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TOWARD DATA-DRIVEN EDUCATION SYSTEMS

Insights into using information to measure results and manage change

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1. Introduction: The role of information in education

Today, 650 million children around the globe are at risk of being left behind as they fail to learn basic skills. Inequitable access to education is part of the problem, but even when children are in school, they may not be learning. In Uganda, for instance, barely half of grade 6 children read at a grade 2 level (Uwezo, 2016). In India, just one in four children enrolled in grade 5 can read a simple sentence or complete simple division problems (ASER Centre, 2017).

These challenges are widespread. According to the International Commission on Financing Global Education Opportunity (Education Commission; 2016), only one in ten children in low-income countries (four in ten in middle-income countries) are on track to gain basic secondary-level skills by 2030. Moreover, the obstacles to learning disproportionately affect marginalized populations—children in poor households or rural areas (especially girls), children with disabilities, and children affected by conflict and violence.

It is clear that the status quo is not good enough, but what should be done differently? While struggling schools would certainly benefit from better facilities and more teachers, research underscores that input-oriented solutions are likely insufficient. Many countries that dedicate substantial resources to education still fall short of ensuring that all children are learning. Meanwhile, relatively resource-poor education systems in Latvia and Vietnam, for example, punch above their weight in achieving greater gains for students than their peers with similar income levels (World Bank, 2018).

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Parents, teachers, policymakers, and school administrators need better tools to diagnose where and why learning gaps exist, and assess what strategies they can employ to turn things around. High-quality data and evidence are essential for both tasks.

Numerous governments, organizations, and companies have responded to this challenge and are generating copious amounts of data and analysis to support education decision-making around the world. Nonetheless, large gaps remain, as data management processes at the school and national level are often under-funded, ad hoc, and of variable quality and timeliness.

While continued investments in data creation and management are necessary, the ultimate value of information is not in its production, but its use. Herein lies one of the biggest challenges of translating information into actionable insights: those that produce education data are often far removed from

those that make crucial decisions about education policies, programs, and investments. With limited insight on what decision-makers use and need, the likelihood of disconnect between supply and demand is high.

Yet, there has been surprisingly little systematic research on the types of information education decision-makers in developing countries value most—and why. Much of the available evidence on the use of education data in developing countries relies upon individual case studies. These qualitative snapshots offer deep insights on use patterns and challenges in a single context, but make it difficult to draw broader conclusions.

In this report, we offer a unique contribution to this body of knowledge by analyzing the results of two surveys of education policymakers in low- and middle-income countries that asked about their use of data in decision-making. Survey participants include senior- and mid-level government officials, in-country staff of development partner organizations, and domestic civil society leaders, among others (see Appendix A for more information). Respondents do not include local-level officials, school administrators, or teachers.

This report aims to help the global education community take stock of what information decision-makers use to measure results and manage change. We define information broadly, including raw statistical and administrative data, quantitative and qualitative analysis, learning assessments, and the results of program evaluations. Drawing upon our review of the literature and the two surveys of end users in developing countries, we offer practical recommendations to help those who fund and produce education data to be more responsive to what decision-makers want and need.

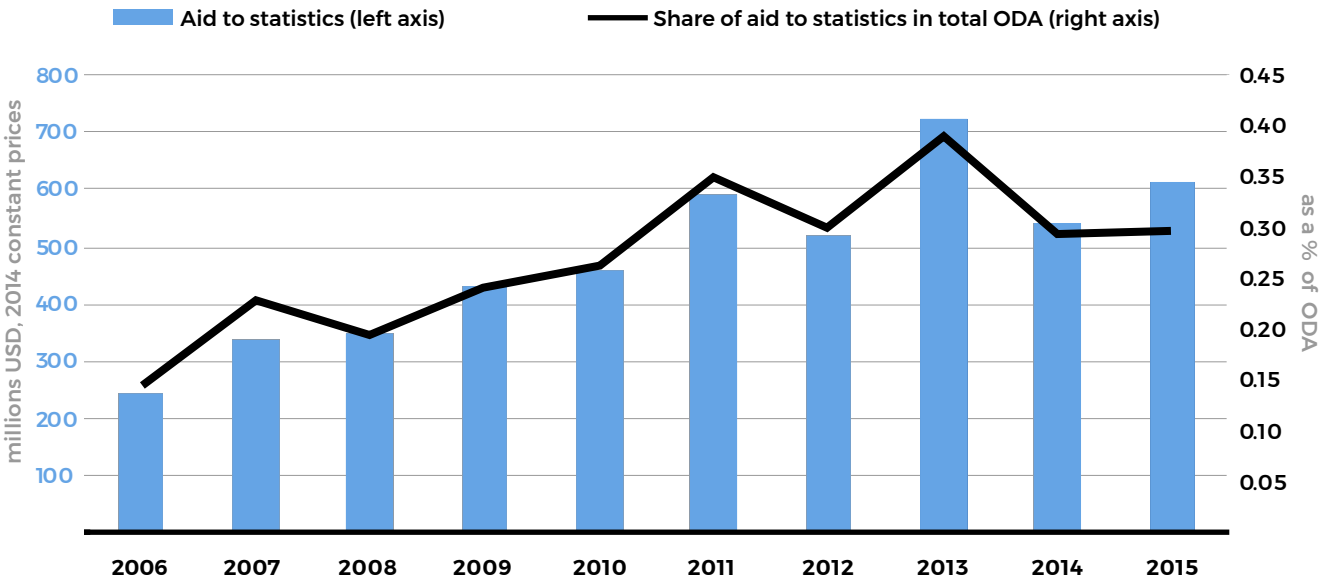
In the remainder of this chapter, we articulate our working theory of change that charts the path from information generation to use (i.e., how education systems transition from being data-rich to data-driven). In Chapter 2, we synthesize what past studies reveal about how data have influenced education policy, programs, and practice, paying particular attention to the motivations and incentives that appear to play a role in both the production and use of education data. In Chapter 3, we present the findings from two surveys of education stakeholders conducted in 2017, with the specific aim of identifying what data they use, how data are used, and how data can be more useful for policy decisions and actions. Chapter 4 concludes with several implications for the future of education data investments.

From information to impact: A theory of change

Data has emerged at the forefront of the global development agenda. Indeed, the United Nations (U.N.) issued a Report of the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda calling for a "data revolution."

Recent landmark reports echo this revolutionary zeal for more and better data in the education sector. For example, the Education Commission's *Learning Generation* report argues that "setting clear priorities and high standards, collecting reliable performance data to track system and student progress, and using data to drive accountability are consistent features of the world's most improved education systems" (2016, p. 52). The 2016 Global Education Monitoring report champions the generation and use of education data, particularly learning metrics, to realize the promise of education for all (UNESCO, 2017). The first World Development Report on education, *Learning to Realize Education's Promise*, reiterates the need to measure learning to catalyze action: "Lack of data on learning means that governments

FIGURE 1. Aid to statistics: Trends in volume and as a share of ODA, 2006-15, commitments



Source: OECD (2017). Development Co-operation Report 2017: Data for Development.

can ignore or obscure the poor quality of education, especially for disadvantaged groups" (World Bank, 2018, p. 91).

The international response to the call for a data revolution has been positive. ODA support for statistics has been increasing over the last decade, more than doubling from 2006 and reaching $541 million in 2015 (Figure 1). While this long-term positive trend is encouraging, ODA support for data still represents only a miniscule 0.3 percent of total ODA and only a handful of bilateral agencies account for nearly four-fifths of the aid for statistics. Moreover, year-to-year fluctuations indicate less than predictable support, as Figure 1 suggests.[1]

Ultimately, these investments in data creation must be matched by an equal (or greater) emphasis on increasing the use of evidence by decision-makers to allocate resources, plan programs, and evaluate results. The path from data generation to use, however, is not simple, automatic, or quick. The seemingly straightforward story of information supply, demand, and use is complicated by users' norms (how they prefer to make decisions), relationships (who they know and trust), and capacities (their confidence and capability to turn data into actionable insights). The process of moving from data generation to use and ultimately to an impact on education outcomes must also take into account different institutional operating environments (i.e., political context) that may incentivize or dampen efforts to make decisions based upon evidence.

Figure 2 illustrates the complex chain from data generation to use and impact. Each

1 Open Data Watch (2016) reports an impressive rise in global investments in statistical capacity between 2015 and 2016—from $264 million to $328 million—but, when comparing only the donors for which data are available in both years, the annual estimated contribution decreased by 10 percent.

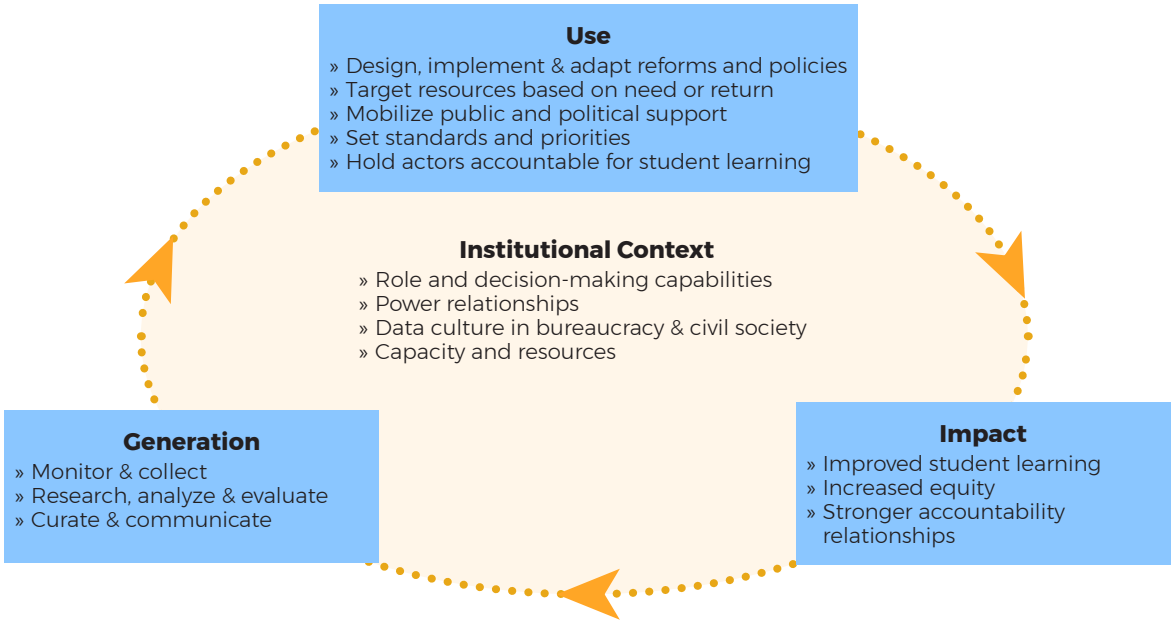
link in this chain involves different tasks and several actors.

Advances in technology and connectivity have largely democratized the *generation* of education data, particularly in front-line service delivery contexts such as local schools. Multiple levels of government (local, provincial, national) are involved in collecting data on education inputs and outcomes. These officials collect, verify, curate, store, analyze, and communicate information. Country-specific data are also generated and analyzed by others outside government, such as researchers in academic institutions, non-governmental organizations, international development agencies, and even parents and teachers.

To move from generation to impact, decision-makers must first take notice of available data, interpret it, and link it to the roles that they play in the education system (Coburn, Honig, and Stein, 2009). Only then can they use the data to inform specific decisions regarding how to allocate resources, set policies and standards, or make course corrections.

The ultimate objective of evidence-based policymaking in the education sector is to fuel progress toward three outcomes: improved student learning, increased equity, and stronger accountability relationships among policymakers, school administrators, teachers, parents, and students. Scholars suggest two avenues through which the use of data can lead to these desired outcomes: (1) improving the quality of decisions made and (2) strengthening the mechanisms available to monitor progress and motivate responsiveness (See Best et al., 2013; Kellaghan et al., 2009; Jacob, 2017; UNESCO, 2013; World Bank, 2018).

FIGURE 2. Data and evidence: From generation to use and impact



1. Better decision-making.
Rather than making decisions based upon gut instinct, personal priorities, or anecdotal evidence, decision-makers can use disaggregated data to pinpoint problems and assess the merits of possible solutions. In this respect, use of empirical data and analysis can help decision-makers tackle difficult questions of how to bolster learning, reduce wasteful spending, and target resources efficiently to areas of greatest need or highest return. Empirical data and analysis can also arm policymakers with information they can use to counter vested interests and make an evidence-based case to mobilize public support for difficult reforms.

2. Stronger monitoring and accountability.
The regular collection of data and information allows for more consistent assessments of the functioning of the education system—students, teachers, schools, and policies—based on objective performance indicators and targets. Such assessments help all stakeholders, including parents and the public, stay up-to-date on how the education system is performing (Read and Atinc, 2017). These instruments also open up opportunities for learning and adaptation by school actors and can restore confidence in education service delivery as goals are met.

Unfortunately, not all education data are used in these ways. Whether or not policymakers embrace evidence-based practice is largely shaped by their conception of what is valid evidence, their technical capacity to understand available data and analysis, and their own "cost-benefit calculus" regarding the effort needed to make decisions based upon evidence rather than other factors. The likelihood that data are effectively used in the decision-making process is highly influenced by the extent to which data availability is accompanied by an institution-wide culture of open communication (or information sharing), appreciation of data, and accountability for results.

Education systems are complex and multi-tiered. Staff have different responsibilities—from upstream policy formulation to downstream classroom instruction—each with their own incentive structures and data needs. In promoting a culture of evidence-based decision-making, leaders must

TABLE 1. How different education decision-makers use information

Ministry of Education (MoE) and decentralized units	Local Governments	School Administrators
The MoE and education sub-ministries use education data for policy design, strategic planning, and decision-making. The MoE diagnoses strengths and weaknesses of the system, measures and ensures equity within the system, monitors the distribution of resources, and holds the system accountable for making progress toward defined standards and objectives.	Local planning units use data to allocate resources, identify and support low-performing schools, monitor the implementation of education programs, and generate comparisons across schools. Depending on the level of autonomy, some sub-national governments are able to plan and execute action plans and allocate financing based on local needs.	School leaders use data to track progress toward system targets, formulate school action plans, guide school-level practices, and evaluate and support teachers and staff.

ensure that staff at all levels not only have access to data that is immediately relevant to their needs, but that the information they create feeds into the decisions of others (see Table 1).

For instance, higher-level administrators responsible for student testing and accountability are likely to focus on the reliability of tests, whereas local district officials responsible for meeting national standards are more likely to use those tests to measure achievement gaps across schools. Civil society groups may use test scores as a barometer of how well their neighborhood schools are performing, while employers are primarily interested how student performance signals the quality of the new graduates available to them.

A strategy for data generation and use must reflect these differences in the perspectives and roles of various stakeholders. There are instances when local concerns are misaligned with national priorities or standards. For example, school-level mechanisms to monitor teacher performance may not connect to up-stream decisions about compensation and in-service training. Similarly, reforms targeted at strengthening social accountability may be limited in cases where public feedback is not integrated into decision-making processes (Read and Atinc, 2017).

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This chapter articulated a theory of change for how data, in the hands of motivated decision-makers, can lead to improved education outcomes. In Chapter 2, we turn from the theory of how data informs education sector decisions to examining what this looks like in practice based upon available evidence.

2. Do investments in education data match use?

The global education conversation has shifted focus in recent years from raising enrollments to improving learning outcomes. This refocusing of education priorities has spurred a notable rise in national and international investments to measure student learning. However, it is less clear whether these data investments are substantively informing the design, delivery, and monitoring of education programs.

In this chapter, we assess the current state of investments in data generation, particularly efforts to strengthen education management and information systems (EMIS), large-scale student assessments, and impact evaluations of policies and programs. We also review the existing evidence of whether and how education sector decision-makers use these information sources.

A growing store of data and evidence

A learning-focused education system must capture accurate, timely, and comparable data that link inputs (e.g., school resources and financing) to outputs (e.g., school enrollment and attendance) and outcomes (e.g., performance assessments and other quality indicators, see Appendix B: Types of education data). Demand for more and better education data has given rise to various frameworks, compacts, and task forces to overcome large data gaps. The World Bank alone has financed over 200 projects related to EMIS in a total of 89 countries between 1998 and 2013 (Abdul-Hamid et al., 2017).

Moreover, global and local initiatives have emerged to facilitate the production of learning data. Consequently, participation in international, regional, and citizen-led learning assessments has grown over the past two decades in low- and middle-income countries (Box 1). In 2015, for example, 72 countries participated in the Program for International Student Assessment (PISA), up from 42 in 2001, with an additional seven countries involved in PISA for Development (Lockheed, 2015). Similarly, participation in the Trends in International Mathematics and Science Study (TIMSS) increased from 26 to 51 countries for the 4th-grade test between 2003 and 2015 (NCES, 2017). Regional initiatives on student assessments for countries in Africa and in Latin America and the Caribbean have also increased their coverage.

More countries than ever before are also implementing their own large-scale national assessments of learning. According to the UNESCO Institute of Statistics (UIS) Learning Assessment Capacity Index, 127 of 235 countries (54 percent) conducted a national assessment between the years of 2010 and 2015. These national assessment systems are

BOX 1. Types of large-scale assessments of student learning

National and sub-national learning assessments	National and sub-national learning assessments regularly track and assess whether students are mastering the national curriculum, in which areas students are stronger or weaker, whether certain population groups are lagging behind and by how much, and which factors are associated with better student achievement. Assessments are census-based or capture representative samples of students across countries or provinces.
International and regional learning assessments	Globally and regionally benchmarked assessments allow comparable assessments of performance across countries, which can provide a check on information that emerges from national assessments. Examples of international assessments include the Program for International Student Assessment (PISA), Trends in International Mathematics and Science Study (TIMSS), and Progress in International Reading Literacy Study (PIRLS). Regional assessments include the Southern and Eastern Africa Consortium for Monitoring Education Quality (SACMEQ), the Programme for the Analysis of Education Systems (PASEC) in francophone West and Central Africa, and the Latin American Laboratory for Assessment of the Quality of Education (LLECE).
Citizen-led learning assessments	Citizen-led assessments measure learning outcomes for children both in and out of school. Such assessments, led by civil society organizations such as the ASER Center in India and Uwezo in East Africa, involve parents and community stakeholders to yield learning metrics on both access and quality of education systems. Citizen-led assessments are of particular importance in settings where official assessments are of questionable quality.

Source: Adapted from the World Development Report (2018).

thought to be more relevant than international assessments in designing pedagogical reforms and changing the way resources are allocated to schools and classrooms (Clarke, 2012).

