

## What do statistics say about basic education in the Philippines?

*Jose Ramon G. Albert*

The past Philippine Development Plans have recognized the importance of education in the achievement of inclusive growth and poverty reduction. Reducing inequalities in school participation and completion can improve the opportunity of each citizen to participate in the processes for socioeconomic growth and progress. Moreover, it is a recognition of the fundamental right of the citizens, particularly the children, to primary education.

Every year, the Department of Education (DepED) produces key education statistics on the performance and internal efficiency of the basic education sector. One of the sources of these data is DepED's Basic Education Information System (BEIS), which generated statistics on inputs (such as the number of enrollees by grade/year level, number of schools, and number of teachers) and outputs of the sector (such as gross enrollment ratio,<sup>1</sup> net enrollment ratio,<sup>2</sup> dropout rate,<sup>3</sup> and cohort survival rate<sup>4</sup>).

In 2011, with the assistance of the Australian Aid, DepED upgraded the BEIS into the Enhanced Basic Education Information System (EBEIS), which has significantly brought down the reporting gap given its mechanism for online data submission.

<sup>1</sup> Gross enrollment ratio is the proportion of the total enrollment in a given education level as a percentage of the population, which, according to national regulations, should be enrolled at this level.

<sup>2</sup> Net enrollment ratio is the ratio of enrollment in the school-age range in a given education level to the total population of that age range, with school-age population for the primary and secondary levels being 6 to 11 years old, and 12 to 15 years old, respectively.

<sup>3</sup> The dropout rate is the proportion of students who leave school during the year as well as those who complete the grade/year level but fail to enroll in the next grade/year level the following school year to the total number of students enrolled during the previous school year.

<sup>4</sup> The cohort survival rate is the proportion of enrollees at the beginning grade or year who reach the final grade or year at the end of the required number of years of study.

*PIDS Policy Notes* are observations/analyses written by PIDS researchers on certain policy issues. The treatise is holistic in approach and aims to provide useful inputs for decisionmaking.

The author is senior research fellow at PIDS. Data support is provided by the Department of Education and Martin Joseph M. Raymundo, research analyst at PIDS. The views expressed are those of the author and do not necessarily reflect those of the PIDS or any of the study's sponsors.

This *Policy Note* examines recent statistics sourced from administrative reporting systems of DepED and sample surveys conducted by the Philippine Statistics Authority (PSA) regarding the basic education sector. It also explains measurement issues and discusses policy implications of these statistics.

### Administrative-based statistics on basic education

From 2006 to 2016, there has been an increase in the number of students, with enrollment average growth at 1–2 percent per year for both primary and secondary levels. Specifically, enrollment growth at the primary level had been the same for both private and public sectors, except for 2014–2016. At the secondary level, only the public sector has experienced a constant increase in enrollment. On the other hand, the total enrollment in the private sector has dwindled in the past three school years (SY). For kindergarten, enrollment in public

schools has been declining since 2014 and in private schools since 2013. Nonetheless, both have witnessed a 120-percent increase since 2006 (Table 1).

In the past decade, the number of schools in the country has also increased. The total number of primary schools (49,593) in SY 2015–2016 was about 14 percent larger than in SY 2006–2007. However, its biggest growth occurred in SY 2012–2013 within the private sector, which has also increased its share of the total number of primary schools from 14.3 percent in SY 2006–2007 to 22.1 percent in SY 2015–2016.

As of the latest year, there are already 13,574 secondary schools throughout the country. More public secondary schools have been available in the country, with the largest growth (28%) occurring in SY 2010–2011, compared to a relatively smaller growth of private schools (21%) in that same period. The share of

**Table 1. Total enrollment in kindergarten, primary, and secondary levels across public and private schools, SY 2006–2007 to 2015–2016**

