# Chapter 2: Outcome

## **Strategic Goal 3:**

Effective and efficient education systems



## **CHAPTER 2:**

## Effective and Efficient Education Systems

## Introduction

Strategic Goal 3 of GPE 2020 focuses on improving the effectiveness and efficiency of GPE developing country partners' education systems. This is the key outcome in GPE's theory of change, which posits that strengthened education systems will contribute to student-level results — namely improved learning outcomes and increased equity, equality and inclusion.

Improved sector planning, policy implementation, mutual accountability and effective financing (discussed in chapter 3) in turn, are expected to result in stronger education systems.

GPE uses six indicators to monitor four dimensions of effective and efficient education systems:<sup>1</sup>

- ◆ Financing of education: The share of public expenditure dedicated to education, out of total public expenditure (Indicator 10).
- Teachers: The equitable allocation of teachers and the availability of trained teachers (indicators 11 and 12).
- **▶** Efficiency: The internal efficiency of the education system (Indicator 13).
- Data: The availability and timely reporting of education data and learning assessments to track student progress (indicators 14 and 15).

<sup>1</sup> In 2016-2017, new data is available for three out of the six indicators. For the remaining three indicators, the next milestone in the results framework has been set for 2018, by which time new data is expected.

For Indicator 10, the GPE Results Report 2015/2016 reported on baseline data from CY2015. Data from CY2016 is now available and reported in this chapter. The 2016 milestone corresponds to CY2016 data; therefore, the CY2016 data is compared to this milestone. Due to variations in the timing of the financial year and the availability of data on expenditure, CY2017 data is not available as of publication of this report. This data will be reported in the GPE Results Report 2017/18.

Indicators 11 and 13 of the results framework measure the equitable allocation of teachers and the internal efficiency coefficient at the primary level, respectively. Data for these indicators is drawn from education sector analyses in DCPs. No new data was available for these indicators in 2017; new data will be available by the next milestone set for 2018.

Indicator 15 of the results framework measures the proportion of DCPs with learning assessments that meet quality standards. The next milestone for Indicator 15 has been set for 2018, and no new data are available for 2017.

This chapter discusses progress of developing country partners (DCPs) with respect to the milestones set for three indicators: public expenditure on education (Indicator 10), pupil to trained-teacher ratio (PTTR; Indicator 12), and reporting of education indicators to UNESCO Institute for Statistics (UIS) (Indicator 14). The remaining three indicators have milestones set for 2018. In interpreting the results, it is important to note that two of the three indicators (PTTR and reporting to UIS) are lagging, with data from 2015 reflecting the effects of policies and programs prior to 2014 (before GPE's current strategic plan began in 2016). Nonetheless, they offer a system for monitoring DCPs' trajectories over time, and they provide information that can be used to drive improvements in GPE's work.

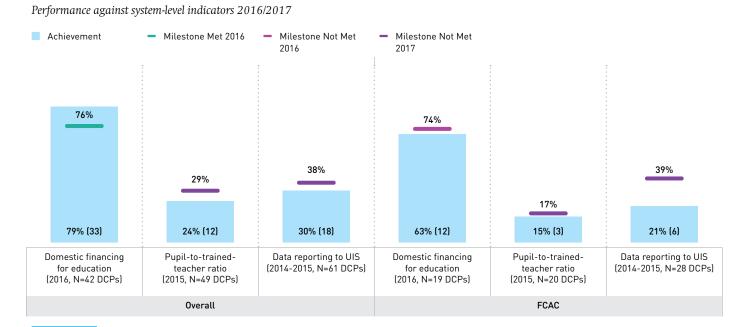
Figure 2.1 summarizes the results for the three indicators. Domestic financing for education remained

strong in 2016. Seventy-nine percent (33) of the 42 DCPs with available data<sup>2</sup> either devoted at least 20 percent of total public expenditure to education or increased their share of public expenditure on education between 2015 and 2016.

Only 24 percent (12) of the 49 DCPs with data available had a PTTR of 40 or better, falling short of the 2017 milestone of 29 percent (Figure 2.1) — whereas in 2016, the milestone of 27 percent was met.

Similarly, 30 percent (18) of 61 DCPs reported 10 or more key education indicators to UIS, missing the 2017 milestone of 38 percent. In 2016, however, the milestone of 30 percent was met. Reporting of data on teachers and their training was especially problematic.