Policymakers and practitioners also have access to a larger body of research than ever before about the determinants of increased learning and equity within education systems. For instance, the volume of impact evaluations completed has increased threefold since 2005 (Figure 3).[2] These studies pinpoint reforms, investments, and community initiatives that have made a quantifiable difference in learning outcomes. In addition, within the last five years, a number of critical meta-reviews have further clarified what works to improve student learning.[3]

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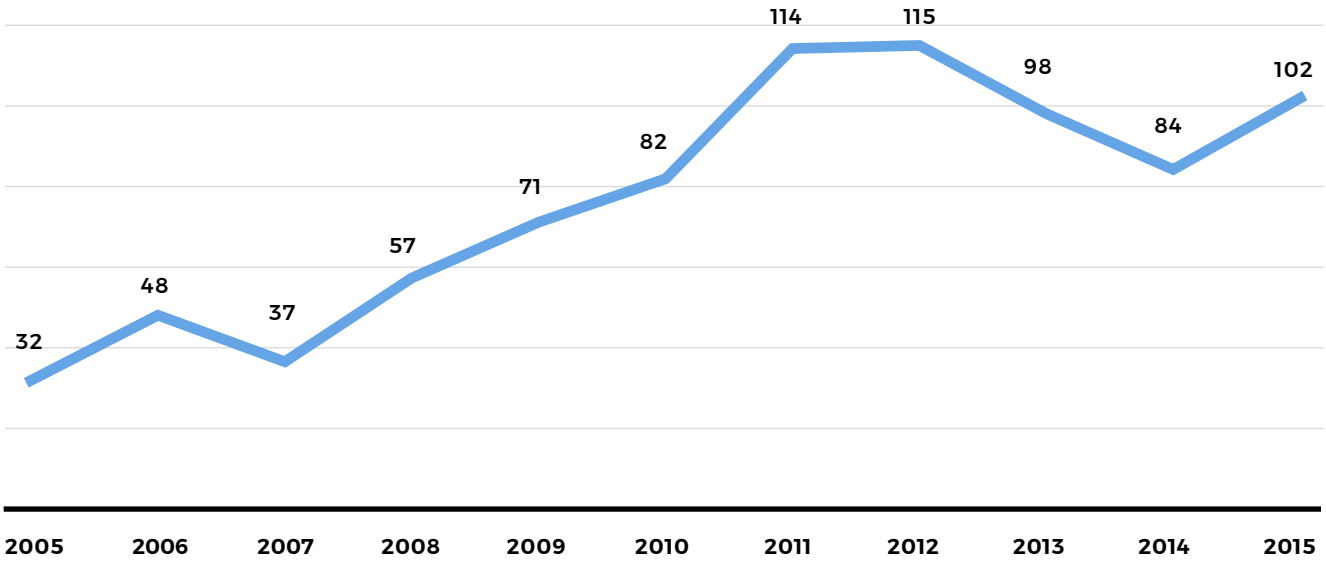
There is no question that education information is becoming more abundant—but is it being used by those making consequential decisions about where to devote scarce resources and how to design programs in order to maximize student learning?

2 These rigorous methods of impact evaluation, experimental or quasi-experimental, require that there is a clearly identified counterfactual in order to estimate the impact of programs or policies.

3 Murnane and Ganimian (2014); Andrabi, Das, and Khwaja. 2014; Krishnaratne, White, and Carpenter (2013); Conn (2014); Blimpo and Evans (2011); McEwan (2015); Snilstveit, et al. (2016); Evans and Popova (2016); Glewwe and Muralidharan (2015); Kremer, Brannen, and Glennerster (2013).

FIGURE 3. Number of impact evaluations in education, by year



Source: 3ie Impact Evaluation Repository. www.3ieimpact.org/en/evidence/impact-evaluations

Collecting, processing, and communicating data requires substantial resources. Therefore, it is imperative that we assess whether data produced are indeed accessible and valuable to key decision-makers. The next section examines what the existing evidence can tell us about the current state of use of data in education decisions.

Evidence of information use

When data advocates promote evidence-based decisions in education systems, they rarely specify who are the intended users, for what purpose, and what kinds of data are needed. The implicit assumption is: by everyone, for everything, and any data. However, the reality is more sobering. There is little indication that decision-makers are systematically using education data and analysis to inform their policies or decisions.

There are many potential effects of evidence on stakeholders—some intrinsic (e.g., a greater appreciation of the role or state of education among society writ large) and some instrumental (e.g., improving specific education outcomes through motivating better decisions).[4] Given the difficulty of assessing the more intrinsic or symbolic role of information, here we employ an instrumentalist approach, restricting our focus on the use of data to inform specific policies.

EMIS

An Education Management Information System (EMIS) produces data that could be of tremendous value for the design, implementation, and monitoring of education programs. Table 2 summarizes the stated uses of ten EMIS initiatives, including facilitating information exchange between levels

4 Boswell (2014) distinguishes between two uses of information: legitimizing and substantiating. Policymakers can use information to bolster their credibility in taking sound, rational decisions, or deploy information to back up claims or preferences. For more information, see https://christinaboswell.wordpress.com/2014/06/23/why-real-policy-impact-is-more-difficult-to-evidence-than-symbolic-knowledge-use/.

of government, planning and budgeting, performance monitoring, and reporting.

The EMIS centrally organizes information from multiple levels of the education system, collecting and managing critical data points such as student enrollments, number of teachers, and class size (see Appendix B for more information on type of education data). Schools or local governments usually report these data on a periodic basis, using standard forms and guidelines from the central education ministry.

Countries are increasingly adopting web-based dissemination of EMIS data, which is making education systems more open and transparent. However, the utility of this information is only as good as the strength of the underlying data.

TABLE 2. Stated use of EMIS initiatives, by country

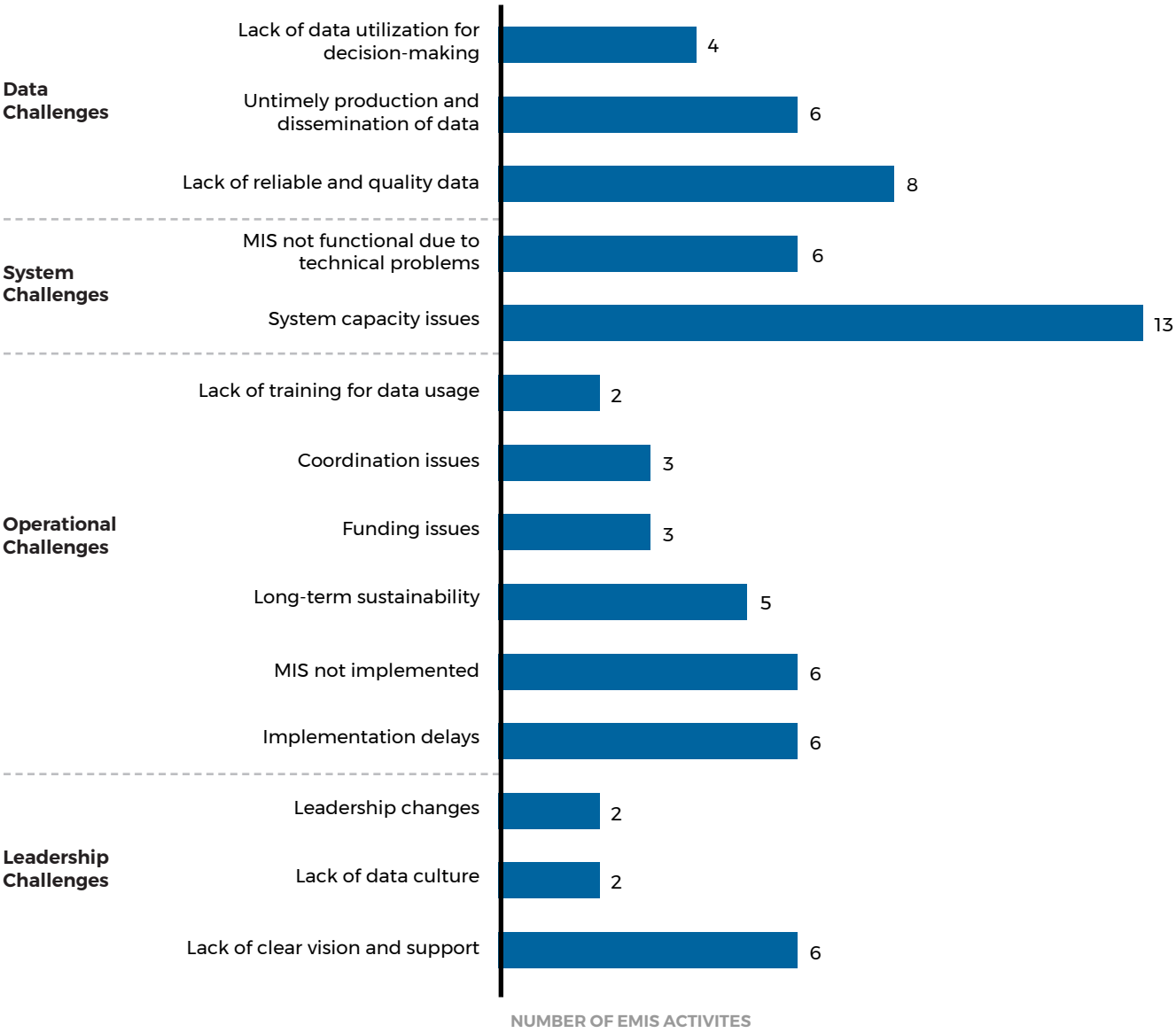
Country	Information sharing between government levels & agencies	Integrating hard-to-reach areas	Planning	Budgeting activities	School management	Identifying infrastructure needs	Performance monitoring	Reporting on system
Bosnia & Herzegovina				✓				✓
Cambodia	✓					✓		
Eritrea	✓					✓	✓	
Guatemala	✓						✓	
Honduras	✓						✓	
Lebanon	✓		✓		✓			
Lithuania	✓						✓	✓
Malaysia		✓						
Nigeria			✓					
Philippines						✓		✓

Source: Abdul-Hamid, Saraogi and Mintz (2017)

Unfortunately, in many countries, the EMIS is not fully functional, which inhibits effective monitoring of education policies and programs (Abdul-Hamid, Saraogi and Mintz, 2017). In particular, education administrators must tackle several challenges ranging from data quality to leadership and capacity, before these EMIS are "fit-for-purpose" (Figure 4).

A number of case studies illustrate these challenges in practice. A study of EMIS capacity in the Philippines, Ghana, and Mozambique, for example, concludes that the countries were not generating adequate information to monitor learning outcomes, inequality, and cost-effectiveness (DeStefano, 2011). Ghana, often cited as a regional leader for its data capabilities, still faces major constraints of duplicative data systems, limited quality

FIGURE 4. Challenges for education management and information systems



Note: MIS = Management Information System
Source: Abdul-Hamid, Saraogi and Mintz (2017)

assurance procedures, and over-reliance on paper-based and manual data entry processes (Spratt et al., 2011).

In India, a survey of frontline bureaucrats reveals that ambiguity about the purpose of school monitoring data can severely undercut the usefulness of information being collected (Bhatty, 2016). "Information [on school quality] that is so assiduously collected through ever-more sophisticated formats is neither analyzed nor followed-up [because it is poorly defined]. Instead, the files remain locked up in school, block, or district cupboards" (11).

LEARNING ASSESSMENTS

Sponsors of student learning assessments emphasize their value for policymaking and agenda setting, but the evidence of such use is scarce and uneven. Open data on student performance has been a boon to researchers seeking to explain differences in education outcomes at regional and international levels. However, the link between assessment results and educational reforms in countries is tenuous at best (Kellaghan, 2009).

International assessments appear to have the greatest visibility in higher income countries. Countries like Germany and Norway have responded to the release of their PISA results with a revision of curriculum standards (Breakspear, 2012) and the introduction of a national quality assessment system (Baird et al., 2011), respectively.

The challenge of translating awareness of international assessments into action is more acute in middle- and low-income countries. In Colombia, Indonesia, Jordan, and Turkey, the release of PISA and TIMSS results have been associated with a subsequent uptick in discussion of education reform (Lockheed, 2015). However, it is unclear whether this heightened awareness has provoked action.

Similarly, Early Grade Reading Assessment (EGRA) results triggered debate about the quality of education in Senegal, but little change in policy (Mejia, 2011). Also similarly, citizen-led learning assessments in India, Pakistan, and a few African countries have increased public awareness of poorly performing schools, but have not spurred concrete action to improve learning (R4D, 2015).

Comparatively, national learning assessments have had more traction with policymakers in developing countries. In Jordan and Uruguay, the national assessment results were used to help teachers improve their teaching (Obeidat and Dawani, 2014; Ravela, 2005). In Bhutan, national assessment results spurred a revision of the mathematics syllabus (Kellaghan et al., 2009). In Kenya, they triggered an effort to ensure that all schools had sufficient desks and textbooks (ibid).

Table 3 summarizes evidence cited in reports about the use of national assessment data in decision-making. These data appear primarily to support countries' monitoring and evaluation systems, curriculum reform, and allocation of school inputs, though the intensity of use is not known. They are less often utilized in budgeting and to shape teacher policies.

PROGRAM EVALUATION AND OTHER RESEARCH

While school-level administrative data from a country's EMIS and student learning assessments can support real-time monitoring, program evaluations and other research may be more helpful in assessing what is and is not working and why.

It makes sense that the growing number of program evaluations in the education sector would prompt decision-makers to mine these data for lessons to inform program selection, design, and implementation. In fact, many organizations make their evaluations accessible on their websites and easily

TABLE 3. Areas of decision-making which used national student assessments, by country

Country	Curriculum reform	Support to teachers	Student support	Staff deployment	Professional develop-ment	Teacher compensa-tion	Budgeting	School inputs	Strategy / M&E
Bhutan	✓								
Bolivia			✓						
Burkina Faso									✓
Ethiopia	✓								
Gambia, The	✓							✓	✓
Guinea			✓						
India			✓	✓		✓			
Jordan		✓			✓				
Kenya								✓	
Nepal									✓
Sri Lanka									✓
Uganda									✓
Uruguay		✓							
Vietnam	✓						✓	✓	
Zimbabwe					✓			✓	✓

Source: Authors' analysis based on information provided in Abdul-Hamid, Abu-Lebdeh, and Patrinos (2011), Kellaghan, Greaney, and Murray (2009); Obeidat and Dawani (2014); Ravela (2005); Senghor (2014), Tobin, et al. (2015), UNESCO (2013).

digestible through short policy briefs for this purpose. In addition to individual program evaluations, they also provide meta-reviews that sift through hundreds or thousands of published studies to distill relevant insights.

Table 4 draws upon data from one of these organizations—the International Initiative for Impact Evaluation (3ie)—which tracks how their evaluation studies are being used by decision-makers. While not limited to the education sector, the data shows that impact evaluations are influencing decision-making across sectors, particularly with regard to informing course corrections, as well as discussion and design of policies and programs.

Nonetheless, two reviews by the Global Partnership for Education (GPE) suggest that research and analysis have limited influence on the education sector plans of the countries it supports. According to Bernard (2015), only 18 of 42 country plans (43 percent) used an education sector analysis to inform their policies and even fewer cited rigorous analysis to identify root causes of performance challenges or determine sector priorities, even when the information was readily available.

TABLE 4. Types of uses of impact evaluations and systematic reviews (associated with 3ie)

Use	Percent
Change policy or program design	27.8
Inform discussion of policies & programs	25.8
Inform design of other programs	23.7
Inform global policy discussions	11.3
Take successful programs to scale	8.2
Close programs that do not work	3.1
Improve the culture of evaluation use & strengthen the enabling environment	0
Total	100

Source: Executive Director's Report to the Eighteenth Meeting of the 3ie Board of Commissioners, London, November 7, 2017, page 9.

Similarly, an earlier assessment of 46 sector plans and joint sector reviews found that these documents rarely discussed learning outcomes or cited empirical evidence (e.g., education production functions, randomized trials, meta-analyses, surveys) in articulating their approach to improving learning outcomes (GPE, 2012). While education sector plans are only one possible outlet, among many, for decision-makers to make use of available program evaluations or other research, this apparent disconnect between evaluations and forward-looking planning warrants further scrutiny.

While we will probe this question in greater depth in the next chapter using the survey results, here we will make three observations. First, education decision-makers will only use evaluation data that is relevant to them. This might be easier said than done. The 3ie repository is a case in point: over half of the 855 impact evaluations in the education-sector pertain to just 10 countries (Figure 5). Education stakeholders interested in other geographic areas are out of luck.

Second, evaluation studies tend to be funder- and researcher-driven, and thus may not cover the specific programs or topics of interest to a broader set of education stakeholders.

Finally, published evaluation studies typically focus on programs that have shown some impact, but education decision-makers are interested in learning from not only program successes, but also their failures to avoid common pitfalls.

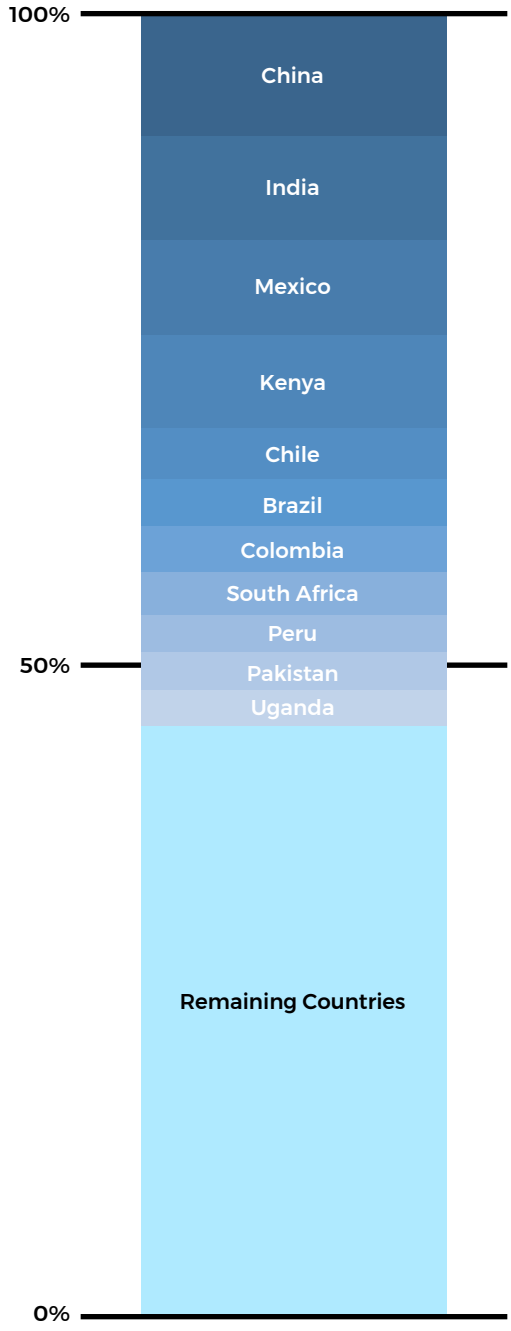
Beyond evaluation studies that focus on specific policies or programs, other initiatives, such as the Research on Improving Systems of Education (RISE) program and the World

Bank's Systems Approach to Better Education Results (SABER), aim to produce a rich body of analytical work that could improve our understanding of the underpinnings of progress in education outcomes in developing countries.