School Year	Total Enrollment					
	Kindergarten		Primary Level		Secondary Level	
	Public	Private	Public	Private	Public	Private
2006–2007	561,207	400,190	12,096,656	1,048,554	5,072,210	1,290,792
2007–2008	591,445	410,778	12,318,505	1,092,781	5,173,330	1,332,846
2008–2009	746,448	428,653	12,574,506	1,112,137	5,421,562	1,342,296
2009–2010	1,054,200	420,444	12,799,950	1,134,222	5,465,623	1,340,456
2010–2011	1,224,173	426,059	13,019,145	1,146,921	5,580,236	1,374,710
2011–2012	1,675,048	431,897	13,241,213	1,195,132	5,635,664	1,414,213
2012–2013	1,776,590	437,473	13,273,325	1,236,365	5,702,597	1,421,081
2013–2014	1,867,941	419,647	13,257,456	1,202,921	5,818,649	1,397,941
2014–2015	1,814,235	397,611	13,312,124	1,180,378	5,963,431	1,353,320
2015–2016	1,737,313	382,012	13,157,333	1,189,743	6,012,761	1,337,386

Source: Basic Education Information System (BEIS) and Enhanced Basic Education Information System (EBEIS), Department of Education (DepED)

public schools to the total number of secondary schools has likewise increased from 54.9 percent in 2006–2007 to 59.5 percent in 2015–2016 (Figure 1).

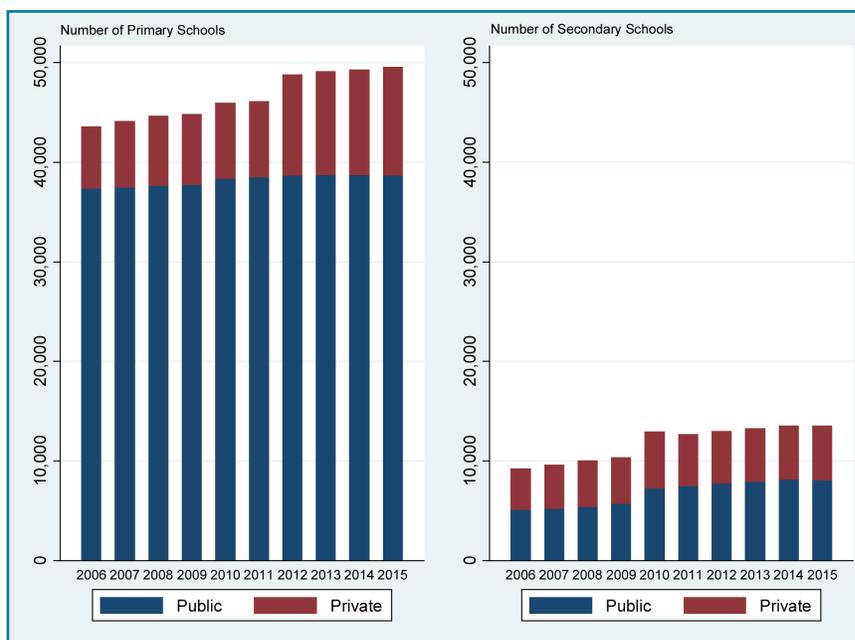
Moreover, the number of public school teachers has expanded since SY 2011–2012. From 2011 to 2015, the annual growth rates had reached 4.5 percent and 10.8 percent for primary and secondary schools, respectively. Prior 2011, the annual growth rates were only 1.3 percent and 3.4 percent.

In terms of sector, the growth in the number of private school teachers (8.5%) had outpaced that of the public sector (3.0%) for the primary level in the past decade. Meanwhile, the reverse can be observed at the secondary level, where the annual growth rate for the private sector (2.6%) is lower than the public sector (7.5%) (Figure 2).

In terms of trends in performance indicators, a slight improvement in school participation from the net enrollment ratio can be observed between 2009 and 2014 (Figure 3). The cohort survival rate also had improved while the dropout rate had declined. However, these changes had been more pronounced at the primary level.

