.616	0.717	0.664	0.635	0.607	0.664	0.695	0.655	0.739	0.605	0.564	0.651	0.779	0.774	0.784
Completion rate	0.652	0.602	0.708				0.669	0.628	0.716	0.590	0.546	0.639	0.776	0.770	0.783
Years input per graduate				7.500	7.700	7.300	7.410	7.720	7.100	7.920	8.360	7.510	6.800	6.860	6.740
Graduation rate	0.982	0.977	0.987				0.959	0.952	0.966	0.967	0.956	0.978	0.976	0.970	0.982
Average repetition rate	0.021	0.026	0.016	0.020	0.025	0.015	0.023	0.029	0.016	0.029	0.038	0.020	0.026	0.033	0.018
Average school leaver rate	0.083	0.097	0.068	0.077	0.087	0.067	0.075	0.086	0.062	0.099	0.112	0.086	0.051	0.053	0.049
Average failure rate							0.052	0.060	0.044	0.046	0.056	0.034	0.036	0.045	0.027
Average (simple) dropout rate							0.013	0.017	0.010	0.014	0.018	0.010	0.011	0.013	0.008

Source: Statistical Bulletins and Basic Education Information System (BEIS), Department of Education

Note: National aggregates (and gender-disaggregated data) for some indicators were not published prior to the establishment of the BEIS.



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Secondary School	SY 1996–1997		SY 1999–2000*		SY 2002–2003			SY 2005–2006			SY 2008–2009				
Performance Indicators	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Gross enrolment ratio	0.574	0.556	0.592	0.753	0.723	0.785	0.657	0.630	0.684	0.629	0.599	0.659	0.642	0.623	0.661
Net enrolment ratio	0.433	0.400	0.466	0.654	0.627	0.682	0.456	0.418	0.494	0.454	0.413	0.497	0.456	0.420	0.493
Cohort survival rate to year 4	0.704	0.655	0.755	0.695	0.664	0.724	0.639	0.567	0.712	0.547	0.475	0.620	0.621	0.563	0.681
Completion rate	0.680	0.626	0.735				0.586	0.511	0.664	0.499	0.421	0.579	0.577	0.515	0.640
Years input per graduate				5.000	5.200	4.900	5.660	6.240	5.190	6.300	7.220	5.600	5.700	6.210	5.280
Graduation rate	0.966	0.956	0.974				0.906	0.884	0.926	0.899	0.864	0.928	0.915	0.894	0.933
Average repetition rate	0.024	0.036	0.013	0.021	0.031	0.012	0.028	0.044	0.013	0.037	0.057	0.019	0.034	0.052	0.017
Average school leaver rate	0.104	0.118	0.092	0.096	0.114	0.078	0.139	0.171	0.107	0.181	0.215	0.148	0.146	0.172	0.120
Average failure rate							0.096	0.126	0.067	0.114	0.156	0.075	0.088	0.119	0.057
Average (simple) dropout rate							0.066	0.089	0.043	0.066	0.090	0.044	0.060	0.081	0.040

Table 2. Selected secondary school annual performance indicators by sex, school years 1996–1997up to 2008–2009

Source: Statistical Bulletins and Basic Education Information System (BEIS), Department of Education

Note: National aggregates (and gender-disaggregated data) for some indicators were not published prior to the establishment of the BEIS.

Caoli-Rodriguez (2007) also notices the disadvantage of male performance compared to females in education outcome indicators from 2000 to 2005, with worsening gender disparities. In 2000, the difference between net enrolment rate of females and males in the secondary level was 6.77 percent, which increased to 9.88 percent by 2005. Data on completion rates further illustrate the glaring gap. In 2000, the difference in completion rate was 9 percent in favor of females. This difference grew to 13 percent in 2005, with females still at an advantage over males.

Among those who eventually graduate from elementary and high school, there are also marked disparities in the amount of time the typical graduate took to complete the cycle of education. For primary schooling, the sex gap is slight but consistent. In the three prior school years for which there were available data (Table 1), boys put in slightly more years into their elementary schooling compared to girls in order to complete the degree. For instance, in school year 2008–2009, the typical male primary school graduate took 6.86 years compared to 6.74 for girls. This gap becomes larger in high school, where in the same school year, a boy takes on an average of 6.21 years to graduate while a girl takes 5.28 years. For the past three school years, boys take more than a year longer to finish high school compared to girls.