FIGURE 2.1. Domestic financing remained strong, but milestones for the pupil-to-trained-teacher ratio and data reporting were missed.



Source: GPE compilation based on 2015 data of the UNESCO Institute for Statistics (database), Montreal, http://www.uis.unesco.org.

<sup>2</sup> For the remaining 19 DCPs, budget data was not publicly available or was not presented at a level of disaggregation that allowed for the computation of this indicator.

Addressing system-level challenges requires sustained, long-term efforts. The sections below discuss the indicators in more detail and provide an overview of how the strengthening of education systems is being supported through GPE instruments.

## Strategic Goal 3: Effective and efficient education systems delivering equitable, quality educational services for all

### **Domestic Finance for Education (Indicator 10)**

Improved domestic financing for education — supporting, incentivizing and advocating for it — is a core aspect of the GPE's work. While external financial aid plays an important role in supplementing domestic resources and is often accompanied by valuable technical expertise, particularly in resource-constrained countries, it accounts for only a small proportion of overall education funding.<sup>3</sup> Domestic funding is by far the most important source of education financing in low-income countries, with international finance comprising only 14 percent of education spending.<sup>4</sup>

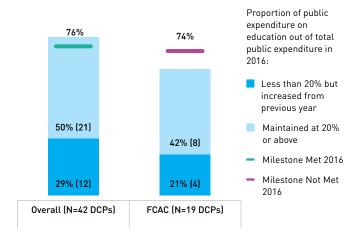
GPE's results framework measures the proportion of DCPs that either (a) increased their public expenditure on education as a percentage of total public expenditure<sup>5</sup>, or (b) maintained sector spending at 20 percent or above of total public expenditure (Indicator 10). The overall proportion of DCPs that increased the share of education in public expenditure from 2015 to 2016, or maintained it at 20 percent and above, was 79 percent (33 out of 42 DCPs), and the milestone set for 2016 was met (Figure 2.2). Out of the 42 DCPs with data available in CY2016, 21 maintained sector spending at above 20 percent of total public expenditure, while 12 DCPs spent less than 20

percent of total public expenditure on education but made progress since CY2015.

However, a smaller proportion of countries affected by fragility and conflict met these requirements, at 63 percent (12 out of 19), and the corresponding milestone set for 2016 was not met. In CY2015, 77 percent (17 out of 22) of FCACs met these requirements. The following year, three of the 17 FCACs that met the requirements in the previous year did not have sufficient data to determine whether they met them in CY2016. Another two of the 17 FCACs that met these requirements in 2015 no longer met them in 2016.

## FIGURE 2.2. The overall milestone for domestic financing of education was exceeded, but not for FCACs.

Proportion of DCPs that increased their public expenditure on education or maintained sector spending at 20 percent or above (CY2016)<sup>6</sup>



Source: GPE calculations based on publicly available budget documents.

Note: Total government expenditure excludes debt service.

<sup>3</sup> See Chapter 4, Box 4.1, for analysis on the primary sources of education financing.

<sup>4</sup> The World Bank, World Development Report: Learning to Realize Education's Promise (Washington, DC: The World Bank, 2017) p.211.

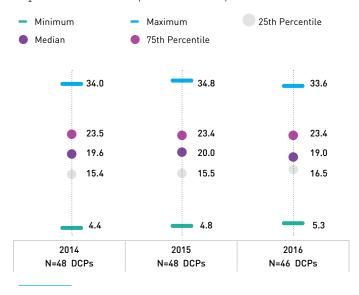
<sup>5</sup> Debt-service is excluded from total public expenditure.

<sup>6</sup> DCPs must have data for both CY2015 and CY2016 to be included in the sample for this indicator.

Since CY2014, the median public expenditure on education as a percentage of total public expenditure across DCPs has remained stable and close to achieving the target level of 20 percent: at 19 percent for all DCPs, and 18 percent for FCACs. Despite this strong overall performance, there is considerable variation among DCPs with respect to public expenditure on education (Figure 2.3).

## FIGURE 2.3. The overall level and distribution of the share of public expenditure on education has remained stable since 2014.