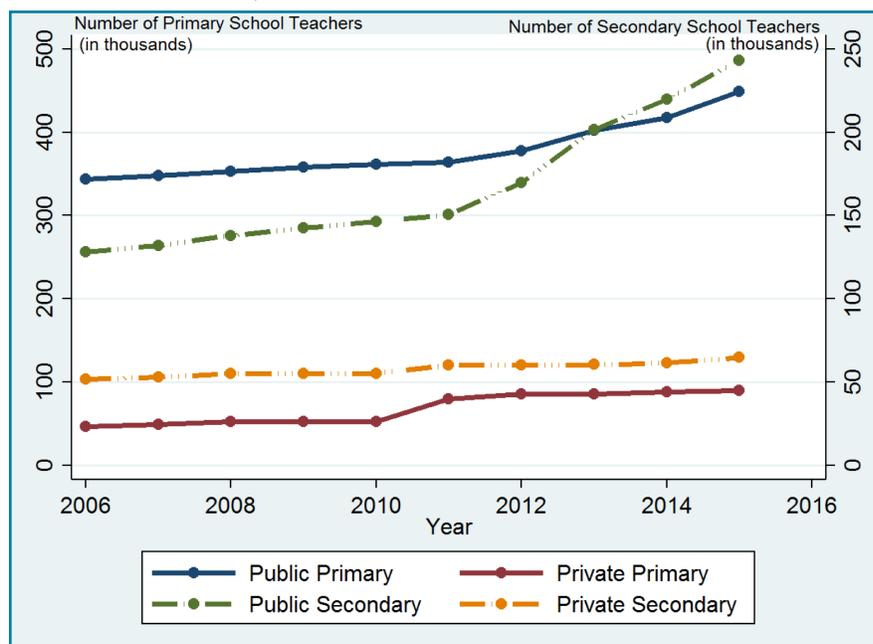
A closer look at the performance indicators suggests that there were

**Figure 1. Number of primary and secondary schools across public and private schools, SY 2006–2007 to 2015–2016**



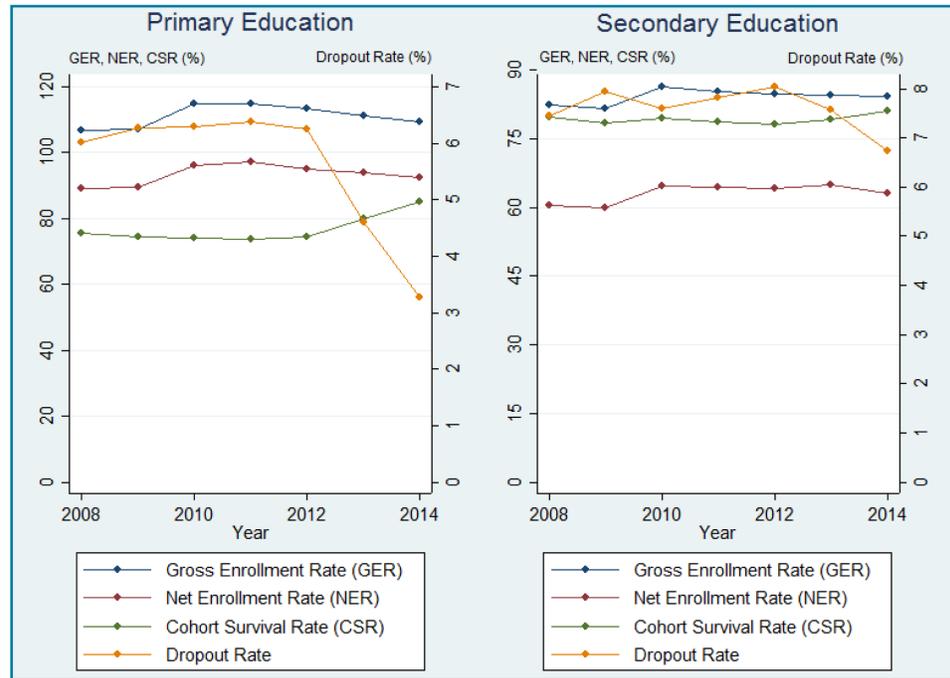
Source: BEIS and EBEIS, DepED

**Figure 2. Number of teachers in primary and secondary schools across public and private schools, SY 2006–2007 to 2015–2016 (in thousands)**