SABER, in particular, offers system-level diagnostics on the state of education in developing countries. The diagnostic toolkit enables educators and policymakers to assess education policies and practices in light of global standards and best practices.

There is some indication that SABER diagnostics are being used to influence country reforms and dialogue with development agencies.[5] For example, one case study documents steps that Jordan has taken (based upon background information from SABER) to strengthen its student assessment systems through linking student assessments with teacher training and support, as well as disseminating assessment results (Obeidat and Dawani, 2014).

FIGURE 5. Impact evaluations in education, by country[6]



Source: 3ie Impact Evaluation Repository. www.3ieimpact.org/en/evidence/impact-evaluations/

5 See country briefs on the program website: http://saber.worldbank.org/index.cfm?indx=6&sub=5.

6 China (81), India (68), Mexico (62), Kenya (61), Chile (33), Brazil (32), Colombia (29), South Africa (28), Peru (26), Pakistan/ Uganda (both, 24).

In this chapter, we distilled insights from the available literature to understand how decision-makers use three sources of evidence—data from a country's EMIS, student learning assessments, and program evaluations—to inform education policy and practice. The scorecard is mixed at best: investments in data generation appear to be outstripping the use of this information to strengthen education systems, aside from a few bright spot examples.

However, there is still much that we do not know about the data decision-makers use and the evidence that they want to be more effective in their jobs. In Chapter 3, we analyze the results of two recent surveys of education decision-makers in order to shed light on these questions from the perspective of one important user base: national-level decision-makers and influencers involved in setting and informing education policy across public, private, and civil society spheres in low- and middle-income countries worldwide.

3. Identifying data needs: What do education decision-makers want?

To move from data generation to policy impact, we need better intelligence on the barriers to evidence use and the types of information that decision-makers want. In the previous chapter, we examined available evidence of education data investments and use, but were left with more questions than answers.

In 2017, AidData fielded two surveys of national-level policymakers and practitioners in low- and middle-income countries who shared their experiences of how they source and use data in their work, as well as what would be most helpful to them in the future. In this chapter, we analyze these novel datasets to answer three key questions: what data are in demand, by whom, and why?

We will discuss these findings in more detail in the remainder of this chapter. The following section first provides more background on the survey data to set the findings in context.

Top-line findings

- Education decision-makers seldom view evidence as the decisive factor when weighing the merits of policy decisions, but it does appear to play a supporting role.
- Education decision-makers consume data from various sources and of diverse types in their work, with demand outstripping supply when it comes to program evaluation data.
- Education decision-makers want data to be timely, actionable, disaggregated, and locally relevant. To this end, they prioritize strengthening their countries' EMIS.

BOX 2. Comparing the surveys

Listening to Leaders Survey. The *2017 Listening to Leaders Survey* was sent via email to policymakers and practitioners knowledgeable about, or directly involved in, development policy initiatives at any point between 2010 and 2015, in 126 low- and middle-income countries. We were successfully able to send a survey invitation to roughly 47,000 of the 58,000 individuals who met our inclusion criteria (about 80 percent). Of the 47,000 people who received an invitation, 3,500 (7.4 percent) participated in the survey.

Education Snap Poll. We identified a subset of the broader *Listening to Leaders* sampling frame of individuals who held positions of relevance to the education sector to use as the sampling frame for the *2017 Education Snap Poll*. Of the 2,000 individuals who were sent the survey invitation, 180 leaders (9 percent) responded.

Both surveys captured the views of five stakeholder groups. The profile of education sector respondents of both data sources is broadly similar: around 40 percent are host government officials and most are from sub-Saharan Africa. Compared to the snap poll, the share of in-country development partner respondents was smaller in the *2017 Listening to Leaders Survey*; and the corresponding share of CSO/NGO respondents was larger.

For more information on the composition of the survey respondents please see Table A1 and A2 in Appendix A.

About the data

AidData's *2017 Listening to Leaders (LtL) Survey* captured the views of nearly 3,500 survey participants in 126 low- and middle-income countries from 22 policy domains, including education. Their insights shed light on the broader picture of data and evidence use, as well as how the education sector is different from other social sectors.[7]

Specific to this study, AidData and the Brookings Institution fielded a more targeted survey of decision-makers in 126 countries. Approximately 180 leaders from 78 countries responded to the *2017 Education Snap Poll.* The poll provides a unique opportunity to examine the various roles that education stakeholders perform and their specific data needs.

The respondents of the two surveys included representatives from five stakeholder groups: government officials, development partner organizations, civil society groups and NGOs, the private sector, and independent experts.

Given the relatively small sample size for the education poll, we primarily draw insights regarding the survey respondents overall, though in some cases we mention differences among stakeholder groups. The majority of the education poll respondents have roles that support policymakers who make decisions related to these domains. Some also make final decisions related to various education activities.

7 The health and education sectors, for example, have a similar service delivery model, but their investment strategies hint at very different views on the value of data. Only three percent of official development assistance for education is spent on global public goods such as data and research, compared with 20 percent for health (Schäferhoff and Burnett, 2016).

In interpreting the results, it is important to recognize that the focus in both surveys is very much on national-level decision-makers. As such, these data give insight into what some user groups care about, but not the needs and concerns of other groups (e.g., parents, teachers, school-level administrators, local officials).

What is the role of data and information in decisions?

Rather than studying data use in the abstract, survey respondents offered their insights on the types of decisions they make in the education sector and the role information plays—among other factors—in that process. Government officials, for example, may allocate resources, determine quality standards, and hold school administrators accountable for meeting national targets.[8] Civil society leaders may advocate for more effective government-run schools or directly administer their own programs that are subject to national standards.

Using their survey responses, we can gain insight into the extent to which education data or analysis is a driver of these decisions in practice. Specifically, we asked participants in the 2017 *Education Snap Poll* about the role of information versus other factors in driving ten common education decisions, adapted from the OECD's Education Sector at a Glance (2012). We further categorized these decisions into four decision-making domains: (1) organization of instruction; (2) personnel management; (3) resource management; and (4) planning and structures (see Table 5).

TABLE 5. Education decisions included in the 2017 Snap Poll, by domain

Organization of instruction	Designing and implementing support activities for students Testing, assessing, and/or credentialing students
Personnel management	Hiring and deploying teachers or principals Developing careers and assessing performance of teachers and/or principals Determining compensation for teachers/principals
Resource management	Budgeting and allocating financial resources for education Ensuring provision of school inputs
Planning and structures	Designing and defining programs of study and course content Creating or closing/abolishing schools or grades Planning and developing strategies

Source: Decision-making domains adapted from OECD Education at a Glance (2012)

Leveraging responses from the 2017 *Listening to Leaders Survey,* we can also pinpoint the primary purposes for which decision-makers and influencers use education data or analysis in their work. Survey respondents could identify several possible use cases, including: program design, program implementation, advocacy and agenda-setting, capacity

8 School administrators supervise teachers, implement school budgets, and report on student enrollment and progression. It should be noted that while these front-line implementers are an important group of education data users, our survey results are primarily capturing use patterns of national-level leaders.

building and technical assistance, monitoring and evaluation, research and analysis, or external communications.

In the remainder of this section, we analyze how decision-makers responded to these two questions on the role of information writ large and the particular purposes for which they use education data or analysis.

Finding 1: Having enough information is seldom the decisive factor in making most education decisions; instead, decision-makers point to having sufficient government capacity.

In determining whether to enact education policies, modify programs or allocate resources, decision-makers assess the anticipated benefits and costs of the options before them. In the process, they weigh many factors of which data is only one consideration.

In the 2017 *Education Snap Poll,* we asked policymakers and practitioners to identify the most important factor in making or influencing ten common education decisions.[9] Survey participants identified sufficient government capacity to implement [policy or programmatic] changes as the decisive factor for most decisions in the education sector.

So, where does data or analysis fit into the decision-making process? In Figure 6, we see that leaders view having sufficient information as less consequential in how decisions are made than technical capacity, financing, and political support. It should be noted that this does not necessarily mean that these decision-makers view this as the ideal situation, merely the status quo. That said, these results are consistent with prior studies, such as that by Bruns and Schneider (2016) which show that political considerations have stymied education reforms in several Latin American countries, even when empirical evidence justifies reforms.

There could plausibly be a mutually reinforcing relationship between government capacity and the perceived importance of information in decision-making. Shortage of staff in national statistical organizations and ministries and limited capacity for using and analyzing data have been reported to be among the most critical constraints to data use in Honduras, Timor-Leste and Senegal (Custer & Sethi, 2017).

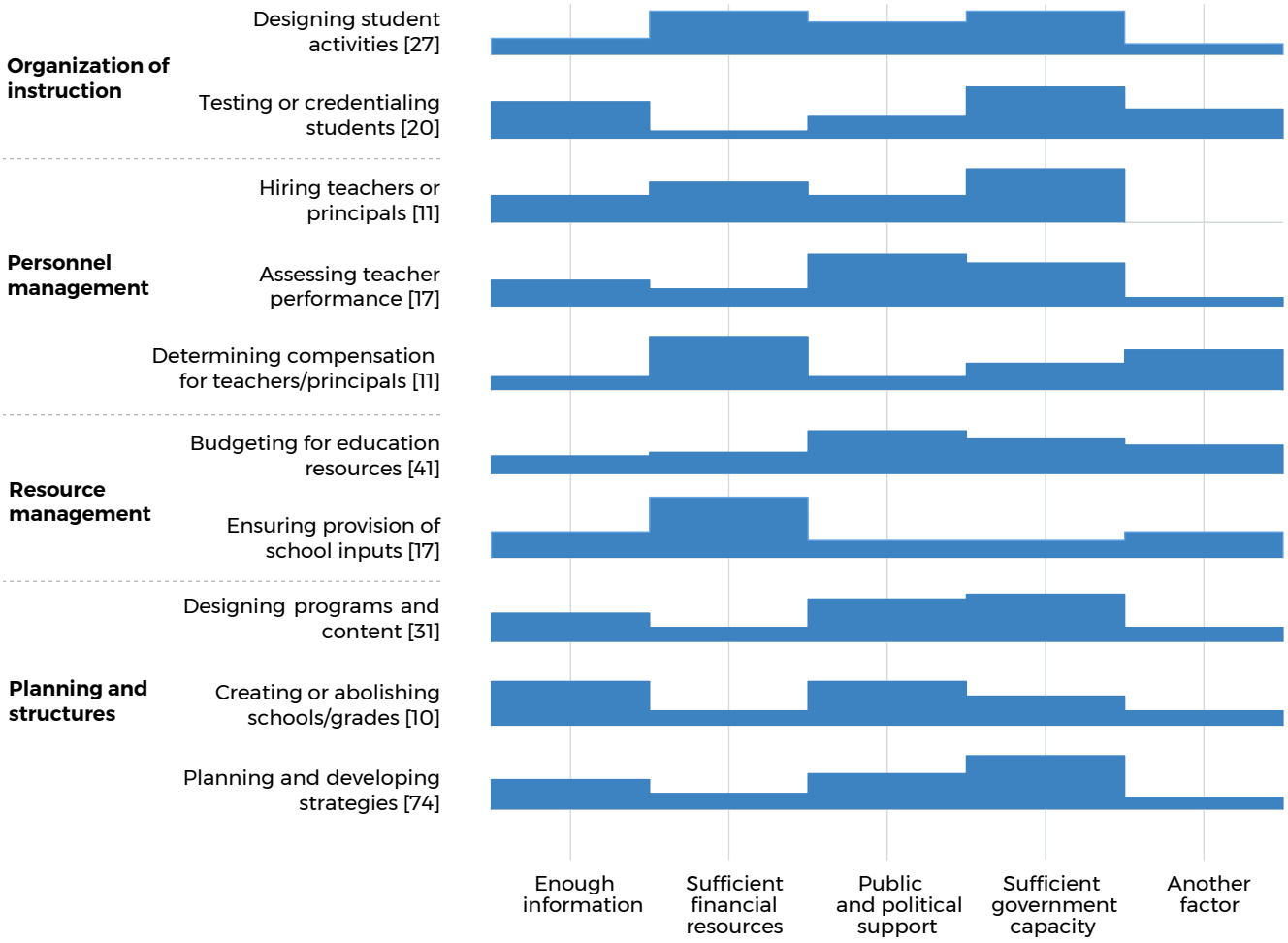
Is the availability of sufficient information more critical to some decisions than others? Leaders place a somewhat higher premium on having enough information when it comes to decisions such as creating or abolishing schools or grades, and testing, assessing or credentialing students (Figure 6).[10] One possible explanation for this could be that leaders feel that they need stronger justification (via an evidence base) for these decisions as they could become easily politicized. Teachers or parents may strongly disagree with a school closure, for example, and mobilize dissenting voices.[11]

9 Respondents first selected all the activities they were personally involved with and then identified the most important factor in making or influencing those decisions. See Figure 6 for the response options. While respondents could have interpreted "sufficient government capacity" in a number of ways, we think it reasonable to interpret this as capacity to implement programs or policies. See Appendix D for the full Education Snap Poll questionnaire.

10 This result is based on a rather small number of responses, and therefore should be interpreted with caution, especially in generalizing the findings to the education sector as a whole.

11 In addition to the pre-defined activities, respondents could select "other" and write-in responses. These were mapped to the decision domains as much as possible, but we combined the 15 responses that could not be mapped and created a fifth category "other". Several of these responses relate to working with education data, statistics, or analysis. It is unsurprising that information (along with public and political support) is the most important factor for this group of respondents.

FIGURE 6. What is the most important factor influencing decisions in various education activities?



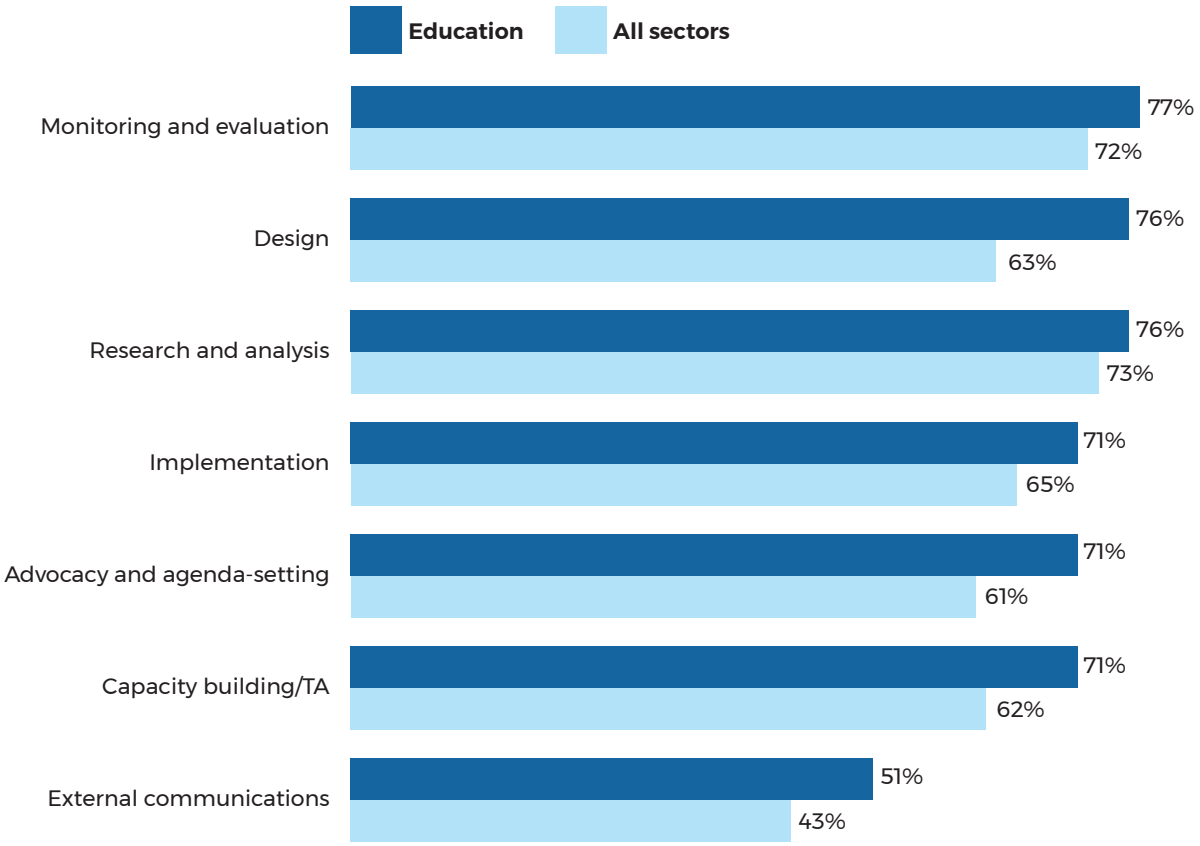
Notes: Of the ten activities listed on the left side of this figure, each respondent first selected the activities that s/he was involved in, and then the most important factor influencing the decisions pertaining to each activity selected. For each activity, the distribution of responses is visualized from left to right. The total number of responses for each activity is noted in parentheses.
Source: 2017 *Education Snap Poll*

Finding 2: Education decision-makers employ evidence in a supporting role throughout the policymaking process, for both retrospective assessment and forward-looking activities.

Information may not be the decisive factor in education decisions, but it is still one of the variables that decision-makers consider. When analyzing the results of the *Listening to Leaders Survey* across all sectors, Masaki et al. (2017) observed that, on average, "leaders use evidence more to conduct retrospective assessments of past performance than to inform future policy and programs."

Notably, however, decision-makers in the education sector are more likely to use data and analysis for forward-looking purposes, such as design and implementation of policies or programs, compared to the use

FIGURE 7. For what purposes do education decision-makers use information?