Public expenditure on education as a percentage of total public expenditure in GPE DCPs (CY2014- CY2016)<sup>7</sup>



Source: GPE calculations based on publicly available budget documents.

Of concern are five DCPs that spent less than 20 percent of total public expenditure on education in 2015 and have not made progress since, and another four DCPs that spent above the 20 percent threshold

in 2015 but slipped below the threshold in 2016 (Figure 2.4).

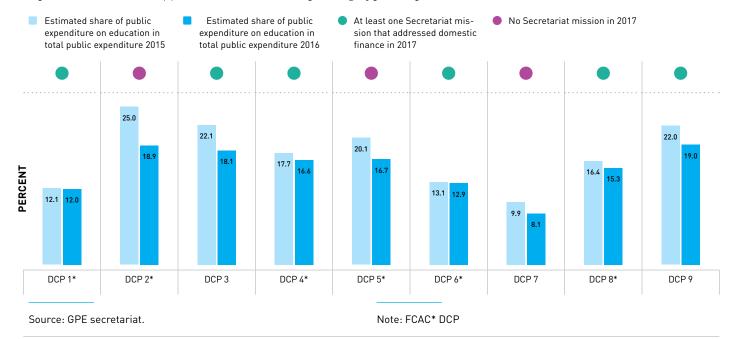
GPE employs several methods as it supports DCPs in meeting the objective of adequate domestic financing for education. It supports financially sound education sector plans, based on budget analyses and financial simulations, and works to increase the availability of data on sector finance by supporting the development of financial information modules in education monitoring information systems (EMIS) in DCPs. The GPE funding model requires DCPs that apply for ESPIGs to commit to either maintaining expenditure on education above 20 percent of total public expenditure, or to increasing the share of expenditure on education progressively toward this target.

Another instrument for improved domestic financing for education is Secretariat staff technical support and engagement in the country's policy dialogue on domestic financing. Under GPE's global objective, Mobilize More and Better Financing, GPE's results framework Indicator 31 measures the proportion of missions to DCPs by Secretariat staff that address the issue of domestic financing. Data from this indicator show that, in FY2017. Secretariat staff carried out at least one mission that addressed domestic finance to six of the nine DCPs that spent less than 20 percent of total public expenditure on education in CY2016 and have not made progress since CY2015. No Secretariat missions to the remaining three DCPs took place in FY2017. Therefore, the issue of domestic financing was addressed in all DCPs that did not meet the domestic financing requirement in 2016 and to which a Secretariat mission took place in 2017.

All DCPs with data available for a given calendar year are included in the sample for that year. The overall samples are larger than for Indicator 10, since the analysis presented here does not require a DCP to have two consecutive years of data in order to be included in the sample.

FIGURE 2.4. Secretariat missions addressed domestic financing in DCPs that did not meet GPE criteria.

Secretariat missions between July 2016 and June 2017 to DCPs where (i) public expenditure on education was below 20 percent of total expenditure in CY2016 and (ii) there was no increase in the percentage of public expenditure on education since CY2015



Finally, particularly in the context of GPE's replenishment through GPE 2020, the Secretariat worked with DCPs on pledges for domestic financing through 2020. These pledges provide an indication of the expected direction of future domestic expenditure on education (Box 2.1).

#### BOX 2.1. DCP Pledges on Domestic Finance at the Financing Conference

In consultation with GPE's developing country partner focal points from ministries of education, the Secretariat developed a process for mobilizing domestic financing pledges from DCPs, which was announced at the GPE Financing Conference in February 2018. Ministries of education were encouraged to work with ministries of finance in setting their targets, and to ensure that such targets were rooted in country-level processes and involved local education groups.

Fifty-three DCPs pledged to increase public expenditure for education. As a result, 45 DCPs will dedicate more than 15 percent of their recurrent budget to education; of these, 35 DCPs will dedicate 20 percent or more by 2020, representing their strong commitment to education. If these pledges are fully realized, expenditure in these DCPs over 2018-2020 will be US\$110 billion, up from US\$80 billion in the previous three years.

The Secretariat will work with DCPs to track progress against the pledges on an annual basis. In addition, making the pledging forms publicly available will enable civil society organizations and other advocacy partners to monitor and track progress of domestic expenditure on education by the DCPs that made commitments.