Across the different indicators of completion such as cohort survival, graduation, years input per graduate, repetition, and failure rates, the following observations are common: (1) boys are faring worse than girls, and (2) the sex disparity in each indicator worsens from primary to secondary education levels.

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The second observation begs the question of what the disparity looks like in the tertiary level. Even education data sourced from sample surveys conducted by the NSO suggest worsening sex disparities. The Labor Force Survey (LFS), for instance, shows that the proportion of women who have years of college or a college degree has been higher compared to men since the 1980s, with said gap gradually increasing as seen in Figure 1. In terms of the proportion of the labor force with no education by gender in 1980, among those in the labor force, there were 1.50 percent more females than males with no education. In a span of two and a half decades, however, the disparities reversed, with the proportion of males among the labor force with no education slightly higher (0.18%) than the corresponding proportion for females.

# Differences in academic achievements

While the disparities in completion, graduation, and cohort survival may be partially explained by economic factors such as poverty, the alarmingly high dropout rates among boys, though, is only part of the picture. This section illustrates how the marked underperformance among boys extends beyond dropout rates to achievement levels.

Every year, the DepEd, through its National Educational Testing and

Research Council (NETRC), conducts the National Achievement Tests (NAT) at the primary and secondary levels. The NAT is administered









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to all currently enrolled students in the 6th grade level of elementary school, and the 2nd and 4th year levels of high school. Students are tested in Science, Math, English, Filipino, and Civics (Araling Panlipunan or HEKASI). Figure 2 shows the average NAT percentage scores for second year high school students of academic year 2006–2007 broken down by sex. Results of this school year are "typical" of the other three prior school years. National averages show that girls outscore boys in every single subject included in the NAT, with the most dramatic differences evident in English and Filipino. Clear differences are also observed in Science.

The achievement advantage of girls over boys is present in an overwhelming number of school divisions. In the same 2006–2007 school year,

Figure 2. Average percentage scores among second year high school students in school year 2006–2007 in the National Achievement Test (NAT) across subject areas by sex



Source: National Educational Testing and Research Council (NETRC), Department of Education

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boys scored equal to or higher than girls in Science in only 11 of 188 school divisions. In the Filipino subject, only one school division, in English, two divisions, and in Civics, three divisions showed equal or higher scores among boys. The picture in Math is a little better, where 36 of 188 school divisions showed equal performance or better performance among boys. Still, this is only one in every five divisions, far from the sex parity scenario of having either roughly equal achievement test scores or a 50/ 50 split between divisions that have girls scoring higher or boys scoring higher.

Table 3 shows female and male average scores in the NAT for the second and fourth school levels in each test area for academic years between 2003 and 2007. Consistently over

> these four school years, girls outscored boys in every subject except in Science where there are two years when the averages were almost equal. The highest differential was in English, followed by Filipino, then Civics.

> When data for NAT Y2 for school year 2006–2007 are inspected by division, girls' advantage over boys appears sharper in city divisions (F-M test score=3.36) compared to noncity divisions (F-M test score=3.8), a pattern that might also be present in the other school years. The urban-rural divide thus seems to exacerbate these disparities. There is also a high

likelihood that large disparities are present in other subjects among the divisions when there are large by-sex disparities for one subject.

Trends in disparate by-sex performance of students may also be observed from the results of the 2003 Trends International Mathematics and Science Study (TIMSS). First conducted in 1995, the TIMSS has provided an assessment of the achievement of students in mathematics and science for students at the fourth and eighth grades. Fifty-one countries participated in the 2003 TIMMS while 60 countries joined the 2007 TIMMS.

Mean scores across all science content areas show that in the Philippines, eighth-grade

level girls have a 7-point advantage over boys (Table 4). A comparison of the international profile, though, reveals a stark contrasting picture, with boys outscoring girls. In Indonesia, Korea, and Malaysia, the differential has 2-digit gaps.

Table 4 also shows that in the Philippines, boys have an advantage over girls only in Physics and in none other. Perhaps more interesting is the consistently higher standard errors in all science content area mean estimates for boys compared to girls, indicating much greater variability in the scores for boys and a bunching of girls' scores more closely around the mean score.