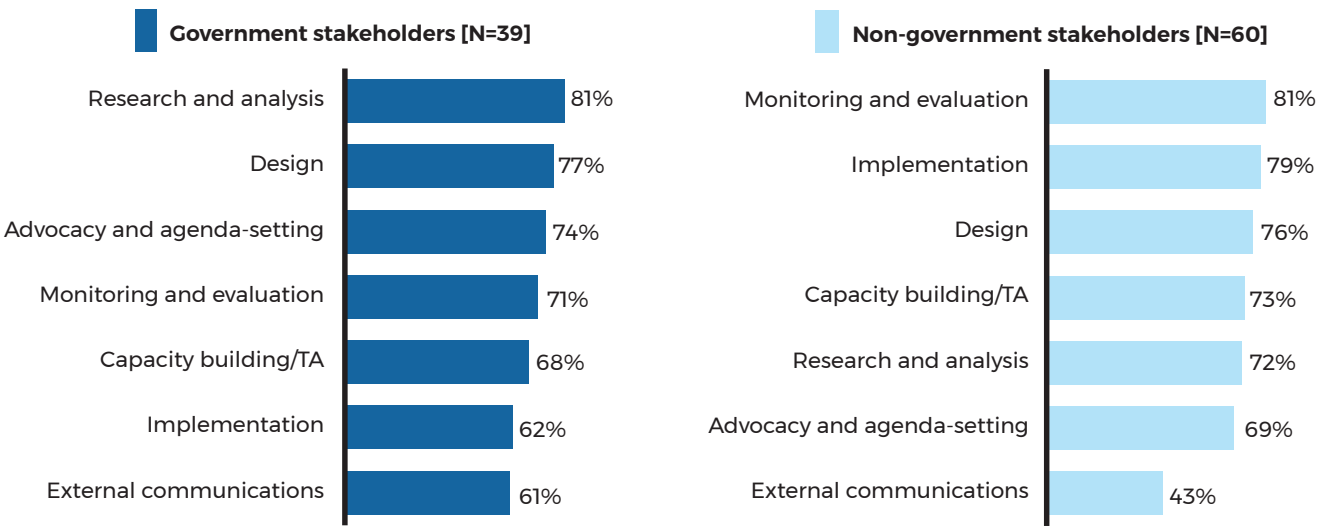
Note: This figure shows the percentage of respondents in (a) the education sector and (b) all sectors who use evidence for different purposes (n=99 and n=1769, respectively). Note that the percentages do not add up to 100 because respondents were able to select all applicable response options.
Source: 2017 *Listening to Leaders Survey.*

patterns observed overall for all sectors. As shown in Figure 7, the majority of education sector decision-makers (over 70 percent) that report using data or analysis, do so fairly consistently throughout the policymaking process.[12] This appears to reinforce the earlier finding that evidence can play a supporting role, even when it is not the major driver of education decisions.

Nonetheless, education decision-makers are not necessarily monolithic, and we see some important distinctions between stakeholder groups in how they report using information in their work. Interestingly, considering their oversight of vast public-sector education programs, government officials were less likely than other stakeholder groups to use data and analysis for program implementation or monitoring and evaluation (see Figure 8). This finding may partly reflect the composition of the survey, which includes national-level officials, rather than local government representatives or school administrators.

12 The high incidence of use throughout the policymaking process is also visible in the health sector. In contrast, the governance sector used data primarily for two purposes: M&E (77 percent) and research and analysis (73 percent). Figures available upon request.

FIGURE 8. For what purposes do education decision-makers use information, by stakeholder group?



Note: This figure disaggregates the results of Figure 7 into two cohorts: government officials and other stakeholder groups in the education sector.
Source: 2017 *Listening to Leaders Survey.*

Is the current supply of data meeting the demands of education decision-makers?

As discussed in chapter 2, there is a growing wealth of education data, from the proliferation of learning assessments, program evaluations, and the strengthening of country education management information systems. While data and analysis may not be the decisive factor in most education decisions, leaders do value and use this information at various stages of the policymaking process.

In this section, we assess whether the current supply of education data is aligned with what decision-makers demand. In other words, what types of data or analysis do education sector decision-makers prize most and where are the gaps between what they want and the information that is readily available to them.

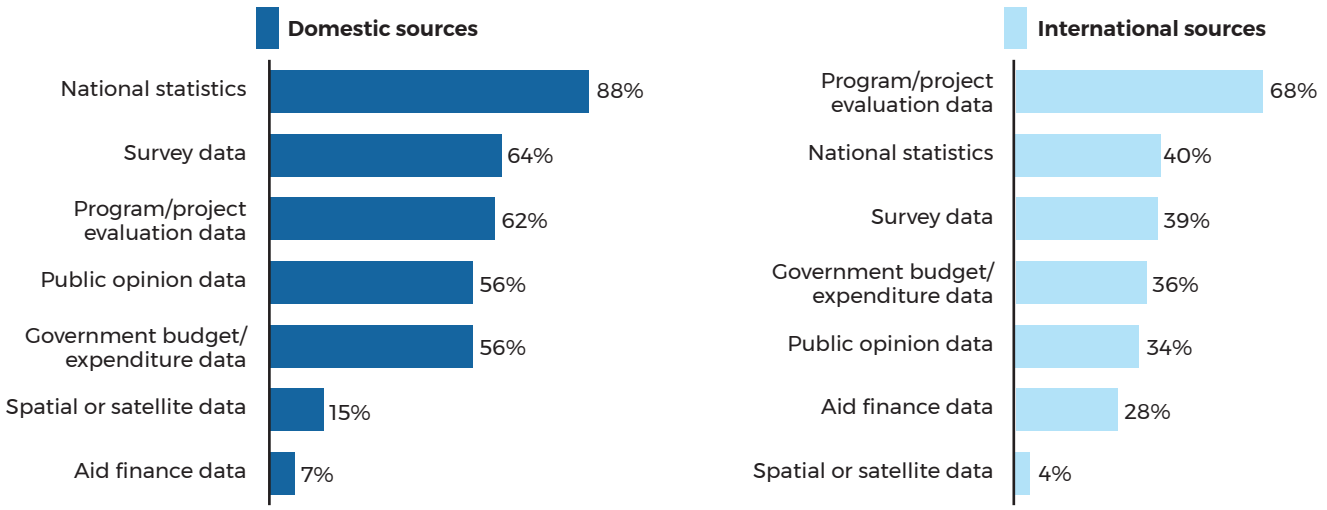
Finding 3: Education decision-makers most often use national statistics from domestic sources and program evaluation data from international sources for their work.

Which types of information do education sector policymakers and practitioners use in their work—and from which sources? Analyzing their responses to the *2017 Listening to Leaders Survey*, we find that decision-makers overwhelmingly relied on national statistics, among domestic sources of information. Of the information produced by international organizations, education stakeholders were most likely to use program or project evaluation data (Figure 9).[13]

Nearly 90 percent of education decision-makers reported using national statistics to support their work, compared with 63 percent who use program evaluation data or

13 See Appendix C: Available datasets on selected education indicators.

FIGURE 9. What types of data do education decision-makers use?



Notes: This figure shows the percentage of education respondents who use each type of data. 32 (or 35) respondents answered questions about the types of data produced by domestic (or international) sources.
Source: 2017 *Listening to Leaders Survey*

survey data (Figure 9, left chart). The outsized use of national statistics among education decision-makers could reflect the sector's reliance on routine administrative data, such as enrollments and school infrastructure available through the country's EMIS.[14]

Comparatively, respondents in the health sector reported usage rates for program evaluation data (85 percent) and survey data (80 percent), that were similar to their use of national statistics (84 percent). Similarly, decision-makers in the governance sector reported using survey data and national statistics in roughly equal measure (75 percent).[15]

More than 80 percent of education respondents report using both quantitative and qualitative analyses, regardless of whether domestic or foreign sources produced them. Use of impact evaluations does not fall far behind, with 75 percent of education sector leaders using this information in their work.

We observe similar use patterns in the health and governance sectors, which may point to a growing appreciation for using mixed-methods approaches to understand drivers of progress. These findings also appear to affirm what we learned from users of 3ie impact evaluations in Chapter 2 (Table 3) who reported using this information to influence policies and programs. Nonetheless, it is important to recognize that the term "use" does not distinguish between employing evidence to justify an existing policy or program, inform a future decision, or assess the merits of a past choice.

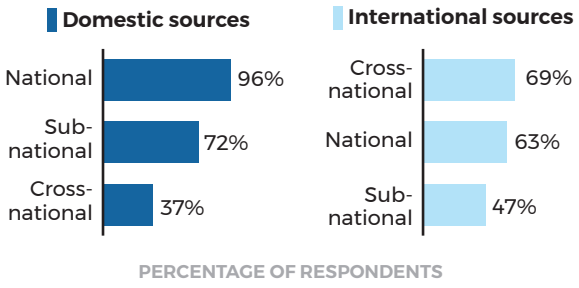
Since world leaders adopted the *World Declaration on Education for All* in 1990, there has been a strong recognition that leaving no one behind means shining a light on in-

14 The high use of national statistics points to the salience of data for the country in question. This may include statistics such as dropout rates for primary school students by district or municipality, the number of schools with secondary education in each village, or pupil-teacher ratios in urban vs. rural areas. The information itself may be at any administrative level, but pertains to the state of affairs for the country in question.

15 Figures available upon request.

equalities not only between, but also within countries. So, how does this affect the use of data by education sector policymakers? When it comes to domestically produced data, most leaders use information disaggregated at the national- (96 percent) or sub-national (72 percent) levels (see Figure 10).[16] Since our respondents are primarily national-level leaders based in capital cities, the use of sub-national data is likely less pronounced than it would be among local-level leaders.[17]

FIGURE 10. How granular is the information education leaders use?



Note: This figure shows the percentage of education respondents who used information at varying levels of geographical granularity. 37 (or 45) respondents answered questions on the granularity of domestic (or international) information.
Source: *2017 Listening to Leaders Survey*

Figure 10 highlights an important role for international sources of education data, namely the provision of cross-national data. Countries increasingly benchmark themselves against their neighbors or best practice examples in the relevant sector. International data sources that report based on common standards that allow for cross-country comparisons provide valuable information to policy-makers and the public alike.

16 A similar use pattern is found in the health and governance sectors. Within the sub-national category, respondents mostly used provincial data (65 percent) and district-level information (44 percent).

17 It is very likely that the type of data used by local-level leaders and staff is quite different, with possibly a much stronger focus on highly granular data that helps them understand their area (ward, village or municipality).

Finding 4: Education decision-makers consider administrative data and program evaluations most essential, and want more of the latter, signaling a gap between need and supply.

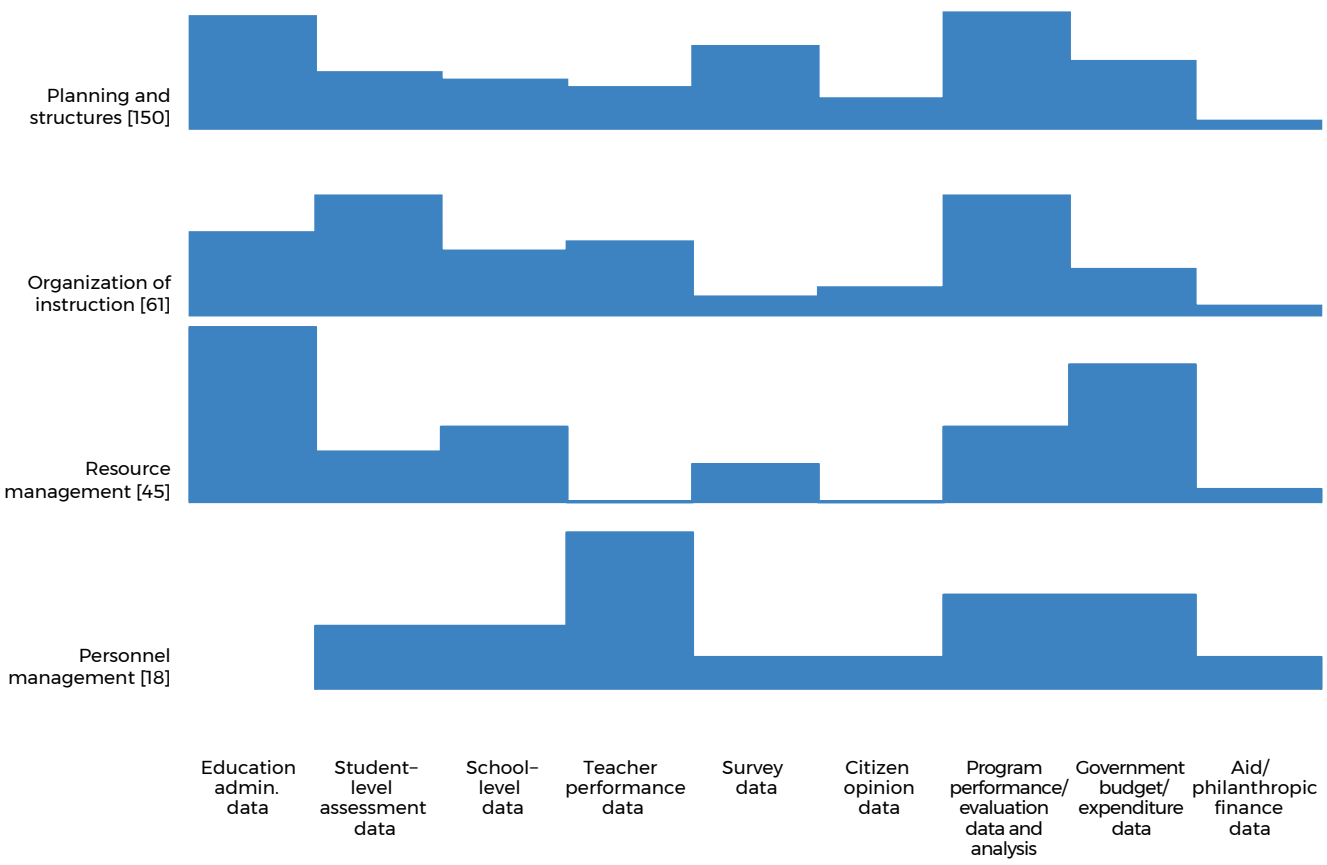
To what extent does the data that leaders want vary depending upon the nature of their work? Analyzing responses to the 2017 *Education Snap Poll,* we assess which types of data decision-makers deemed most essential in each of the ten common education activity areas we examined previously. We also asked survey respondents about their wish list – what types of information would they want more of?

Figure 11 provides a breakdown of how decision-makers rated the most (and least) essential data types by education activities. Decision-makers responsible for allocating and managing resources place a premium on administrative data (e.g., number of schools, teachers, students) and government budget and expenditure data (e.g., school-level budgets, expenditure per student). For those working on personnel management, teacher performance data are most valuable to hire and compensate staff. Meanwhile, leaders tasked with overseeing instructional matters deem program evaluation data and student-level assessment data essential.

There were several categories of data that decision-makers wished were more readily available to support their work (see Figure A5 in Appendix A).[18] In Table 6, we juxtaposed these responses about what data leaders wished for with the data they deemed most essential for their work by each of the four decision-domains. Data types that were both deemed as essential to leaders' work and also high on their wish lists represent attractive investment opportunities for data pro-

18 Note: 18 percent reported having access to the information they need.

FIGURE 11. What types of data are most essential for education decision-makers?



Note: The number of responses in each decision-domain are reported in parentheses. For each decision-domain, the distribution of responses among various types of data is visualized from left to right.
Source: 2017 Education Snap Poll.

ducers to increase their impact in response to user demand. We identified four such opportunities: (1) program performance and evaluation data; (2) budget and expenditure data; (3) student-level assessment data; and (4) teacher performance data.

The desire for more evaluations is striking in relation to the earlier supply-side discussion in Chapter 2. While there has been a steady uptick in the last two decades, gaps probably remain in the geographic diversity of the existing studies and in sharing and disseminating the findings of existing evaluations with decision-makers in low- and middle-income countries. Leaders see this valuable data as being in short supply. CSOs report that the results of programs that have not worked are not made public due to reputational risk, hindering future learning from such failures (Custer and Sethi, 2017). Meanwhile, the limited ability of policymakers to interpret evaluation data is also a serious barrier in using research to inform policy (Callen et al., 2017)

Silos and fragmentation may be a common theme across the three remaining data investment opportunities. In Chapter 2, we foreshadowed that the use of student learning assessments was likely hampered by the lack of interoperability. Host government officials reportedly wish for greater access

TABLE 6. Data needs in the education sector, by decision-making domain

Decision domain	Essential but not high on wish list (Met need)	Essential and high on wish list (Unmet need)	Not essential but on wish list	Neither essential nor on wish list
Planning and structures	Education administrative data	Program evaluation data	Citizen opinion data	Aid and/or philanthropic finance data
Organization of instruction	–	Student-level assessment data	School level data	Aid and philanthropic finance data; survey data
Resource management	Education administrative data	Government budget and expenditure data	–	Teacher performance data
Personnel management	–	Teacher performance data	Education administrative data	Aid and/or philanthropic finance data

to education administrative data; however, since the government itself often collects such data, this suggests that the root issue may be lack of access, rather than availability. Government ministries are often reluctant to share information and instead retain competing, proprietary systems. These access issues are compounded for data users outside of the government that seek greater access to teacher performance data (prioritized by CSO leaders) and government budget and expenditure data (prioritized by development partners).

It is worth noting that citizen opinion data, while not necessarily deemed as essential, is another category of data that appears to be in relatively short supply relative to demand. While only 12 percent of respondents consider such data essential to their work, 26 percent wish more of such data existed (see Figures A3 and A4 in Appendix A). One possible explanation of this high interest is that policymakers may value citizen opinion data as a barometer of political support for education reforms.

How can education data be more useful in decision-making?

Having identified some of the gaps that exist in meeting the needs of education decision-makers, we now turn to what producers and funders of data should do better or differently to meet the data demands of the sector. What information attributes do decision-makers want? What improvements can make data more usable?

Finding 5: Education decision-makers value domestic data that reflect local context and point to policy actions; and improving the timeliness and accessibility of information will make it more helpful.

In the 2017 *Listening to Leaders Survey*, we asked respondents about the attributes of information that make it directly helpful for their work, broken down by source of information (Figure 12). Data from both domestic sources and international sources were deemed most helpful when they provide information that reflects the local context. Additionally, education decision-makers rated information from international sources as most helpful because it provides policy recommendations (43 percent) likely informed by cross-national experience and is accompanied by critical financial, material, or technical support (36 percent).[19] The latter suggests that respondents may draw a connection between the use of data produced by certain organizations with the financial or technical support these organizations provide to them or their government.[20] Leaders viewed domestic data as helpful when it was available at the right level of aggregation, as well as being timely, trustworthy, and insightful.