### Teachers (Indicator 12)

Teachers are central to the learning process, and teacher effectiveness has been found to be more strongly associated with learning than any other school-based factors.<sup>8</sup> Teachers also constitute the largest expenditure in education budgets, accounting for up to 90 percent of recurrent costs in the sector.<sup>9</sup>

For an education system to deliver on improved and more equitable learning, it must be adequately supplied with trained teachers. GPE's results framework measures the proportion of DCPs that have pupil-to-trained- teacher ratios (PTTRs) of 40 pupils per teacher or better at the primary level (Indicator 12). In 2015, the overall proportion of DCPs that had a PTTR of 40 or better was 24 percent (12 out of 49 DCPs<sup>10</sup>) and the target for 2017 was not met. The corresponding figure for FCACs was 15 percent (3 out of 20) and the target for 2017 was also not met (Figure 2.5). In 2016, the overall milestone was met, as was the milestone for FCACs. The indicator value is affected by changes in data availability and therefore the number of DCPs in the pool for the year. Among the sample, three DCPs<sup>11</sup> that met the threshold in 2014 fell below it in 2015. In addition, one DCP that did not meet the threshold was added to the sample in 2015.

Eric A. Hanushek and Steven G. Rivkin, "Generalizations about Using Value-Added Measures of Teacher Quality," The American Economic Review 100, no. 2 (May 2010): 267-271; Eric A. Hanushek, John F. Kain, Daniel M. O'Brien, and Steven G. Rivkin, "The Market for Teacher Quality" (NBER Working Paper No. 11154, Cambridge, MA: National Bureau of Economic Research, February 2005); Jonah E. Rockoff, "The Impact of Individual Teachers on Student Achievement: Evidence from Panel Data," The American Economic Review 94, no. 2 (May 2004): 247-252; William L. Sanders and June C. Rivers, Cumulative and Residual Effects of Teachers on Future Student Academic Achievement (Knoxville, TN: University of Tennessee Value-Added Research and Assessment Center, 1996); Birte Snilstveit et al., "Interventions for improving learning outcomes and access to education in low- and middle- income countries: a systematic review," 3ie Systematic Review 24 (London: International Initiative for Impact Evaluation [3ie], September 2015).

<sup>9</sup> UNESCO Institute for Statistics, "Teaching staff compensation as a percentage of total expenditure in public institutions," 2016.

<sup>10</sup> In 2015, data from UIS was available for only 49 DCPs, compared to 55 DCPs in 2014. There were seven DCPs in the sample for 2014 that do not have data for 2015; of these, only one DCP met the PTTR threshold of 40:1 in 2014. One DCP that did not have data in 2014 was added to the sample in 2015; it did not meet the PTTR threshold of 40:1. In addition, three DCPs that met the threshold in 2014 no longer did so in 2015.

In 2014, Kyrgyz Republic met the PTTR threshold of 40:1 with a PTTR of 33 for the most recent year available (2012). UIS has since revised the PTTR series for Kyrgyz Republic, with a PTTR of 140 reported for 2015. The PTTR for Bhutan was previously estimated by GPE, due to a lack of UIS data, at 31 for 2014; UIS data is available for 2015 with a reported PTTR of 40.

FIGURE 2.5. The proportion of DCPs with an adequate provision of trained teachers declined for non-FCAC DCPs.

Proportion of DCPs with PTTRs of 40:1 or better at the primary level, CY2010-CY2015



Source: GPE compilation based on data of the UNESCO Institute for Statistics (database), Montreal, http://www.uis.unesco.org .

Looking at longer-term trends at the country level, PTTRs in five out of 18 DCPs<sup>12</sup> with data available deteriorated between 2010 and 2015 (Figure 2.6).

In 2015, 37 DCPs with data available did not meet the PTTR threshold of 40:1. Of the 37 DCPs that did not meet the PTTR threshold of 40:1 in 2015, 24 had active ESPIGs that supported teacher training in FY2017 and another five had sector pooled grants (Figure 2.7).<sup>13</sup> The remaining eight DCPs did not have an active grant in FY2017. However, five of these DCPs have developed education sector plans, endorsed between 2014 and 2017, four of which incorporated teaching and learning strategies that met GPE's quality standards.<sup>14</sup> These sector strategies can serve as the basis for implementing critical improvements in teaching and learning, including provision of trained teachers.