Table 3. Difference in female scores and male scores in NAT by subject areas for school years2003-2004 up to 2006-2007

Division	Number	Math				English				Science			
	of Examinees	Female	Male	F-M	Total	F	Μ	F-M	Total	F	Μ	F-M	Total
Y2 06–07 Y4 05–06 Y2 05–06 Y4 04–05 Y2 04–05 Y2 03–04	1,245,707 985,728 948,971 1,026,115 996,417 1,132,558	39.67 48.52 42.74 51.04 43.74	38.39 47.25 41.91 50.33 41.88	1.28 1.26 0.83 0.72 1.85	39.05 47.82 42.34 50.70 42.83	54.52 49.77 53.40 53.04 50.34 50.00	48.73 45.52 48.64 49.26 45.60 44.08	5.78 4.25 4.76 3.78 4.74 5.92	51.78 47.73 51.20 51.33 48.14 47.16	43.01 38.13 43.64 39.35 44.06	40.89 38.06 42.35 39.69 42.04	2.11 0.07 1.29 -0.34 2.01	41.99 37.98 43.02 39.49 43.09
Division	Number of Examinees		Filip	oino			Aralin Pa	Inlipunai	า		Tota	l Test	
		Female	Male	F-M	Total	F	Μ	F-M	Total	F	Μ	F-M	Total
Y2 06-07 Y4 05-06 Y2 05-06 Y4 04-05 Y2 04-05 Y2 03-04	1,245,707 985,728 948,971 1,026,115 996,417 1,132,558	50.96 42.06 48.36 43.72	46.57 38.84 44.67 40.99	4.40 3.21 3.69 2.73	48.89 40.51 46.66 42.48	53.31 49.09 53.39 50.92	49.47 46.09 49.62 48.94	3.84 3.00 3.77 1.98	51.48 47.62 51.65 50.01	48.29 45.51 48.31 47.61 46.05 39.17	44.81 43.15 45.44 45.84 43.18 36.24	3.48 2.36 2.87 1.77 2.87 2.93	46.64 44.33 46.97 46.80 44.69 37.75

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In Math, girls more consistently do better than boys among most of the Asian countries in the eighth-grade level (Table 5). However, compared to all these other countries, the Philippines posts the greatest disparity, with boys scoring on average 13 points lower than girls. Since the universal goal is gender parity, having boys trailing girls in achievement levels must be considered as equally undesirable as having boys outscoring girls with such consistency. The picture painted by these TIMMS data reinforces the necessity of doing a systematic examination of the possible situational and social factors that may be contributing to boys' disadvantage in participation and achievement (compared to girls) in the Philippine educational system. If

the Philippines is to improve its performance along the EFA and MDG benchmarks, a comprehensive program to address the systematic underachievement of boys will have to be included and a better understanding of the contributory factors for this gap will allow for the formulation of the appropriate programs and policy actions to address them.

## Possible sources of gender disparities

In the education literature, there is more evidence that explains the disadvantage of girls in educational performance than that of boys largely because of the more common global pattern of female underperformance in

### Table 4. TIMMS average Science achievement in Grade 8 by sex and content

Participating Country	Life Sc	ience	Chem	nistry	Physics			
	Girls	Boys	Girls	Boys	Girls	Boys		
Indonesia	422 (4.0)	425 (4.3)	393 (4.3)	389 (4.4)	417 (4.2)	443 (4.6)		
Korea	555 (1.9)	562 (2.1)	527 (3.0)	531 (2.8)	575 (2.7)	582 (1.8)		
Malaysia	504 (4.3)	504 (4.2)	513 (4.9)	514 (4.9)	512 (4.3)	527 (3.9)		
Philippines	395 (5.9)	377 (6.5)	348 (6.2)	334 (8.2)	377 (4.9)	385 (4.3)		
Singapore	571 (3.7)	566 (4.8)	584 (4.0)	581 (5.1)	578 (3.4)	579 (4.0)		
Taipei	563 (3.6)	562 (3.4)	589 (4.3)	579 (4.6)	568 (3.6)	571 (3.8)		
International average	476 (0.6)	473 (0.6)	474 (0.6)	474 (0.6)	468 (0.6)	480 (0.6)		

Note: Standard errors in parentheses.