In the 2017 *Education Snap Poll,* we went a step further to ask education decision-makers the three most important improvements that producers could undertake to improve their data. Overall, survey responses suggest that improving the timeliness and accessibility of available data matter most to end users (Figure 13).[21] Over half of the decision-makers surveyed also identified efforts to improve data disaggregation, accuracy, and trustworthiness as desirable.

Despite broader transparency commitments[22] in many low- and middle-income countries, much government data is still proprietary or hidden behind paywalls (Custer and Sethi, 2017). Survey respondents would like data from the national government, in particular, to be more accessible and disaggregated (Figure A7, Appendix A). The dual emphasis here on accessibility of more granular data may indicate an untapped opportunity: while reported use of subnational data lags behind national-level data, this may reflect a dearth of disaggregated information, rather than muted interest.[23]

Interestingly, education decision-makers also indicated that it would be helpful for education and policy experts to improve the accessibility of their data. This may reflect the need for these non-governmental actors to ramp up their own transparency efforts, as well as simplify documentation of their methodology and findings to be more easily understood by audiences with relatively less technical skill.

When it comes to data produced by local governments, organizations, and schools, decision-makers place greater emphasis on improving timeliness. This response perhaps reflects the expected use for local information as compared with information

19 The percentage of respondents in the health and governance sector that indicated that information from international sources was helpful because it was accompanied by financial, material or technical support was lower (18 percent and 25 percent, respectively). Instead the third most important reason according to health (governance) respondents was that information was timely and up-to-date (unbiased and trustworthy).

20 For instance, respondents using the World Bank's data to improve their performance on certain development indicators may view this as a way to signal their commitment to reforms and thus be more likely to receive financial or technical assistance from the Bank.

21 The snap poll respondents were only asked to suggest improvements to sources of information that they deemed as being helpful in their work.

22 The lack of Freedom of Information Laws is an additional constraint in many countries, though its existence does not necessarily guarantee freely accessible information.

23 Data from development partners additionally lacked comparability over time.

produced by the national government. Since national government data may be used more for long-range planning or analysis of historical trends and the effectiveness of past policies, perhaps they do not need to be as up-to-date as data used for, say, program decisions in a local area.

Government-produced data is sometimes characterized by a trust deficit (Custer and Sethi, 2017). While this information is in high demand, users do not see it as entirely credible when it is available. Several factors may be contributing to this request on the part of decision-makers to strengthen the trustworthiness of education data. Technical constraints including publication delays, episodic data collection, and limited data management capacity at the subnational level compound the problem of inaccurate data. Data at the point of service delivery (school or clinic-level data) is still largely paper-based, and digitization increases the risk of errors as well as delays. Political factors can also exacerbate inaccuracies in data, if incentives exist for public servants to massage official numbers.

Finding 6: Decision-makers strongly support strengthening their countries' EMIS to bolster their education data ecosystem.

Beyond identifying general areas of improvement for education data, respondents to the 2017 *Education Snap Poll* also ranked a list of more specific solutions. Respondents were largely in agreement with the seven solutions proposed, rating all of them as "extremely important", on average (see Figure 14). Of the seven solutions, the recommendation to strengthen the EMIS within the education ministry resonated with the highest number of respondents.

In this respect, there is a nice symmetry between the call to strengthen the country-owned EMIS that arose from the survey of the literature in Chapter 2 and the favored solution of education decision-makers we analyzed in Chapter 3. To realize this solution in practice, domestic leaders and their development partners will need to address several common EMIS shortcomings we discussed at length earlier in this paper, namely: fragmentation of data collection activities across ministries, unclear protocols for sharing and disseminating data openly, lack of funding, poor coordination among international funders, and a nascent or deficient statistical culture (UNESCO, 2016).

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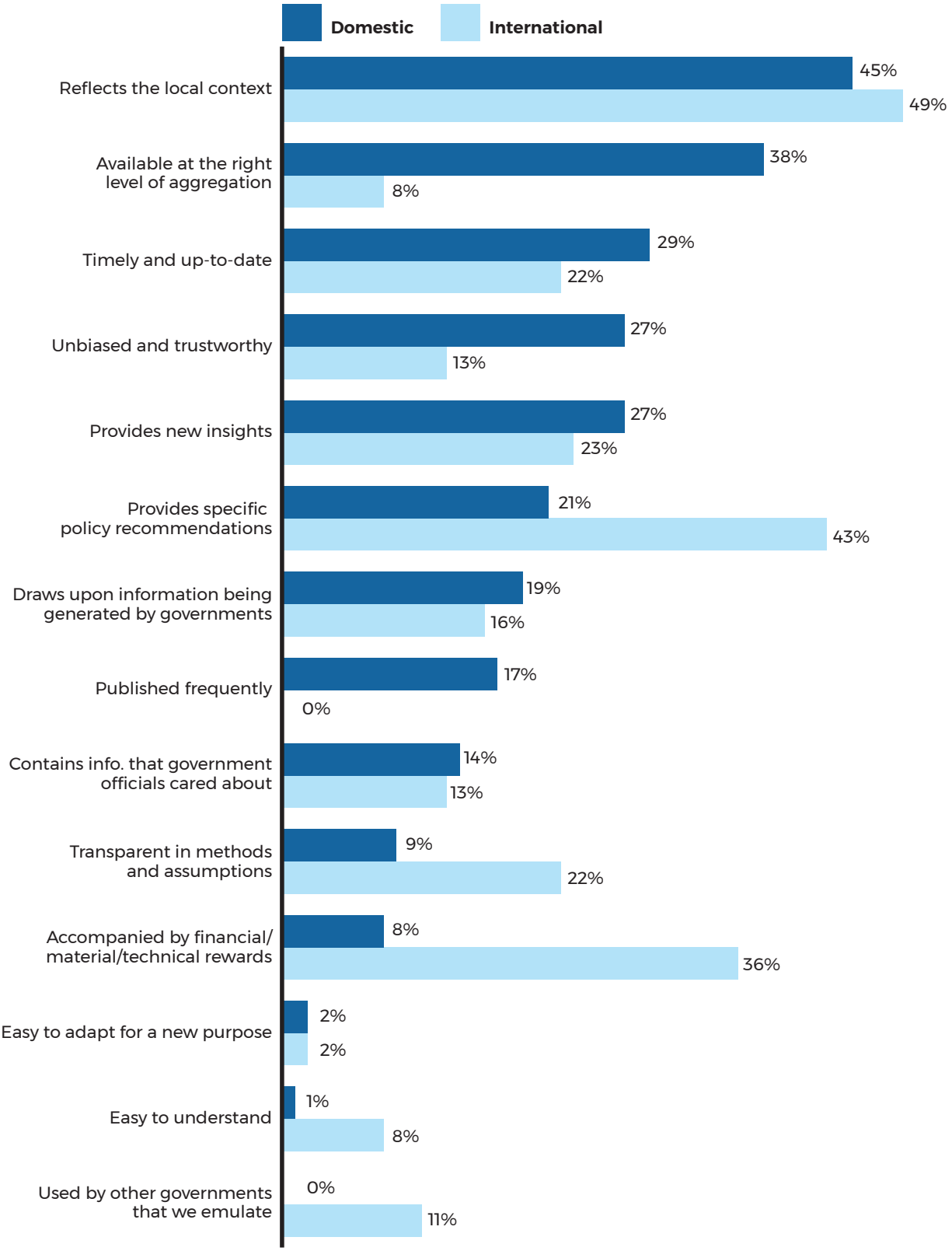
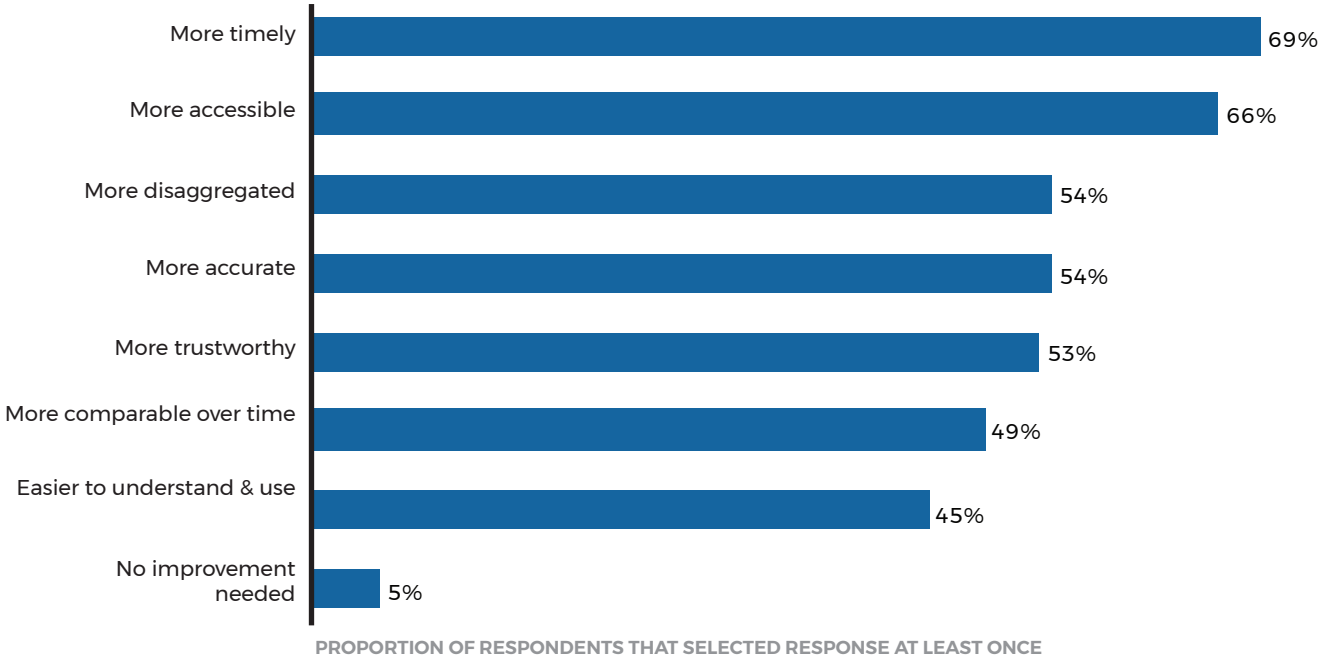
In this chapter, we distilled insights on the state of data use from two AidData surveys of education stakeholders in low- and middle-income countries: the 2017 *Listening to Leaders Survey* and the 2017 *Education Snap Poll* conducted in partnership with the Brookings Institution. Our three-fold aim for this analysis has been to: (1) understand the status quo of how education sector leaders use data or analysis in the context of their most common decisions; (2) pinpoint areas of opportunity for producers and funders of education data to close gaps in response to revealed demand from end users; and (3) identify the most important areas and promising solutions to increase the value of education data in future. Armed with these insights, we conclude in Chapter 4 with several implications for the future of education data investments.

FIGURE 12. What makes some sources of data and analysis more helpful to education decision-makers?



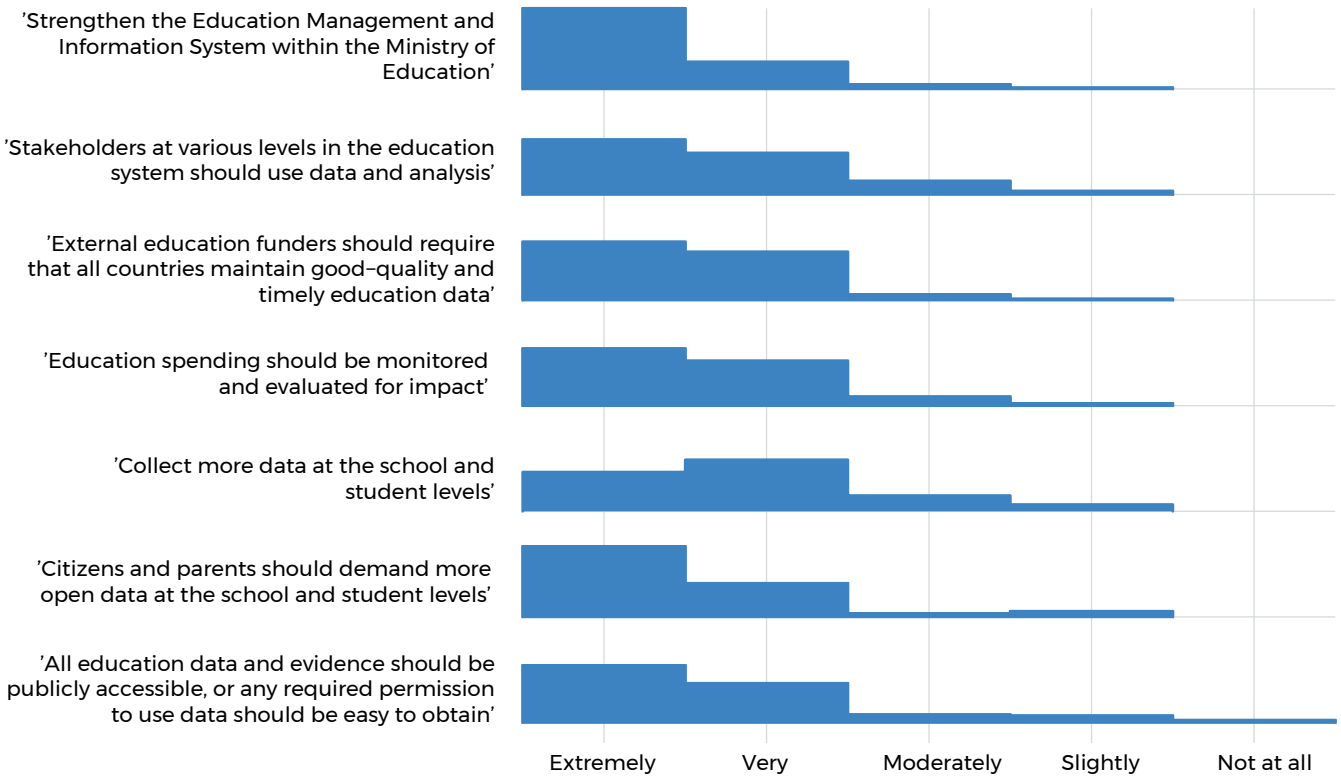
Notes: The figure reports the percentage of respondents who cited each factor as a reason for why they rated certain information sources as particularly helpful. This figure is based on 32 (or 34) respondents who answered a question on what makes information from a given domestic (or international) organization particularly helpful. Respondents could select up to three reasons.
Source: *2017 Listening to Leaders Survey.*

FIGURE 13. What improvements can make information more helpful to education decision-makers?



Notes: Respondents could select up to three improvements for each data source.
Source: *2017 Education Snap Poll.*

FIGURE 14. Which solutions are the most important to enhance the value of data in education?



Notes: All respondents were presented with the same list of possible solutions and could rank each as "extremely important", "very important", "moderately important", "slightly important", or "not at all important".
Source: *2017 Education Snap Poll.*

4. Conclusion and key findings

Developing countries face multiple challenges in improving their education system's ability to meet ambitious goals related to access, quality, and equity. Limited resources, as well as poor or missing information on various dimensions of the system, hampers progress. Increasing the availability and use of data and evidence is a critical arena for leadership and management in the education sector. The call for more and better data has been heard—and while investment in education data lags behind some other sectors, it has increased and improved substantially. However, a data-driven system is not just about generating data. It is also about increased appreciation for and use of evidence.

Several factors impede data use. Decision-makers and other stakeholders may not know what data are available if data producers do not invest enough in dissemination or sharing the data widely, if at all. The available data may not be the *right* evidence, that is, evidence that is relevant to the decisions and issues at hand, available at the time it is needed, and in a form that can be accessed, understood, and applied.

This report has focused on the use of evidence—by whom, for what specific roles and decisions, and what type and sources of evidence. Political interests and low implementation capacity that undermine the willingness and ability of actors to use evidence may block the pathway from data generation to use and to data-informed decisions. We have reviewed research about the effect of these factors to explain how best to increase evidence use. We have also presented data from two surveys that provide information on evidence use by and data needs of education stakeholders in low- and middle-income countries.

To conclude, we summarize the key findings on how an education system can transform itself from being data-rich to data-driven, and thus better able to meet its goal of learning for all. Being able to increase evidence use, in turn, alters the benefit-cost calculus for data generation, thus creating a stronger information chain.

Investments in an effective national education information system will pay off in terms of better data and more data use

Shortcomings in the quality of education data—inaccuracies, uneven coverage, closed data, and delays in availability—erode trust in information and eventually discourage use. But perhaps more important than emphasizing the improvements needed in specific data is developing a functional, reliable information system that not only collects and stores data but also has the capacity to share and disseminate data to inform views and decisions. In many countries, however, the EMIS is limited by weaknesses in its structure, capacity, and implementation. Its data sources tend to be fragmented across duplicative information systems within the same

ministry, or worse, across several ministries in charge of different sub-sectors. These weaknesses often lead to, as well as stem from, inadequate and unpredictable funding.

A systematic national learning assessment is a clear asset in education systems that aim to improve student learning, but these assessment mechanisms are still nascent in most developing countries. National learning assessments of language and mathematics at early grades and at the end of primary education were carried out in just over one-half of developing countries in 2010-2015, and the coverage of lower secondary education is sparser across countries and regions. There remain stark differences in this respect between low- and middle-income countries.

Besides increasing the number of countries with national assessments, a big task at hand is to strengthen those that exist. As a case in point, notwithstanding shortcomings, Jordan's education system illustrates a long-term commitment to using student assessments to drive significant curriculum and other reforms. When Jordan fell in the rankings of international student assessments, the government did not "shoot the messenger"; rather, it sought to improve its own assessment system so it could have a better way of measuring and tracking student learning, and it continues to benchmark its students' performance against other countries (Obeidat and Dawani, 2014).

Data and analysis that are trustworthy, shared, and disseminated will be noticed and used

Barriers to timely access and use of data, especially at the local level, waste investments in data generation and may result in loss of budgetary support. Nascent EMIS do not have clearly established protocols for sharing data, so data remain closeted and grow old without being noticed, analyzed, or used. Some blockages are also because political interests can capture data systems. Ensuring that data are open and trustworthy implies some level of administrative independence from political interests throughout the information cycle. Investments in review and verification processes by a third party will pay off.

Improvements in subnational data collection protocols will bring data closer to decision and action points

Decision-makers report using national-level data most often, but also indicate a desire for more disaggregated or local data. They want this level of data particularly for information provided by the national government and development partners. It is important that sub-national data, often collected, reported and entered into digital systems by local government officials, are reliable and trusted by all decision-makers and stakeholders. This quality assurance can be achieved in two ways. First, governments and development partners should invest in building the capacity of local officials to collect better data and encourage data use. When data collectors become users, the quality of information improves. Second, government ministries at the national level need to collaborate with local governments to determine the essential information needed for decision-making. This will prioritize the types of information expected from local governments and reduce the burden of data collection.