Source: BEIS and EBEIS, DepED

**Figure 3. Selected performance indicators in primary and secondary education, 2008–2014**



Source: BEIS and EBEIS, DepED

**Table 2. Gender parity indices for gross enrollment rate, net enrollment rate, cohort survival rate, and dropout rate at the primary and secondary levels, SY 2009–2010 to 2014–2015**

Gender Parity Indices for	School Year					
	2009–2010	2010–2011	2011–2012	2012–2013	2013–2014	2014–2015
Gross enrollment rate						
Primary	0.99	1.00	0.99	0.98	0.98	0.98
Secondary	1.07	1.07	1.07	1.07	1.08	1.07
Net enrollment ratio						
Primary	1.03	1.03	1.03	1.02	1.02	1.02
Secondary	1.18	1.18	1.18	1.18	1.17	1.17
Cohort survival rate						
Primary	1.14	1.13	1.12	1.11	1.08	1.05
Secondary	1.12	1.13	1.15	1.13	1.12	1.08
Dropout rate						
Primary	0.65	0.67	0.70	0.71	0.71	0.75
Secondary	0.64	0.60	0.56	0.61	0.62	0.68

Notes: DepED statistics shown here made use of 2008 and 2009 population projections from interim estimates based on the 2007 Census of Population and Housing, while those for 2010–2014 were based on interim population projections (as of December 15, 2014) from the 2010 Census of Population and Housing.

Source: BEIS and EBEIS, DepED

disparities in basic education in favor of girls (Table 2). This was evident especially at the secondary level, where school participation rates, whether gross or net enrollment rates, had been consistently in favor of girls. On the other hand, the school participation rates were generally equal at the primary level, although there was a slight advantage for girls as regards the net enrollment ratio.

Cohort survival rates were also higher for girls than boys, both at the primary and secondary levels. Furthermore, more boys were dropping out of school than girls, although the difference was more pronounced at the secondary level. These disparities had already been observed prior 2009, not only in school participation and completion, but also in learning achievement (David et al. 2009).

David and Albert (2015) similarly noted significant improvements in school participation during the period of the Aquino administration. However, in terms of regional trends, they noticed higher than average dropout rates in the Autonomous Region in Muslim Mindanao and Central Visayas among boys at the primary level. Apparently, this disparity worsens as children get older. Furthermore, they also discovered a higher dropout rate of male students at the secondary level in Ilocos, Bicol, and Western Visayas regions, as well as in the Cordillera Administrative Region, compared to the rest of the country.

### **Sample survey-based statistics on basic education**

Although the basic education sector has improved in terms of school participation and

completion, it is still important to examine why some children remain out of school, and why others are dropping out. The presumption is that the reason is economic in nature.

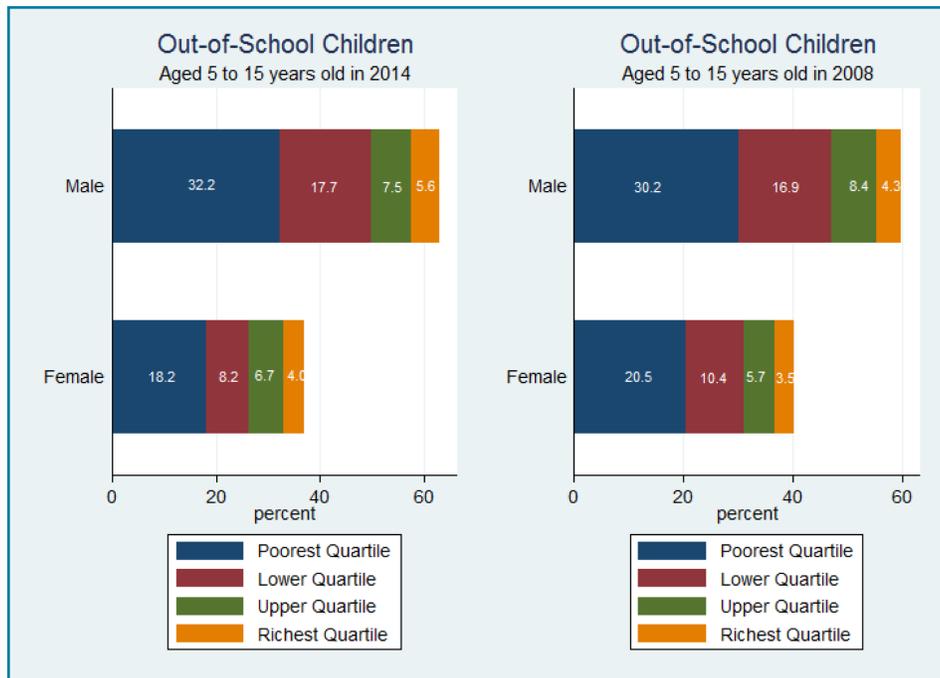
While the statistics sourced from BEIS and EBEIS describe overall conditions of the basic education sector, they do not provide reasons why such conditions have occurred. These statistics pertain to the schools and the children who have entered the formal educational system. However, they do not cover children who never went to school.