Participating Country	Earth S	cience	Environme	ntal Science	Science (Overall)			
	Girls	Boys	Girls	Boys	Girls	Boys		
Indonesia	424 (4.2)	438 (4.2)	451 (4.1)	457 (4.0)	415 (3.9)	426 (4.6)		
Korea	527 (2.0)	552 (2.4)	538 (2.0)	548 (1.7)	552 (2.1)	564 (1.9)		
Malaysia	494 (4.6)	510 (3.9)	509 (3.6)	516 (3.8)	505 (4.3)	515 (4.0)		
Philippines	376 (6.0)	377 (7.4)	410 (5.4)	394 (6.0)	380 (5.9)	374 (6.4)		
Singapore	542 (4.1)	556 (4.4)	566 (3.7)	569 (4.5)	576 (4.0)	579 (5.0)		
Taipei	542 (3.2)	554 (3.9)	561 (3.5)	558 (3.2)	571 (3.8)	572 (3.8)		
International average	466 (0.6)	482 (0.6)	472 (0.6)	476 (0.6)	471 (0.7)	477 (0.7)		

Note: Standard errors in parentheses.

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educational benchmarks. Still, some of these evidences may be instructive, if only to begin considering the factors that may influence male educational outcomes.

Family or household factors have been shown to significantly affect the probability of dropping out from school. These include the mother's education, religion, and parents' marital status which are all found to have stronger effects on girls than boys (Lloyd et al. 2000). Specifically, the enrolment of boys has been shown to be less affected by changes in family circumstances than the enrolment of girls (Lloyd et al. 2000). The situation, however, may be the reverse in the Philippines where boys are more likely to leave school at a younger age than girls, and more likely to be outperformed academically by girls. The 2007 EFA mentions that this phenomenon of less participation and less achievement of boys than girls in

the Philippines is also observed in a number of countries in the Pacific, Latin America, the Caribbean, North America, and Western Europe (with well-developed education systems), with the disparities in favor of girls greater in the secondary level of education than in the primary. Household circumstances that would need to be explored as possible contributory factors for underachievement among boys must begin with a look at family latent support for male educational attainment, parental expectations for returns on education investments in girls as against boys, and the level of direct parental involvement in school and learning-related activities.

Aside from the household, the school environment must also be explored as potential contributors to the disparities. The literature in other countries has shown that girls' retention in schools can be discouraged by the quality of the school environment (Lloyd et al. 2000). Girls are less likely to stay in school under conditions such as the unfair provision of support for boys and girls;

Table 5. TIMMS average Math achievement in Grade 8 by sex

Participating Country	Gi	rls	Bo	Difference	
	Percent of Students	Average Scale Score	Percent of Students	Average Scale Score	between Averages
Indonesia	50 (0.7)	411 (4.9)	50 (0.7)	410 (5.3)	-1 (3.0)
Korea	48 (2.8)	586 (2.7)	52 (2.8)	592 (2.6)	5 (3.1)
Malaysia	50 (1.8)	512 (4.7)	50 (1.8)	505 (4.5)	-8 (4.2)
Philippines	58 (0.9)	383 (5.2)	42 (0.9)	370 (5.8)	-13 (3.4)
Singapore	49 (0.8)	611 (3.3)	51 (0.8)	601 (4.3)	-10 (2.9)
International average	50 (0.2)	467 (0.6)	50 (0.2)	466 (0.6)	1 (0.6)

Note: Standard errors in parentheses.

teachers' gender bias evident in hard subjects such as math; nonexistence of school policy to stop or discourage harassment; and lack of recognition of the unequal treatment experienced by girls (Lloyd et al. 2000). If such conditions are present in the Philippine public school system, they would then be systematically against boys instead of girls.

Sex disparities in education are believed by some to stem from social expectations made on males and females (Fehr 2003) which may either be obvious or latent. Latent expectations are transmitted through cultural and social perceptions, attitudes, and even through curriculum designs. The virtual discussion on sex disparities in education sponsored by the Conference of Commonwealth Education Ministers (CCEM), with 150 discussants from member nations participating, cited specific examples of such expectations (Fehr 2003). Much of the discussions are premised on boys having the advantage over girls. One common example is that females are expected to be homemakers and, in some cultures, are taught to accept

their subordinate status to their husband. During periods of economic vulnerability in other countries, girls are also the first to be taken out of school. There are areas in South Asia where girls are encouraged to attend school but not necessarily encouraged to complete their education due to the perception that a highly educated woman may not be suitable for marriage.

In the absence of a similar cultural scenario in the Philippines, women understandably get further in the education ladder than their counterparts in other countries. However, this does not by itself provide a satisfactory explanation for the boys underperforming the way they are. One possibility worth exploring is the change in demand for export labor toward female-dominated professions such as teaching and nursing. If the female child is expected by parents to have a greater chance of being an overseas Filipino worker (OFW), then it would be reasonable for them to provide greater support for her than for a male child.