Program evaluation evidence is regarded as essential to education decision-makers—but there's not enough of it

Education decision-makers reported program and project evaluation data to be the most essential to their work, used most often, and most desired. This type of information seems to be highly valuable but in

short supply. The gap may lie in two areas. First, impact evaluations in education are heavily concentrated in a few countries and a few topics. Second, gaps in coverage aside, policymakers' ability to interpret the evidence and link it to policy decisions may be limited. To address this, evidence producers should invest in communicating the results of their research in ways that various stakeholders can easily understand. In the process of communicating research and evidence, producers should pay careful attention to highlighting the generalizability of findings and any caveats that decision-makers should know, as well as how the findings from the research can be useful in programmatic and policy decisions. Policymakers could benefit from being presented with a range of solutions relevant to a country's context, demonstrating what has and has not worked in the past, and— importantly—why and why not. To the extent possible, researchers should involve policymakers in the design and execution of impact evaluations to increase their salience and relevance. Finally, to build trust in the evidence, research should draw lessons not only from successes but also from failed initiatives.

Decision-makers want different types of information, depending on the nature of their work

Decision-makers have a host of met and unmet data needs, and those data needs differ depending on the decision. For example, decision-makers who focus on planning and structures say they would benefit from program evaluation data, while those whose primary work relates to instructional matters report wanting more student-level assessment data, and those who are responsible for resource management want better government budget and expenditure data. These results highlight the importance of targeting data generation and dissemination to particular constituencies. While producers may invest in more broad-based dissemination strategies for a certain data types, they may lose out on power users if the decision-makers who need them most do not know about or have access to the data they need the most.

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In this report, we have focused on the issues related to one part of the information cycle—data and evidence use. The lack of data use is lamented often by data producers and researchers but is usually taken for granted. The focus of investments in the information cycle has been solidly on data generation and improvements in the coverage and quality of evidence. While these improvements should promote data use (as in a positive feedback loop), the uptake and use of information is not automatic or straightforward. Understanding why education decision-makers and influencers do not notice, value, or use data that are produced by their own statistical agencies or by international organizations deserves more attention than it has received thus far. Funders of data collection should continue to allocate more resources to disseminating evidence and monitoring evidence use, but more research on the effects of behavioral and contextual determinants of evidence use is warranted.

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Appendix A: Composition of survey participants and additional figures

Composition of survey participants

TABLE A1. Composition of respondents by stakeholder group (2017 LtL Survey and Snap Poll)

Survey	2017 Education Snap Poll	2017 Listening to Leaders Survey		
Stakeholder Group	Full Sample of Respondents	Members of the Sampling Frame	Full Sample of Respondents	Sample of Education Sector Respondents
Host government	76 (42.5%)	27,990 (47.9%)	1,473 (45.8%)	63 (40.4%)
Development partner	75 (41.9%)	14,502 (24.8%)	516 (16.1%)	19 (12.2%)
CSO/NGO	16 (8.9%)	7,063 (12.1%)	701 (21.8%)	45 (28.8%)
Private sector	1 (0.6%)	1,949 (3.3%)	179 (5.6%)	6 (3.8%)
Country Experts	11 (6.2%)	6,881 (11.8%)	345 (10.7%)	23 (14.7%)
Total	179	58,385	3,214	156

Notes: The reported number of respondents for the *2017 Listening to Leaders Survey* includes only those respondents who indicated working as part of one of the five stakeholder groups listed above. All those who indicated working for none of those groups (N=89) were excluded from our analysis.

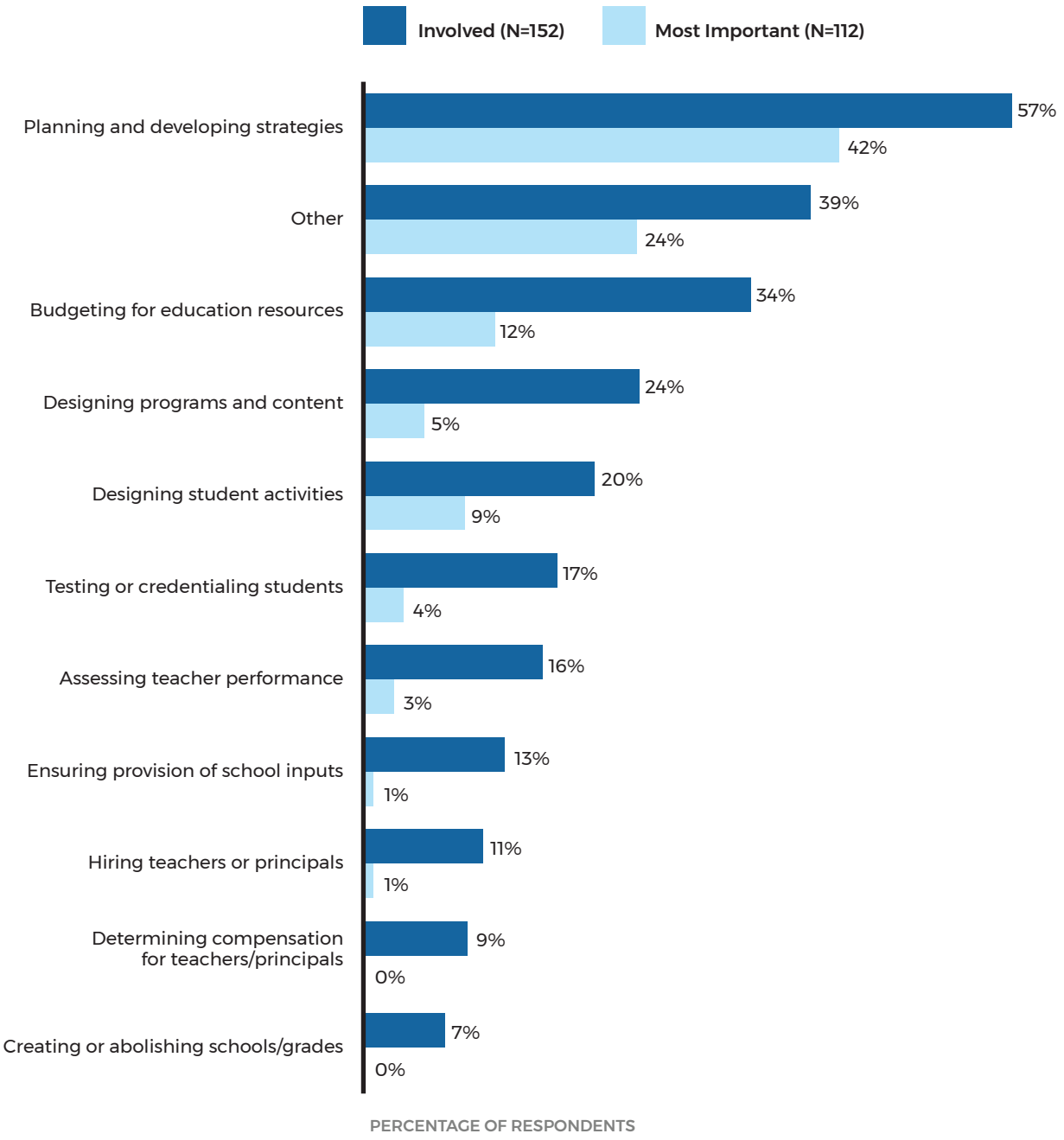
TABLE A2. Composition of respondents by region (2017 LtL Survey and Snap Poll)

Survey	2017 Education Snap Poll	2017 Listening to Leaders Survey		
World Bank Region Classification	Full Sample of Respondents	Members of the Sampling Frame	Full Sample of Respondents	Sample of Education Sector Respondents
East Asia and Pacific	44 (24.6%)	8,713 (14.9%)	474 (14.8%)	26 (16.7%)
Europe and Central Asia	34 (19.0%)	10,247 (17.6%)	674 (21.0%)	32 (20.5%)
Latin America and the Caribbean	13 (7.3%)	8,010 (13.7%)	424 (13.2%)	19 (12.2%)
Middle East and North Africa	14 (7.8%)	5,767 (9.9%)	251 (7.8%)	12 (7.7%)
South Asia	19 (10.6%)	5,427 (9.3%)	341 (10.6%)	17 (10.9%)
Sub-Saharan Africa	55 (30.7%)	20,221 (34.6%)	1,050 (32.7%)	50 (32.1%)
Total	179	58,385	3,214	156

Notes: Numbers in each column add to 100%.

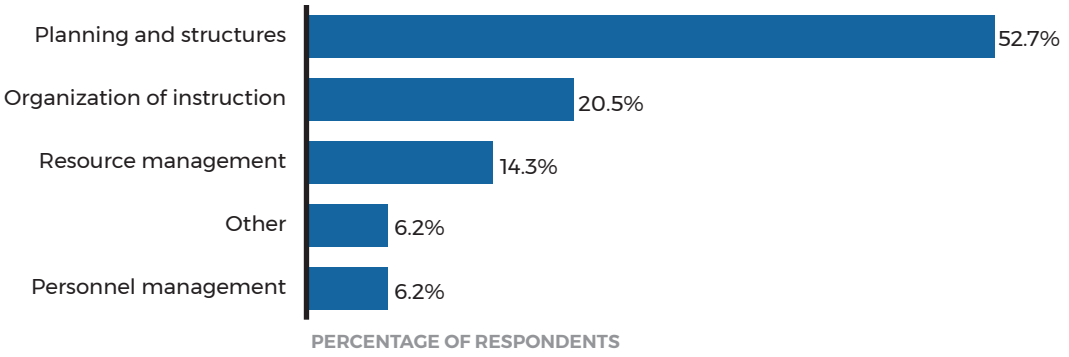
Additional figures

FIGURE A1. Which education activities were snap poll respondents involved in and considered most important?



Notes: This figure is based on question 3 and 6 of the snap poll questionnaire. Each respondent could select as many activities as applicable.. Of the 27 responses for "other" for the "Most important" question, 20 could be recoded to the four decision-domains.

FIGURE A2. Distribution of snap poll respondents into four decision-making domains



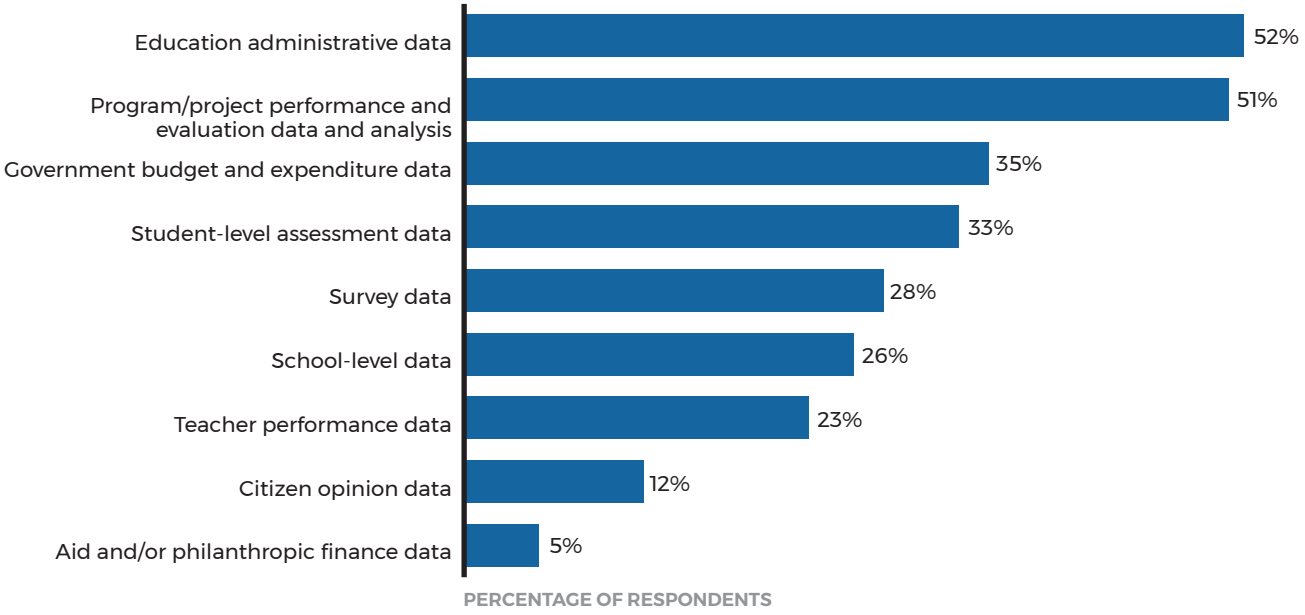
Notes: This figure combines the ten activities in the snap poll into four decision-making domains, adapting from OECD (2012)

TABLE A3. How does information make its way into decision-making?

Activities in the education sector	Most important factor in making or shaping decisions
Designing and defining programs of study and course content	Government has sufficient capacity
Designing and implementing support activities for students	Sufficient financial resources; Government has sufficient capacity
Creating or closing/abolishing schools or grades	Enough information; Public and political support
Testing, assessing, and/or credentialing students	Government has sufficient capacity
Hiring and deploying teachers and/or principals	Government has sufficient capacity
Developing careers and assessing performance of teachers and/or principals	Public and political support
Determining compensation of teachers and/or principals	Sufficient financial resources
Budgeting and allocating financial resources for education	Public and political support
Ensuring provision of school inputs	Sufficient financial resources
Planning and developing strategies	Government has sufficient capacity

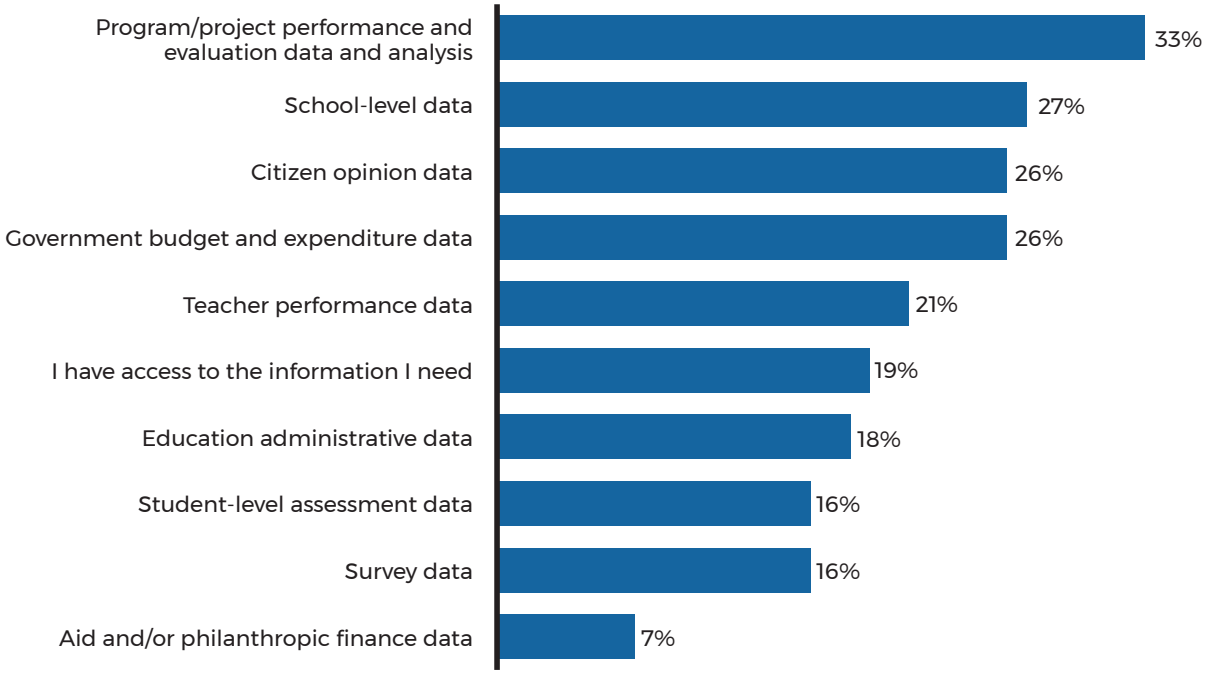
Source: *2017 Education Snap Poll*

FIGURE A3. What types of data are most essential for education stakeholders?



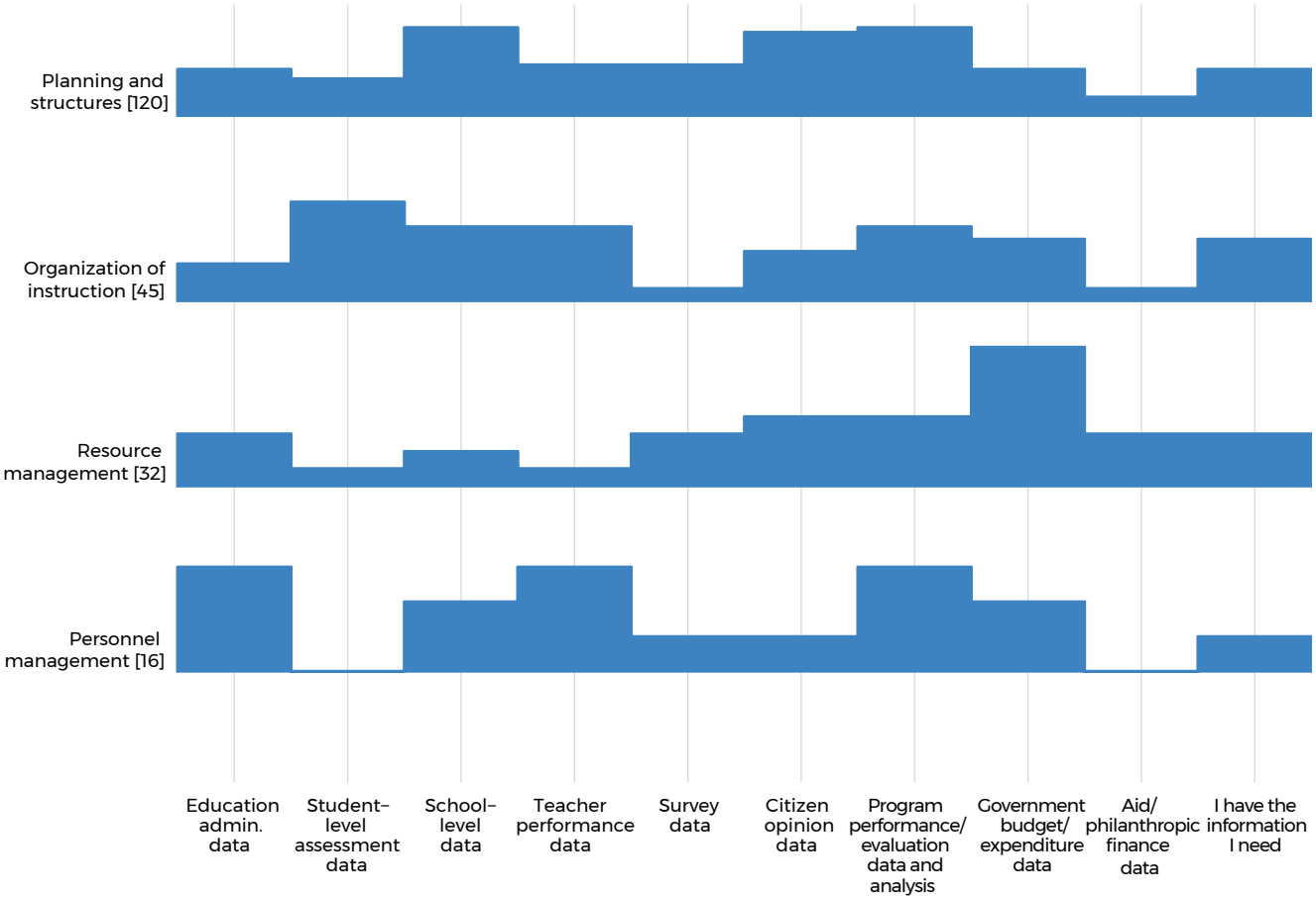
Notes: The figure is based on question 7 in the snap poll questionnaire and respondents could select up to three types of data. The figure shows the number of responses that selected each information source as among most essential types of information. Numbers in parentheses are the percentage of respondents. The figure excludes responses from two respondents that selected "other".
Source: *2017 Education Snap Poll*

FIGURE A4. What types of data do education stakeholders wish existed for their work?