To address the abovementioned concerns, statistics from household surveys conducted by the PSA are studied, particularly the Annual Poverty Indicators Survey (APIS) and the triennial Family Income and Expenditure Survey.

Two consecutive APIS revealed that 776 (33%) and 177 (10%) under-five children were not attending school in 2008 and 2014, respectively. Moreover, roughly 1.27 million and 420,000 children between 6 and 11 years old were not also attending school, at least in the primary level, during the same years. These figures represented 9.2 percent and 3.1 percent of children in the primary age group who were not in school in 2008 and 2014, respectively.

Furthermore, between 12 and 15 years old, about 980,000 and 606,000 were not attending school, either in primary or secondary level, representing 10.5 percent and 6.2 percent of the secondary age group in 2008 and 2014, respectively.

**Figure 4. Out-of-school children profile in 2008 and 2014, by sex and by per capita income quartile**



Source: Author's calculations from Annual Poverty Indicators Survey (APIS) 2008 and APIS 2014 conducted by the Philippine Statistics Authority (PSA)

About half of the 1.1 million out-of-school children (OOSC)<sup>5</sup> aged 5 to 15 in 2014 belonged to families in the bottom 25 percent of the per capita income distribution. Three out of five of these children were boys. This is practically the same profile of OOSC in 2008, although the number of OOSC aged 5 to 15 years old had dropped from 2.9 million in 2008 to 1.1 million in 2014 (Figure 4).

<sup>5</sup> We follow here the convention of United Nations Children's Fund's Global Study on Out-of-School Children to consider children as being in school if (1) they are of preprimary-school age and are currently attending preprimary education or higher levels of education and (2) they are of primary- or secondary-school age and they currently participate in primary- or secondary education. Thus, children of primary- or secondary-school age who are in preprimary and nonformal education are viewed as being out of school, although their participation in the educational system should not really be discounted.

It should be noted that estimates of school participation obtained from DepED's EBEIS (and population projections) and household surveys have discrepancies due to measurement issues, including the accuracy of reported ages of children, differences in definitions and reporting periods, and coverage problems (Albert et al. 2012). Nevertheless, both data from DepED and the APIS revealed improvements in school participation. However, there still are children who are not in school, especially among secondary-age children (David and Albert 2015). Disparities in school participation across regions

remain evident, especially between urban and rural areas (in favor of urban area), younger and older children (in favor of younger children), and boys and girls (in favor of girls).

For the primary age group, one in every three children cited lack of personal interest as a reason for non-attendance in school both in 2008 and 2014. However, illness became a major reason for non-attendance in 2014 whereas in 2008, the children were only perceived to be too young for schooling.

Among the secondary age group, lack of personal interest was the most cited reason both in 2008 and 2014. One in every two boys and one in every three girls cited it as a reason.