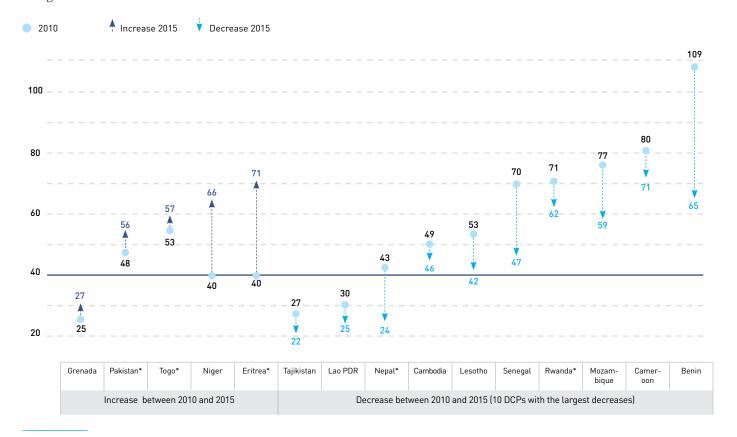
<sup>12</sup> Data for both 2010 and 2015 are available for 18 DCPs without the use of imputations to estimate missing values. The aggregate represented in Figure 2.5 uses imputed values for an additional eight DCPs.

<sup>13</sup> GPE's ESPIG has not been classified as supporting teacher training when it is part of a sector pooled grant, even if the pooled grant may support teacher training.

<sup>14</sup> The other three DCPs did not have an ESP endorsed after 2014; only ESPs endorsed after 2014 have been assessed against the quality standards developed in 2016.

FIGURE 2.6. Pupil-to-trained-teacher ratios have improved in several DCPs that are still above the threshold of 40 pupils per trained teacher.

Change in PTTRs in selected DCPs between 2010 and 2015

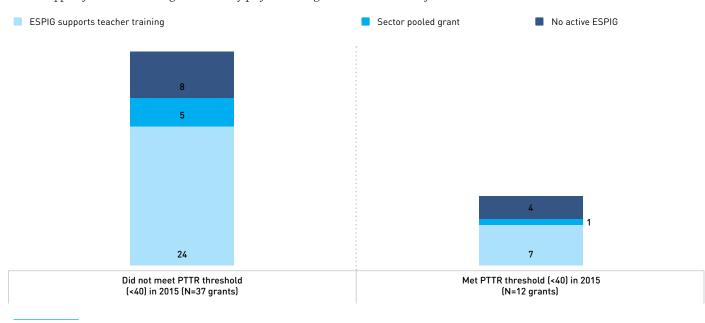


Source: UNESCO Institute of Statistics.

FCAC\*



ESPIG support for teacher training in FY2017 by performance against PTTR threshold of 40:1 in CY2015



Source: GPE secretariat.

Where teachers are available, it is also essential that they be allocated equitably among schools to benefit all children. Inequitable teacher allocation is often the result of either an absence of allocation mechanisms that ensure equitable distribution, or the ineffective implementation of such mechanisms. <sup>15</sup> For instance, teacher allocation decisions may be subject to political influences or may reflect the preferences of teachers to work in urban schools. <sup>16</sup> Thus, schools that are already disadvantaged, perhaps because of a lack of political patronage or because they are in remote rural areas, may also face teacher shortages.

The GPE results framework measures the equitable allocation of teachers, as indicated by the relationship (R2) between the number of pupils and the number of teachers per primary school (Indicator 11). In statistical terms, a country-level value equal to 1 represents a perfectly equitable allocation of

teachers. For a country to meet the minimum criteria for equitable allocation of teachers, it must have a value equal to at least 0.8.<sup>17</sup>

While no new data is available on Indicator 11, analysis of the country-level values between 2010 and 2014 for both indicators shows that 12 out of 19 DCPs with data available face challenges in terms of both the equitable allocation of teachers and the availability of trained teachers (Figure 2.8). In other DCPs, however, the adequate availability of trained teachers is accompanied by inequitable allocation or vice versa. This suggests the need for differentiated policy responses, based on the specific challenges faced by each DCP. GPE works to improve teacher training and deployment both at the country level, through support for sector planning and implementation grants, and through global initiatives (Box 2.2).