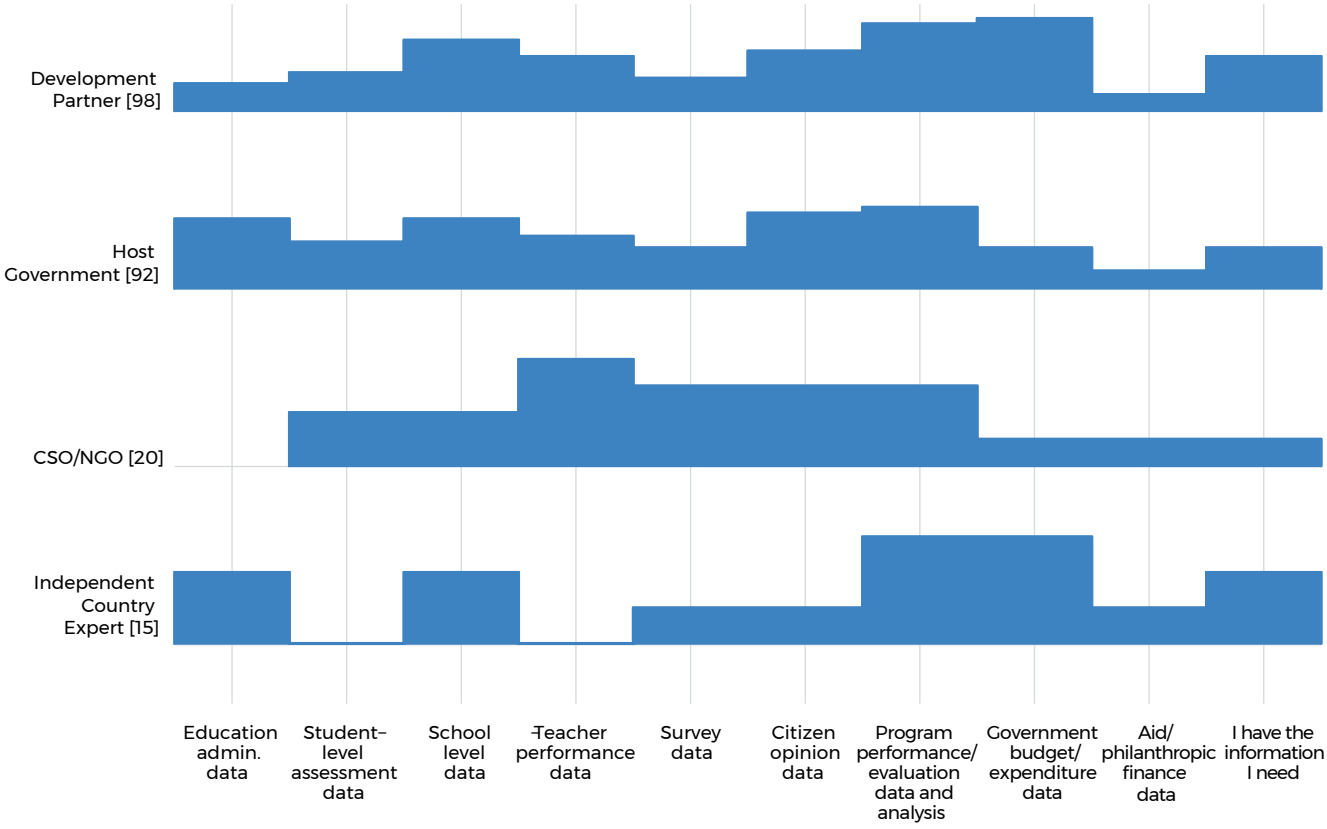
Notes: The figure is based on question 8 in the snap poll questionnaire and respondents could select up to three types of data. The figure shows the number of times each information type was selected by respondents. Numbers in parentheses are the percentage of respondents. The figure excludes responses from four respondents that selected "other".
Source: *2017 Education Snap Poll*

FIGURE A5. What types of data do education stakeholders in various roles wish existed for their work?



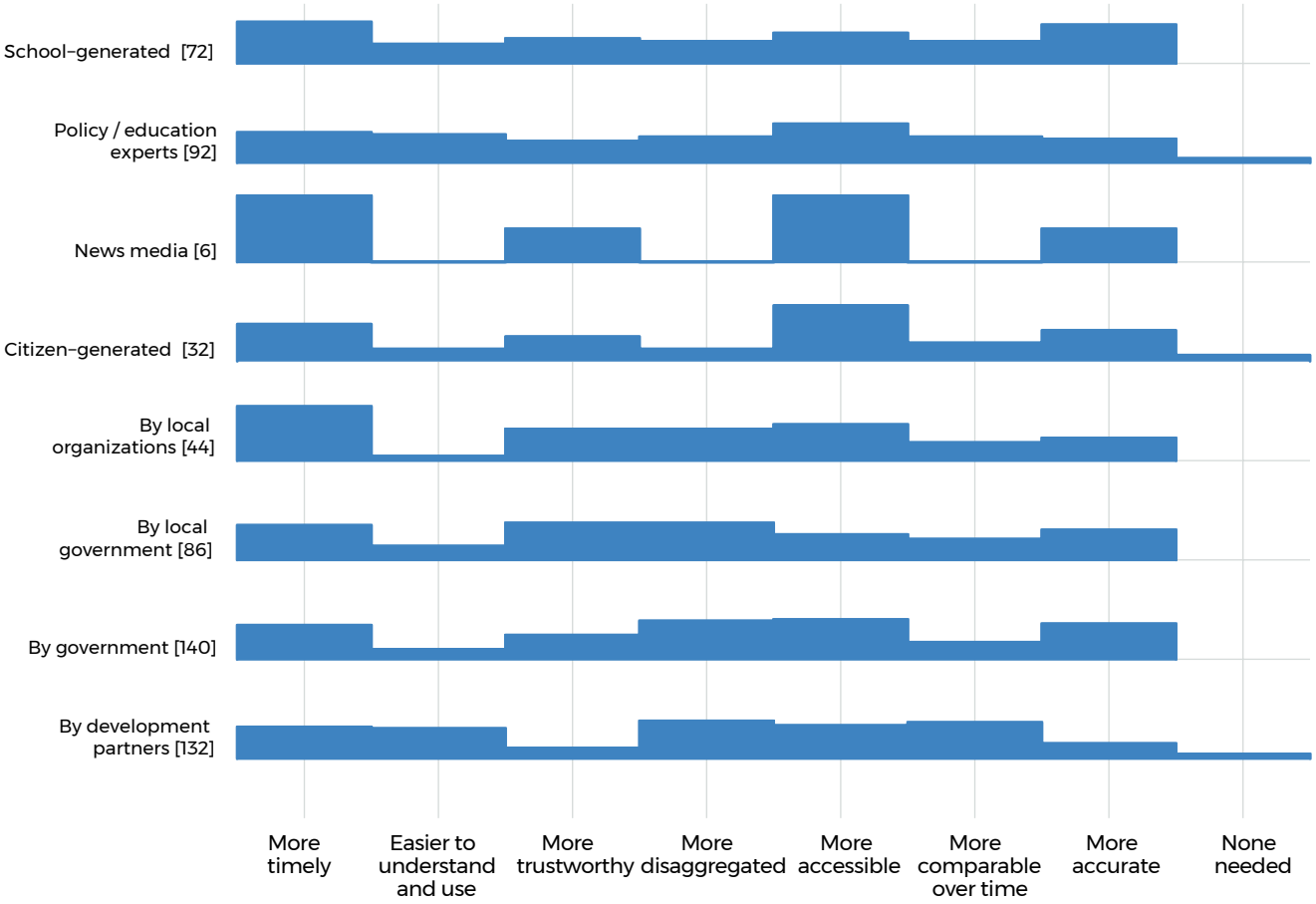
Notes: The figure reports Figure A4 by decision-domains, visualizing the distribution of responses within each decision-domain from left to right. Number in parentheses is the number of responses in each decision-domain.
Source: *2017 Education Snap Poll*

FIGURE A6. What types of data do different stakeholders in the education sector wish existed for their work?



Notes: The figure reports Figure A4 by stakeholder group, visualizing the distribution of responses within each decision-domain from left to right. Number in parentheses is the number of responses for each stakeholder group.
Source: *2017 Education Snap Poll*

FIGURE A7. What improvements would make information from data sources more helpful?



Notes: This figure is based on question 11 in the snap poll questionnaire, visualizing the distribution of responses for each information source from left to right. The number in parentheses is the number of responses for each information type.

Appendix B: Types of education data

The foundation of an education information system is a school census. The specific indicators that are collected will reflect the goals of the education system, but a census typically captures school-level data on students, staffing, finances, infrastructure, and the administrative context.

Countries can then aggregate raw school-level data to gain valuable insight into the functioning of the education system in terms of access, quality, equity, and efficiency at all levels, particularly when paired with contextual information captured in household surveys and learning assessments that measure learning at a particular age or grade.

- **Access indicators:** Gross enrollment rate; net enrollment rate; school intake numbers; average class size
- **Quality indicators:** Student/teacher ratios; classroom size; student assessment and performance data
- **Efficiency indicators:** Completion/repetition rates; dropout rates; transition rates; survival rates; cost-benefit data
- **Equity indicators:** Enrollment rates disaggregated by age group, gender, ethnicity, disability data, and other characteristics tied to the goals of the education system

TABLE B1. School-level data

Student data	Human resource data	School data	Financial data
• Enrollment rates • Attendance and absenteeism rates • Repetition and dropout rates • Assessment and test scores • Student characteristics (e.g., parents' level of education and socio-economic standing; gender; ethnicity; language; disability)	• Number of teaching and non-teaching staff • Teachers' qualifications • Teachers' attendance rates	• School type (e.g., public; private; religious) • Facilities (e.g., classrooms; electricity; bathrooms, computers; furniture) • Resources (e.g., textbooks; paper)	• Source(s) of funding, including government funding, tuition fees, grants, etc • Allocation and Expenditures

A high-quality Education Management Information System (EMIS) enables decision-makers to draw on such various sources of information, also including labor market and living standards surveys, as well as census data, budgetary information, and data housed by ministries outside of the education sector. EMIS enables comparisons between schools, districts, and provinces/states. Annual country data, such as those reported to UNESCO Institute for Statistics, are also used for cross-country comparisons and global benchmarking of basic outcome indicators. Table B1 shows how different international organizations, partnering with statistical and education agencies in countries, have been collecting an array of education data, and have been making those data publicly available.

Appendix C: Available datasets on selected education indicators

Dataset	Organization	Main source	Years available	Variables covered	Number of countries
UIS Data Centre	UNESCO Institute for Statistics	UN member countries responding to an annual survey	Annual, 1970-2015	Out-of-school children, entry, participation, progression, completion, literacy, educational attainment, international student mobility, human and financial resources, teaching conditions, adult education, education system, population	218
EdStats*	World Bank	UIS, WB, UN	Annual, 1970-2015, projection until 2050	Out-of-school children, participation, progression, completion, literacy, educational attainment, human and financial resources, learning outcomes, population; public expenditures, labor, EMIS, population	242
Demographic and Health Survey (DHS)	ICF International; USAID	Household survey data	Intermittent, usually every five years	Participation, literacy, educational attainment, individual and household characteristics	89 since 1984 (48% in Sub-Saharan Africa)
Multiple Indicator Cluster Surveys (MICS)	UNICEF	Household survey data	Intermittent, varies by country	Participation, progression, completion, literacy, educational attainment, individual and household characteristics	109 in total since 1995/6

Dataset	Organization	Main source	Years available	Variables covered	Number of countries
Living Standards Measurement Surveys (LSMS)	World Bank	Household survey data	Intermittent, varies by country	Participation, educational attainment, expenditures, individual and household characteristics	37 since 1985
Eurostat	European Commission	UNESCO-OECD-Eurostat and other surveys	Annual, EU countries	Entry, participation, progression, completion, international student mobility, human and financial resources, teaching conditions, educational attainment, languages, transition from education to work, education system, population	28 since 1995
Organization of Economic Cooperation & Development (OECD)	OECD	UNESCO-OECD-Eurostat and other surveys	Annual, OECD countries	Entry, participation, progression, completion, international student mobility, human and financial resources, teaching conditions, educational attainment, education system, population	41 since 1995
Other household surveys**	Different providers	Household survey data	Intermittent, varies by country	Participation, literacy, educational attainment, individual and household characteristics, other information	

Note: *EdStats contains education data provided by the UIS combined with data from other sources. **E.g., Malaysia Family Life Survey, Indonesia Family Life Survey from RAND, and STEP Surveys from the World Bank, among others.
Source: Adapted from UIS (2016)

Appendix D: Survey methodology and questionnaires

Details on the implementation of the 2017 Listening to Leaders Survey

Prior to fielding the 2017 *Listening to Leaders Survey*, our research team spent nearly two years preparing a sampling frame of approximately 58,000 host government and development partner officials, civil society leaders, private sector representatives, and independent experts from 126 low- and lower-middle income countries and semi-autonomous territories. In this appendix, we provide an overview of our methodology and describe key attributes of our sampling frame construction, questionnaire design, survey implementation, and data aggregation processes.

DEFINING THE POPULATION OF INTEREST

While the *true* global population of development policymakers and practitioners is for all intents and purposes unobservable, we took painstaking efforts to identify a well-defined and observable population of interest. We define this population of interest as including those individuals who are knowledgeable about the formulation and implementation of government policies and programs in low- and lower-middle income countries at any point between 2010 and 2015. For more information on sampling frame inclusion criteria, see Appendix C of Masaki et al. (2017).

In recognition of the need for cross-country comparability, and the fact that every government consists of a unique set of institutions and leadership positions, we identified our population of interest by first mapping country-specific public sector institutions (and leadership positions within those institutions) back to an ideal-typical developing country government. This ideal-typical government consisted of 33 institution types, such as a Ministry of Finance, a Supreme Audit Institution, and a National Statistical Office. We then identified functionally equivalent leadership positions within these institutions, and the specific individuals who held these positions between 2010 and 2015. For the four additional stakeholder groups that we included in our sampling frame (in-country development partners, domestic civil society and non-governmental organizations, private sector associations, and independent experts), we undertook a similar process of first mapping country-specific institutions and positions, and then identifying the individuals who held those positions between 2010 and 2015.

Identifying functional equivalents at the institution- and leadership position-level resulted in a sampling frame that enables comparison across countries. In addition, by clearly defining a population of interest and constructing a master sampling frame that is stratified by country, stakeholder group, and institution type, we managed to overcome one of the most vexing challenges

associated with expert panels and opinion leader surveys: the absence of detailed demographic data and the inability to assess the representativeness of findings at various levels. The stratification of our master sampling frame by country, stakeholder group, and institution type makes it possible to generate extremely granular elite survey data that can be published at varying levels of disaggregation without compromising participant confidentiality. It also enables analysis of the factors that influence participation rates as well as the underlying sources of response bias. A more detailed description of the master sampling frame can be found in Appendix C of Masaki et al. (2017).

CREATING THE SAMPLING FRAME

Our ability to select individuals from the population of interest for inclusion in our final sampling frame was constrained by the availability of individual contact information. We identified the contact information of potential survey participants using publicly available resources, such as organizational websites and directories, international conference records, Who's Who International, and public profiles on LinkedIn, Facebook, and Twitter. While we identified approximately 58,000 individuals who met our inclusion criteria in the sampling frame, we were able to identify and successfully send a survey invitation to roughly 47,000 of those individuals (about 80 percent).

SURVEY IMPLEMENTATION

We administered the 2017 *Listening to Leaders Survey* between early January and late March 2017. Survey implementation was guided by the Weisberg total survey error approach and the Dillman tailored design method. Survey recipients were sent a tailored email invitation to participate in the survey that included a unique link to the online questionnaire. During the course of the survey administration period, survey recipients received up to three different automated electronic reminders, as well as some additional tailored reminders. Survey participants were able to take the survey in one of six different languages: English, French, Spanish, Portuguese, Russian, and Arabic. Of 47,000 individuals who received our email invitation, about 3,500 indeed participated (with a response rate of 7.4%) and 1,441 survey respondents (41 percent) completed the survey.

WEIGHTING SCHEME FOR AGGREGATE STATISTICS

The response rate to the 2017 *Listening to Leaders Survey* was 7.4 percent. In light of this relatively low response rate and imperfect information about the representativeness of our sample vis-à-vis the sampling frame (i.e. the population of interest), we employ non-response weights to account for unit non-response (or survey non-response) and to redress potential bias deriving from it. To generate non-response weights, we take the following steps. First, we estimate the probability of survey response by using a logistic regression. For all members of our sampling frame, we have information on their gender, country, institution types (e.g., finance ministry, anti-corruption agency, supreme audit institution) and stakeholder group (e.g., host government officials, development partners. We use all these predictors to estimate the probability of survey response for each member of the sampling frame (as each of them turns out to be significant in predicting survey response). Second, we take the inverse of the estimated probability to arrive at the final non-response weights used for our analysis.