**Table 3. Reasons for not attending school by primary-aged and secondary-aged children, national level, 2008 and 2014**

Reasons for Not Attending School	Primary-Aged Children						Secondary-Aged Children					
	2008			2014			2008			2014		
	Boys	Girls	Both Sexes	Boys	Girls	Both Sexes	Boys	Girls	Both Sexes	Boys	Girls	Both Sexes
Lack of personal interest	35.2	27.0	31.7	38.2	30.5	36.0	54.7	33.9	47.2	51.2	29.0	44.1
High cost of education	11.0	12.2	11.5	15.3	11.2	14.1	21.9	30.3	24.9	25.2	38.3	29.4
Too young to go to school	24.6	35.3	29.2	9.5	14.6	11.0						
Illness/Disability	10.1	8.7	9.5	33.7	37.1	34.7	5.0	8.2	6.1	10.4	16.7	12.4
Lack of nearby schools	7.4	7.5	7.5	2.1	2.1	2.1	3.3	5.6	4.1	0.6	2.7	1.3
Employment	0.1	0.2	0.1				9.2	7.8	8.7	6.0	1.9	4.7
Other reasons (including school records, marriage, housekeeping)	11.6	9.2	10.5	1.2	4.5	2.1	5.9	14.2	8.9	6.6	11.3	8.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Note:												
Estimated number of out-of-school children (in thousands)	720	545	1,265	251	159	411	624	356	980	361	172	533

Source: Author's calculations from APIS 2008 and APIS 2014 conducted by PSA

Another third of secondary-aged girls and a quarter of the secondary-aged boys were not in school because of economic reasons (Table 3).

### Policy issues

Investments made by the Aquino government to the education sector, coupled with the implementation of universal kindergarten and the conditional cash transfer (CCT) programs, have improved school participation. Furthermore, there is evidence that a greater number of children are now staying in school. The current government is encouraged to continue the Aquino government's support for basic education, particularly through the provision of ample resources to DepED and the continued support for the CCT.

However, despite these gains, there is still much to be done. The education statistics presented here show that some children are still being left behind in being provided opportunities to attain their rights to basic education. The fact that half of OOSC are from poor families suggests that the problem is still largely economic. It will require continued support for the CCT, which can also improve disparities in education opportunity between boys and girls, and between children from urban and rural areas.

While the past government has extended support to children of secondary school age to complete schooling through the CCT, it is important to reexamine the provision of a uniform cash grant of PHP 500, as opportunity costs for schooling are

different for secondary school-aged boys and girls, and between children from rural and urban areas.

The fact that one in every three primary school-age OOSC was not attending school due to illness in 2014 is also a cause for concern. Government has traditionally used school feeding programs (Albert et al. 2016) to improve nutritional status of children. However, these programs do not reach those who are not in school.

Data from a nationwide survey conducted by the Food Nutrition Research Institute suggest that about a third of children under five have stunted growth, and a fifth are underweight. While we have a large set of national policies on health and nutrition, implementation of programs has been weak and mostly fragmented. Past studies have suggested, in particular, the importance of the first 1,000 days from conception to two years as a critical period for shaping the health and nutrition of children and for ensuring the long-term health of society. The current government, which has declared a war on drugs, should recognize the importance of declaring a war against hunger and malnutrition.

As of 2014, 1 in every 10 five-year-old children needs to be put in school. Campaigns for bringing these children into kindergarten should be continued and further intensified by DepED, through the help of various stakeholders. Local government units have a strong role to play in locating OOSC and working on having them go to school.

Once these children are part of the school system or have returned (in the case of dropouts), the bigger challenge is how to make them stay. That half of secondary-aged male

OOSC lack interest in schooling compared to a third among female counterparts suggests gender issues. Information and communications technology (ICT) can be a mechanism to stir and sustain interest in schooling. That a 12 year old named Isabel Sieh (who learned HTML and Javascript when she was 10) managed to found **Girls Will Code**, a community of learners who code (Rey 2016), shows the power of ICT in learning. Teachers, however, need to have ICT skills and competencies to help students discover the fun in learning.

While there has been suspicion that this lack of interest of children is largely a lack of interest of the parents to send their children to school, an evidence-based research actually suggests otherwise. The Philippine Country Study on Out-of-School Children revealed that parents undervaluing education is more of an exception (DepED et al. 2012). It appears they prefer having their children finish at least second year high school when they expect returns on investments. The decision to pull children out of school is typically still an economic issue.