In addition to factors external to the child, there are internal motivational or attitudinal variables that may contribute to the gap. Analysis of the APIS suggests that personal interest or motivation can potentially play an important role in explaining some of the higher dropout rates among males (Manasan 2005; Maligalig and Albert 2008). For children between the ages of 13 and 16 who have stopped schooling, a larger portion of males stated lack of personal interest as their reason compared to females. Among females, the more common reason cited for dropping out is lack of money. Boys are found to be nearly 40 percent more likely than girls not to attend schools, *ceteris paribus*. This scenario, however, refers to those who have already left school, and some of the answers provided may be internal post-hoc rationalizations aimed at reinforcing the decisions that they have already made. Understanding the motivational and attitudinal factors among those who are still currently in school would thus be more instructive.

A significant portion of the disparity in graduation rates can be explained by poverty whereby poor families pull out males from school to put them to work and contribute to the household income. This would thus imply that improvements in economic conditions among the poor and the vulnerable should decrease the disparity (Maligalig and Albert 2008). This, however, might only explain the reasons for simple dropout rates; the significant gaps in achievement and performance levels among those who are in schools, though, suggest a more complex story.

What are the micro processes that might help explain, and ultimately present solutions to, the underperformance of boys compared to girls in the country's school system? It is important to examine this if only to help achieve the BESRA masterplan and improve the possibilities of meeting the goals of the global EFA initiative.

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## **Corrective policy actions**

The Pantawid Pamilyang Pilipino Program (4Ps) that provides extremely poor families cash transfers on the condition of families' sending their children to school is a promising public intervention to assist poor families in breaking out of the intergenerational cycle of poverty through investment on human capital. However, such public programs fall short of addressing boys' early dropping out of school and underachievement. It may be tempting to downplay the implications of the observed gender disparities in education, but disparities in education across any subgroups of society require policy attention because these inequalities are social volcanoes that may have serious consequences in the future.

Programs need to be formulated and properly targeted to mitigate the high dropout rates among boys by addressing the motivational challenges they may face in attending school and any other causes not directly related to their poverty status. DepEd's current initiative to integrate the technical-vocational component in the secondary school curriculum is a welcome development in arresting boys' dropouts and addressing boys' lack of interest in going to school. Such programs, however, may only be scratching the surface if there is no understanding about the root causes of by-sex disparities in participation and performance in school. At the moment, there is not enough systematic analysis that documents the extent of the disparity, its trend, and its history. For instance, are these gender disparities in

participation and achievement new, emerging or something that has been going on for decades? What are the elements of Philippine society that are shared with the societies of Latin American, the Pacific, and the developed economies that yield these same gender disparities?

Policy interventions that would be designed to specifically address the underachievement of boys must be guided by sufficient information about its underlying causes. The discussion above touched on some possible directions of broad areas wherein one might look into: household, community, social, school, and individual factors. Each one implies a different policy or programmatic need. If it is the school environment through teachers or curricula—that is lacking in responding to the needs of boys, then the DepEd would have to redesign its programs to address it. If it is a matter of teaching style, then teacher training would be appropriate. If it is the sex of the teacher that leads to such achievement disparities, then active affirmative action in hiring policies will have to be undertaken which will attract more men into the teaching profession, at least for a particular period of time.

Individual motivational or attitudinal causes can also be addressed through the school system via after-school activities or alternative learning activities designed to keep boys engaged and interested in staying in school and in increasing their achievements. Household economic reasons can be addressed through programs that would allow instruction during off-work hours or through active recruitment of overaged out-of-school youth back into the system. Teachers can be properly compensated with longer hours in school to conduct specific activities for boys. The possibilities are plenty, but programs and policies cannot be prioritized without the evidence of root causes, cause mechanisms, propagation factors, and possible consequences in the long term.

## **Concluding remarks**

There is an urgent need to broaden and deepen the pool of evidence for investigating the gender disparity trends in Philippine schools. Synergies have to be developed between research and policy toward the formulation, implementation, and monitoring of evidence-based policies to ensure gender parity in education. The main challenge now is to respond to an observation by Caoli-Rodriguez (2007) "to seek empirical reasons behind the trends [so] to implement

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appropriate interventions and to exercise caution against complacency with respect to the better performance of girls" (p.63).

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