<sup>15</sup> IIEP-Pôle de Dakar, "Teacher Utilization and Allocation in Africa" (working paper), 2016.

<sup>16</sup> Tara Béteille and Vimala Ramachandran, "Contract Teachers in India," Economic & Political Weekly 51, no. 25 (June 2016).

<sup>17</sup> The value 0.8 indicates that 80 percent of the number of teachers per school is explained by the number of students per school.

FIGURE 2.8. Most DCPs face challenges in both teacher training and deployment (2010-2014).

Teacher allocation and PTTRs across DCPs (19 DCPs have data on both indicators)



#### BOX 2.2. GPE's Support to Teachers

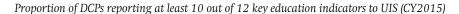
In addition to supporting improvements in teacher training and deployment through its country-level investments in sector planning and program implementation, GPE works with partners to address these challenges at the global level. GPE's new Knowledge and Innovation Exchange (KIX) mechanism will address key policy challenges in teaching and learning through a Learning Exchange platform that supports knowledge sharing, peer learning, and capacity development as well as investments in global public goods. In addition, as part of the steering committee of the UNESCO Teacher Task Force, GPE's Secretariat contributes to shaping the global policy dialogue, promotes knowledge exchange around teachers, and supports an initiative that brings together five other partners for a harmonized approach to improving stronger national teacher policies in four countries. To increase visibility around teacher deployment, the Secretariat is collaborating with UNESCO's IIEP-Pôle de Dakar on a policy brief and is exploring working together to develop guidelines for country-level actors. Finally, the Secretariat is undertaking two analytical studies in order to better understand the issues related to the supply of trained teachers and their equitable deployment and to identify further opportunities for action. These studies will be available beginning in the second half of 2018.

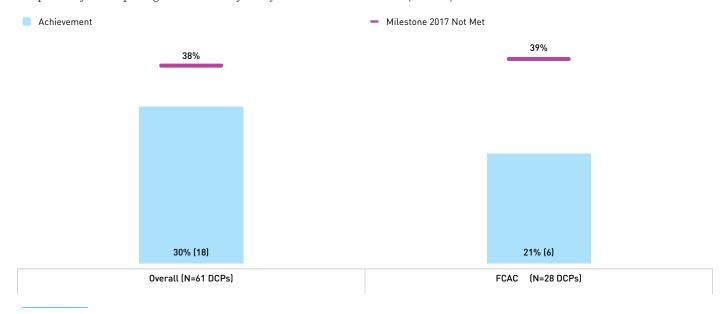
## Data (Indicator 14)

Good information is the foundation for good policy. Reliable education data can help to shape the incentives facing politicians resulting in better policy, help policymakers manage complex systems, improve accountability with stakeholders, and reveal hidden exclusions. At the country level, GPE brings together credible, evidence-based education sector plans, monitored through joint sector reviews that assess key data on plan implementation. Grant support for data systems further bolsters the capacity of the sector to monitor education outcomes.

The results framework tracks the proportion of DCPs that report at least 10 out of 12 key education indicators to UIS<sup>19</sup> (Indicator 14). In 2015, only 30 percent (18 out of 61 DCPs) reported at least 10 out of 12 indicators to UIS, lower than the 2017 milestone of 38 percent (Figure 2.9). Twenty-one percent of FCACs (6 out of 28) reported at least 10 key indicators, also missing the milestone of 39 percent for 2017. The overall milestone was met in 2016, as was the milestone for FCACs.

FIGURE 2.9. Data reporting overall and for FCACs was lower than the 2017 milestone.





Source: GPE compilation based on data of the UNESCO Institute for Statistics (database), Montreal, http://www.uis.unesco.org .

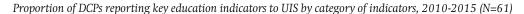
<sup>18</sup> The World Bank, World Development Report: Learning to Realize Education's Promise (Washington, DC: World Bank, 2017); UNESCO, Global Education Monitoring Report: Accountability in Education: Meeting our Commitments (Paris: UNESCO, 2017).

<sup>19</sup> See Appendix 2.1 for a list of indicators to be reported.