Moreover, DepED should take into account factors that determine potentially varying learning styles, such as gender and context. Currently, there are no specific instructional assistance provided to teachers to promote boys' achievements. Outcome measures suggest not only a male disadvantage, but an increase in the gender disparities in favor of girls as students grow older. DepED should institute affirmative action, such as hiring more male teachers. At present, roughly 9 in every 10 public school teachers are female. While there are existing scholarship programs for high school students interested in entering the teaching profession

provided by the Commission on Higher Education, these programs have not been used to encourage more male teachers to enter public schools, as in the case of Australia. These affirmative action policy interventions can be done for a limited period, say five years, subject to reexamination.

While DepED has had the Alternative Learning Systems (ALS) and alternative delivery modes (ADMs) to help children who may find it challenging to get into formal schooling, the quality of learning in the ALS and ADMs will need to be extensively monitored.

Finally, DepED will need to continue its efforts to ensure the quality of data being collected through its EBEIS and other databases, such as the Learners Information System. These databases are expected to grow. The department should not only have a sufficient ICT backbone, but a strengthened research unit and engagements with research institutions to examine them. The DepED and PSA will need to also strengthen their examination of various basic education indicators and triangulate these education statistics. This can help prevent DepED from becoming data rich but information poor. 📄

## References

- Albert, J.R., F.M. Quimba, A.P. Ramos, and J. Almeda. 2012. Profile of out-of-school children in the Philippines. PIDS Discussion Paper No. 2012-01. Makati City, Philippines: Philippine Institute for Development Studies.
- Albert, J.R., A.M. Tabunda, and I. Angeles-Agdeppa. 2016. What is the impact of DepED's School-Based Feeding Program? PIDS Policy Notes No. 2016-10. Quezon City, Philippines: Philippine Institute for Development Studies.
- David, C. and J.R. Albert. 2015. Recent trends in out-of-school children in the Philippines. PIDS Discussion Paper No. 2012-51. Makati City, Philippines: Philippine Institute for Development Studies.
- David, C., J.R. Albert, and S. Carreon-Monterola. 2009. In pursuit of sex parity: Are girls becoming more educated than boys? PIDS Policy Notes No. 2009-05. Makati City, Philippines: Philippine Institute for Development Studies.
- Department of Education (DepED). n.d. Basic Education Information System and Enhanced Basic Education Information System. Pasig City, Philippines: DepED.
- Department of Education (DepED), Philippine Institute for Development Studies (PIDS), United Nations Educational, Scientific and Cultural Organization (UNESCO), UNESCO Institute for Statistics (UIS), and United Nations Children's Fund (UNICEF). 2012. Philippine country study on out-of-school children. Pasig City, Philippines: DepED et al. <http://dirp4.pids.gov.ph/webportal/CDN/EVENTS/OOSC%20Country%20Report.pdf> (accessed on June 10, 2016).
- Philippine Statistics Authority (PSA). Various years. Annual Poverty Indicators Survey. Quezon City, Philippines: PSA.
- . Various years. Family Income and Expenditure Survey. Quezon City, Philippines: PSA.
- Rey, A. 2016. Twelver year-old girl teaches kids how to code. *Rappler*. June 22. <http://www.rappler.com/move-ph/122461-girl-teach-code> (accessed on September 12, 2016).

For further information, please contact:

The Research Information Staff  
 Philippine Institute for Development Studies  
 18th Floor, Three Cyberpod Centris - North Tower  
 EDSA corner Quezon Avenue, 1100 Quezon City, Philippines  
 Telephone numbers: (63-2) 372-1291 and 372-1292  
 E-mail: jalbert@mail.pids.gov.ph; publications@mail.pids.gov.ph

The *Policy Notes* series is available online at <http://www.pids.gov.ph>. Entered as third class mail at the Quezon City Central Post Office under Business Mail Permit No. 3C-15-12-494. Valid until December 31, 2016.