Disaggregation by categories of indicators shows that the most significant challenge is with respect to reporting service delivery indicators, which relate to teacher availability and training. Only 33 percent of DCPs (20 out 61) reported at least three out of four service-delivery indicators to UIS in 2015, signifying the need to strengthen national EMIS capacity for improved data availability and reporting on teachers. While a significantly greater proportion of DCPs reported data on outcome indicators and financing indicators, the proportion of DCPs that reported financing indicators declined sharply from 2014 to 2015 (Figure 2.10).

The challenge in reporting financing and service-delivery indicators was even more acute in the 43 DCPs that did not meet the threshold of reporting at least 10 indicators to UIS in 2015. Of these, only 23 percent (10 of 43 DCPs) reported three out of four service-delivery indicators and 30 percent (13 out of 43 DCPs) reported two out of three financing indicators. In contrast, 63 percent (27 out of 43 DCPs) could report outcome indicators in 2015. Of the 18 that met the UIS data threshold, only 10 reported three out of four service-delivery indicators — but all 18 reported at least two out of three indicators on finance.

FIGURE 2.10. Reporting on service delivery indicators remained problematic and reporting on financing indicators dropped sharply (CY2010 – CY2015).





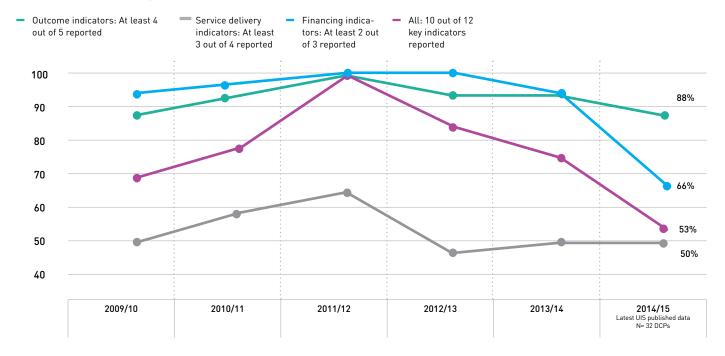
Source: GPE compilation based on data of the UNESCO Institute for Statistics (database), Montreal, http://www.uis.unesco.org .

A key challenge in this area appears to be that, having accomplished or established data collection and reporting to UIS in 2012, several DCPs were unable to sustain these processes. In 2012, out of 61 DCPs, 32 reported at least 10 indicators to UIS. However, in

2015, only 50 percent of the 32 DCPs reported at least 10 indicators (Figure 2.11). Here, too, reporting on service-delivery indicators remained low and reporting on financing indicators declined sharply.

FIGURE 2.11. The capacity to collect and report data to UIS was not sustained between 2012 and 2015.

Proportion of DCPs reporting key education indicators to UIS, by category of indicators (out of DCPs that reported at least 10 out of 12 key indicators in CY2012, N=32)



Source: GPE compilation based on data of the UNESCO Institute for Statistics (database), Montreal, http://www.uis.unesco.org

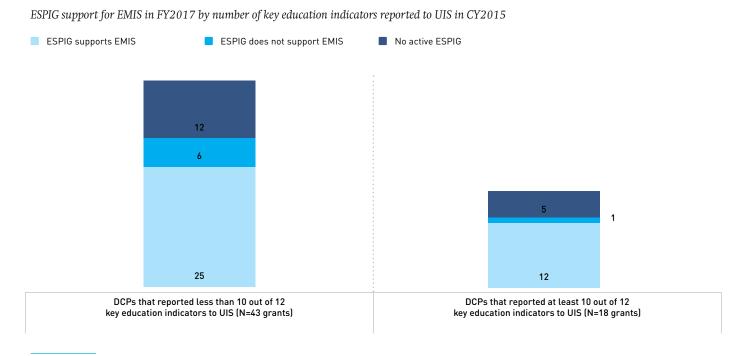
Several tools in GPE's new funding and operational model, in effect since 2014, are used to build the capacity of DCPs to collect, report and make use of data. The funding model requires that countries applying for an ESPIG must be able to provide education data, disaggregated by gender and socioeconomic status, and report critical data to UIS for global monitoring of education progress. If such capacity does not exist, a time-bound strategy<sup>20</sup> to develop or strengthen the national education management information system to produce reliable education and financial data is required. Dialogue between DCPs and the Secretariat during the quality assurance process for ESPIGs helps to identify milestones in addressing gaps, if any, in meeting these requirements. In cases where a data gap is identified but there is a lack of funding to address it, the

Source: GPE secretariat.

GPE funding model requires the use of ESPIG funds to address the gap. Progress toward milestones in addressing data gaps is monitored through the joint sector review process carried out by local education groups.

An important component of ESPIG support to DCPs is the development of education management information systems. Of the 43 DCPs that reported less than 10 key indicators to UIS in 2015, 31 had active ESPIGs in FY2017. EMIS were supported by 25 of these 31 ESPIGs (Figure 2.12). Of the six DCPs<sup>21</sup> where EMIS were not supported by ESPIGs, three are expected to submit new grant applications in FY 2019, through which process the requirements of the GPE funding model will ensure that this issue is addressed.

FIGURE 2.12. There was strong support for EMIS through ESPIGs in FY2017, including in DCPs with weak data reporting capacity.



<sup>20</sup> Indicator 17 of the results framework measures the proportion of DCPs with an ESPIG application approved in the reference financial year that have a data strategy that meets quality standards. See Chapter 3 for further details.

<sup>21</sup> All six ESPIGs were approved prior to the implementation of the new funding model. In cases where the GPE ESPIG does not support an EMIS system, the development of an EMIS may be financed through other sources.

Although data availability and reporting are important indicators of system capacity, data must be used for sector monitoring if it is to drive policy implementation and strengthen accountability. Joint sector reviews (JSRs) in DCPs are critical mutual-accountability platforms that promote inclusive dialogue and sector monitoring. The Secretariat assesses JSRs for quality, including whether they monitor key education outcome indicators. In CY2015<sup>22</sup>, JSRs in seven DCPs (out of the 35 JSRs assessed) were found not to have monitored key outcome indicators — yet five

of these DCPs reported all five key outcome indicators to UIS in CY2015. Therefore, while there is considerable progress to be made in ensuring the availability of education data, concurrent efforts are also needed to ensure the effective use of data when it is available. With these challenges in mind, GPE is working both at the country level and with private sector partners at the global level to employ innovative mechanisms in addressing the data challenge in DCPs (Box 2.3).

#### BOX 2.3. GPE's Efforts for Improved Data Availability and Use

At the country level, the incentives generated by funding-linked indicators, which constitute the variable part of GPE grants, can drive better data collection and use. For instance, the funding-linked indicator on equity in Rwanda's ESPIG targeted an improvement in the poorest-performing districts in terms of pre-primary gross enrollment ratio (GER) — from 10 percent in 2014 to 17 percent in 2017. To operationalize this indicator, disaggregated data on pre-primary enrollment was collected at the district level, which led to the identification of 22 districts with the lowest pre-primary GERs. The ESPIG supported targeted efforts to improve pre-primary enrollment in these districts, including the construction of pre-primary classrooms, the development and distribution of pre-primary instructional materials, and capacity building for pre-primary teachers and caregivers. By 2017, the average pre-primary GER in these 22 districts rose to 18 percent, exceeding the target set.

At the global level, GPE has entered into an agreement with the UIS to work together to collect data on public expenditure on education. Under this agreement, UIS will integrate the production of Indicator 10 of GPE's results framework into its data collection on domestic financing through questionnaires sent to DCPs. The first round of data, for 2017, produced under this agreement will be available in mid-2018. This process, which supplants two parallel processes carried out by GPE and UIS, will result in greater efficiency and higher-quality data on education financing, with the added benefit of that data being verified by both GPE and UIS.

Alongside this initiative, GPE has convened a multi-stakeholder Education Data Solutions Roundtable to help developing countries strengthen their collection, management and use of education data. The Roundtable will explore opportunities to improve DCPs' capacity to gather accurate, comprehensive and timely data, which is essential to understanding where improvements are needed in education systems and where progress is being made. The Roundtable will work closely with an EMIS taskforce (consisting of several international development agencies and constituted by the Secretariat) and will contribute to GPE's knowledge exchange and innovation work.

GPE also recognizes that the business community — which is represented at the Roundtable — can, in collaboration with other global development partners, offer innovative solutions, creative thinking and new technology that will drive improvements at community, regional, national and, ultimately, global levels.

<sup>22</sup> Additional information on the use of evidence in JSRs is presented in Chapter 3.