The 2017 Listening to Leaders Survey

Please note: This is not the complete 2017 Listening to Leaders Survey questionnaire. For brevity, we have presented only a subset of questions that were analyzed in this report. For the full survey questionnaire, please see the Appendix E of Masaki et al. (2017).

Q1 [SG1-4][1] : You've been selected to participate in this survey based on our records, which indicate that you worked [[in.country]] at some point between 2010 and 2015. In the drop-down menu below, please select the country you worked in for the longest period from 2010 to 2015.

- <<List of 126 low-income and middle-income countries and semi-autonomous territories>>
- I did not work in one of these countries at any point between 2010 and 2015.

Q2 [SG1-4]: Please select the type of organization within [[Q1: Country]] with which you worked for the longest period of time between 2010 and 2015.

- Government (1)
- Development Partner (2)
- Non-Governmental Organization or Civil Society Organization (3)
- Private Sector (4)
- I did not work for one of these types of organizations between 2010 and 2015. (5)

Q2 [SG5]: Over your entire career, for approximately how many years have you monitored issues related to policy formulation and implementation in [[Q1: country]]?

- 0-4 years (1)
- 5-9 years (2)
- 10-14 years (3)
- 15-19 years (4)
- More than 20 years (5)

Q3 [SG1-4]: Please write the name of the organization within [[Q1: Country]] with which you worked for the longest period of time between 2010 and 2015.(Almost all of the questions in this survey will ask about your time at this organization.)

Q3 [SG5]: We want to best capture your perspective on policy-making in [[Q1: Country]]. Starting as early as 2010, with which one of the following administrations are you most familiar?

<<List of all administrations relevant for [[Q1: Country]] between 2010 and 2015: not shown here to save space>>

1 Some questions are asked to only a subset of respondents depending on where they worked. Our sampling frame consists of individuals who belonged to one of the five different stakeholder groups: host government (SG1); development partner officials (SG2); civil society leaders (SG3); private sector representatives (SG4); and independent experts (SG5). Indicated in brackets are stakeholder groups to which a given question was asked.

Q4 [SG1-4]: The following questions refer to your time at [[Q3: Organization]]. Please identify the position that you held for the longest period of time between 2010 and 2015. What was the name of this position? (example: Director)

Q5 [SG1-4]: In which of the following years did you hold this position?

- 2010 (1)
- 2011 (2)
- 2012 (3)
- 2013 (4)
- 2014 (5)
- 2015 (6)

Q6 [SG1-4]: The following question asks about your area of focus while holding the position of [[Q4: Position]]. What was your primary area of focus? (Please select one.)

Q6 [SG5]: Thinking of [[Q3: Administration]], with which area of policy-making are you most familiar? (Please select one.)

- Agriculture, Fishing and Forestry (1)
- Economic Policy (2)
- Education (3)
- Energy and Mining (4)
- Environment and Natural Resource Management (5)
- Finance (6)
- Health (7)
- Human Development and Gender (8)
- Industry, Trade and Services (9)
- Information and Communications Technologies (10)
- Labor Market Policy and Programs (11)
- Nutrition and Food Security (12)
- Private Sector Development (13)
- Good Governance and Rule of Law (14)
- Public Sector Management (15)
- Rural Development (16)
- Social Development and Protection (17)
- Trade (18)
- Transportation (19)
- Urban Development (20)
- Water, Sewerage and Waste Management (21)
- Foreign Policy (22)
- Other (Please indicate): (23) _____

Q20 [SG1-4]: Now we would like to ask about the raw data and analysis you used while you were working on [[Q6: Policy Area]] problems.

Q20 [SG1]: At which stages of the policy process have you used raw data in your work on [[Q6: Policy Area]] policy initiatives in [[Q1: Country]]? For the purposes of this survey, we define raw data as a data point, dataset, or datasets (examples: spreadsheet, CSV file). (Please select any and all that apply.)

- ☐ Research and analysis (1)
- ☐ Advocacy and agenda-setting (2)
- ☐ Design (3)
- ☐ Implementation (4)
- ☐ Monitoring and evaluation (5)
- ☐ External communications (6)
- ☐ Training, capacity building, and/or technical support (7)
- ☐ Don't know/not sure (8)
- ☐ Prefer not to say (9)
- ☐ None of these (10)

Q20 [SG2-4]: For which purposes have you used raw data in your work on [[Q6: Policy Area]] policy initiatives in [[Q1: Country]]? For the purposes of this survey, we define raw data as a data point, dataset, or datasets (examples: spreadsheet, CSV file).(Please select any and all that apply.)

- ☐ Research and analysis (1)
- ☐ Advocacy and agenda-setting (2)
- ☐ Design (3)
- ☐ Implementation (4)
- ☐ Monitoring and evaluation (5)
- ☐ External communications (6)
- ☐ Training, capacity building, and/or technical support (7)
- ☐ Don't know/not sure (8)
- ☐ Prefer not to say (9)
- ☐ None of these (10)

Q21 [SG1]: At which stages of the policy process have you used analysis in your work on [[Q6: Policy Area]] policy initiatives in [[Q1: Country]]? For the purposes of this survey, we define analysis as evaluations, papers, memos, and other products that use interpretations of data to provide insight into a particular situation. (Please select any and all that apply.)

- ☐ Research and analysis (1)
- ☐ Advocacy and agenda-setting (2)
- ☐ Design (3)
- ☐ Implementation (4)
- ☐ Monitoring and evaluation (5)
- ☐ External communications (6)
- ☐ Training, capacity building, and/or technical support (7)
- ☐ Don't know/not sure (8)
- ☐ Prefer not to say (9)
- ☐ None of these (10)

Q21 [SG2-4]: For which purposes have you used analysis in your work on [[Q6: Policy Area]] policy initiatives in [[Q1: Country]]? For the purposes of this survey, we define analysis as evaluations, papers, memos, and other products that use interpretations of data to provide insight into a particular situation. (Please select any and all that apply.)

- Research and analysis (1)
- Advocacy and agenda-setting (2)
- Design (3)
- Implementation (4)
- Monitoring and evaluation (5)
- External communications (6)
- Training, capacity building, and/or technical support (7)
- Don't know/not sure (8)
- Prefer not to say (9)
- None of these (10)

Q27 [SG1-4]: Now we would like to ask about the raw data and analysis provided to your team by foreign and international organizations while you were working on [[Q6: Policy Area]] problems.

Q27 [SG5]: Now we would like to ask about the raw data and analysis you used to study and monitor [[Q6: Policy Area]] problems in [[Q1: Country]].

Q27 [SG1-4]: In making decisions while working on [[Q6: Policy Area]] policy issues, did you use any raw data or analysis provided by foreign or international organizations? For the purposes of this survey, we define raw data as a data point, dataset, or datasets (examples: spreadsheet, CSV file) and analysis as evaluations, papers, memos, and other products that use interpretations of data to provide insight into a particular situation.

- Yes, I used raw data or analysis provided by foreign or international organizations. (1)
- No, I did not use raw data or analysis provided by foreign or international organizations. (2)

Q27 [SG5]: In your work studying and monitoring [[Q6: Policy Area]] policy issues in [[Q1: Country]], did you use any raw data or analysis? For the purposes of this survey, we define raw data as a data point, dataset, or datasets (e.g., a spreadsheet, CSV file) and analysis as evaluations, papers, memos, and other products that use interpretations of data to provide insight into a particular situation.

- Yes, I used raw data or analysis provided by foreign or international organizations. (1)
- No, I did not use raw data or analysis provided by foreign or international organizations. (2)

Q28 [SG1-4]: Which external sources of information have you drawn from? For the purposes of this survey, we define raw data as a data point, dataset, or datasets (examples: spreadsheet, CSV file) and analysis as evaluations, papers, memos, and other products that use interpretations of data to provide insight into a particular situation.

<<List of foreign and international organizations being identified in Q22>>

Q29 [SG1-4]: How did you become familiar with the information you used from external sources? For the purposes of this survey, we define familiar as being aware the information existed. (Please select any and all that apply.)

<<List of foreign and international organizations being identified in Q28>>

- Email/e-newsletters (1)

- Informal face- to face communication (2)
- Memorandum/policy brief/short technical papers (3)
- Social media (4)
- Formal meeting or consultation (5)
- Internet search (6)
- Traditional media (newspaper, radio, television) (7)
- Information or data portal (8)
- Don't know / Not sure (9)
- None of these (10)

Q30 [SG1-4]: Which types of analyses, if any, did your team use from each of the following organizations to support your work on this initiative? For the purposes of this survey, we define analysis as evaluations, papers, memos, and other products that use interpretations of data to provide insight into a particular situation. (Please select any and all that apply.)

Q30 [SG5]: Which types of analyses, if any, did you use to support your work studying or monitoring this initiative? For the purposes of this survey, we define analysis as evaluations, papers, memos, and other products that use interpretations of data to provide insight into a particular situation. (Please select any and all that apply.)

<<List of foreign and international organizations being identified in Q28>>

- Qualitative analysis (1)
- Quantitative analysis (2)
- Impact evaluation analysis (3)
- Another type of analysis (4)
- Don't know / Not sure (5)

Q31 [SG1-4]: Which types of raw data, if any, did your team use from each of the following organizations to support your work on this initiative? For the purposes of this survey, we define raw data as a data point, dataset, or datasets (examples: spreadsheet, CSV file). (Please select any and all that apply.)

Q31 [SG5]: Which types of raw data, if any, did you use to study and monitor this initiative? For the purposes of this survey, we define raw data as a data point, dataset, or datasets (examples: spreadsheet, CSV file). (Please select any and all that apply.)

<<List of foreign and international organizations being identified in Q28>>

- National statistics (1)
- Survey data (examples: household surveys, income surveys) (2)
- Public opinion data (3)
- Program/project performance and evaluation data (4)
- Government budget and expenditure data (5)
- Spatial or satellite data (6)
- Aid and/or philanthropic finance data (7)
- Another type of data (8)
- Don't know / Not sure (9)

Q32 [SG1-4]: What was the geographic scope of the information you used? (Please select any and all that apply.)

Q32 [SG5]: What was the geographic scope of the information you used? (Please select any and all that apply.)

<<List of foreign and international organizations being identified in Q28>>

- ☐ Cross-national (1)
- ☐ National (2)
- ☐ Province/region (3)
- ☐ District (4)
- ☐ Village / town / city (5)
- ☐ Exact location (6)
- ☐ Don't know / Not sure (7)
- ☐ No data were featured (8)

Q33 [SG1-4]: You indicated that the foreign and international organizations below provided you with information. Overall, how helpful would you say the information provided by each of these foreign and international organizations was to your work? For the purposes of this survey, we define helpful as being of assistance in implementing policy changes.

<<List of foreign and international organizations being identified in Q28>>

Q34 [SG1-4]: You identified information from [[Q33: Organization]] as helpful. In your opinion, which type of information from [[Q33: Organization]] was most helpful? For the purposes of this survey, we define helpful as being of assistance in implementing policy changes.

- ☐ Qualitative analysis (1)
- ☐ Quantitative analysis (2)
- ☐ Impact evaluation analysis (3)
- ☐ Another type of analysis (4)
- ☐ National statistics (5)
- ☐ Survey data (examples: household surveys, income surveys) (6)
- ☐ Public opinion data (7)
- ☐ Program/project performance and evaluation data (8)
- ☐ Government budget and expenditure data (9)
- ☐ Spatial or satellite data (10)
- ☐ Aid and/or philanthropic finance data (11)
- ☐ Another type of data (12)

Q35 [SG1-4]: What has made [[Q34: Information]] from [[Q33: Organization]] helpful? For the purposes of this survey, we define helpful as being of assistance in implementing policy changes. (Please check up to 3 boxes.)

- ☐ It was easy to understand. (1)
- ☐ It was easy to adapt for a new purpose. (2)
- ☐ It contained information that senior government officials cared about. (3)

- ☐ It provided new insights that were not otherwise understood or appreciated. (4)
- ☐ It reflected an understanding of the local context [[Q1: Country]]. (5)
- ☐ It was timely and up-to-date. (6)
- ☐ It provided a concrete set of policy recommendations. (7)
- ☐ It was used by other governments that we could emulate. (8)
- ☐ It drew upon data or analysis produced by the government. (9)
- ☐ It was based on a transparent set of methods and assumptions. (10)
- ☐ It was seen as unbiased and trustworthy. (11)
- ☐ It was accompanied by critical financial, material, or technical support. (12)
- ☐ It was published frequently. (13)
- ☐ It was at the right level of aggregation (i.e., cross-national, national, district) (14)
- ☐ Another reason (Please describe): (15) _____
- ☐ Don't know / Not sure (16)
- ☐ None of these (17)
- ☐ Prefer not to say (18)

Q40 [SG1or5]: Please list the names of as many domestic organizations in [[Q1: Country]] that provided the government with advice or assistance to support this initiative as you can remember. (Please select as many as apply and/or write the full name of each organization. Do not include your own organization.)

Q47 [SG1-4]: Now we would like to ask about the raw data and analysis provided to your team by domestic organizations while you were working on [[Q6: Policy Area]] policy problems.

Q47 [SG1-4]: In making decisions while working on [[Q6: Policy Area]] policy issues, did you use any raw data or analysis provided by domestic organizations? For the purposes of this survey, we define raw data as a data point, dataset, or datasets (examples: spreadsheet, CSV file) and analysis as evaluations, papers, memos, and other products that use interpretations of data to provide insight into a particular situation.

- ☐ Yes, I used raw data or analysis provided by domestic organizations. (1)
- ☐ No, I did not use raw data or analysis provided by domestic organizations. (2)

Q48 [SG1-4]: Which domestic sources of information have you drawn from? For the purposes of this survey, we define raw data as a data point, dataset, or datasets (examples: spreadsheet, CSV file) and analysis as evaluations, papers, memos, and other products that use interpretations of data to provide insight into a particular situation.

<<List of domestic organizations being identified in Q40>>

Q49 [SG1-4]: How did you become familiar with the information you used from external sources? For the purposes of this survey, we define familiar as being aware the information existed. (Please select any and all that apply.)

<<List of domestic organizations being identified in Q48>>

- ☐ Email/e-newsletters (1)

- Informal face- to face communication (2)
- Memorandum/policy brief/short technical papers (3)
- Social media (4)
- Formal meeting or consultation (5)
- Internet search (6)
- Traditional media (newspaper, radio, television) (7)
- Information or data portal (8)
- Don't know / Not sure (9)
- None of these (10)

Q50 [SG1-4]: Which types of analyses, if any, did your team use from each of the following organizations to support your work on this initiative? For the purposes of this survey, we define analysis as evaluations, papers, memos, and other products that use interpretations of data to provide insight into a particular situation. (Please select any and all that apply.)

<<List of domestic organizations being identified in Q48>>

- Qualitative analysis (1)
- Quantitative analysis (2)
- Impact evaluation analysis (3)
- Another type of analysis (4)
- Don't know / Not sure (5)

Q51 [SG1-4]: Which types of raw data, if any, did your team use from each of the following organizations to support your work on this initiative? For the purposes of this survey, we define raw data as a data point, dataset, or datasets (examples: spreadsheet, CSV file). (Please select any and all that apply.)

<<List of domestic organizations being identified in Q48>>

- National statistics (1)
- Survey data (examples: household surveys, income surveys) (2)
- Public opinion data (3)
- Program/project performance and evaluation data (4)
- Government budget and expenditure data (5)
- Spatial or satellite data (6)
- Aid and/or philanthropic finance data (7)
- Another type of data (8)
- Don't know / Not sure (9)

Q52 [SG1-4]: What was the geographic scope of the information you used? (Please select any and all that apply.)

<<List of domestic organizations being identified in Q48>>

- Cross-national (1)
- National (2)
- Province/region (3)
- District (4)

- ☐ Village / town / city (5)
- ☐ Exact location (6)
- ☐ Don't know / Not sure (7)
- ☐ No data were featured (8)

Q53 [SG1-4]: You indicated that the domestic organizations below provided you with information. Overall, how helpful would you say the information provided by each of these domestic organizations was to your work? For the purposes of this survey, we define helpful as being of assistance in implementing policy changes.

<<List of domestic organizations being identified in Q48>>

Q54 [SG1-4]: You identified information from [[Q53: Domestic Organization]] as helpful. In your opinion, which type of information from [[Q53: Domestic Organization]] was most helpful? For the purposes of this survey, we define helpful as being of assistance in implementing policy changes.

- ☐ Qualitative analysis (1)
- ☐ Quantitative analysis (2)
- ☐ Impact evaluation analysis (3)
- ☐ Another type of analysis (4)
- ☐ National statistics (5)
- ☐ Survey data (examples: household surveys, income surveys) (6)
- ☐ Public opinion data (7)
- ☐ Program/project performance and evaluation data (8)
- ☐ Government budget and expenditure data (9)
- ☐ Spatial or satellite data (10)
- ☐ Aid and/or philanthropic finance data (11)
- ☐ Another type of data (12)

Q55 [SG1-4]: What has made [[Q54: Information]] from [[Q53: Domestic Organization]] particularly helpful? For the purposes of this survey, we define helpful as being of assistance in implementing policy changes. (Please check up to 3 boxes.)

- ☐ It was easy to understand. (1)
- ☐ It was easy to adapt for a new purpose. (2)
- ☐ It contained information that senior government officials cared about. (3)
- ☐ It provided new insights that were not otherwise understood or appreciated. (4)
- ☐ It reflected an understanding of the local context in [[Q1: Country]]. (5)
- ☐ It was timely and up-to-date. (6)
- ☐ It provided a concrete set of policy recommendations. (7)
- ☐ It was used by other governments that we could emulate. (8)
- ☐ It drew upon data or analysis produced by the government. (9)
- ☐ It was based on a transparent set of methods and assumptions. (10)
- ☐ It was seen as unbiased and trustworthy. (11)
- ☐ It was accompanied by critical financial, material, or technical support. (12)
- ☐ It was published frequently. (13)
- ☐ It was at the right level of aggregation (i.e., cross-national, national, district) (14)
- ☐ Another reason (Please describe): (15) _____

- ◻ Don't know / Not sure (16)
- ◻ None of these (17)
- ◻ Prefer not to say (18)

Q56 [SG1-4]: How did your team use the [[Q54: Information]] provided by [[Q53: Domestic Organization]]? (You may select up to three statements.)

- ◻ To better understand the [[Q6: Policy Area]] policy problems that needed to be solved (1)
- ◻ To keep citizens and other domestic stakeholders updated on the initiative's progress (2)
- ◻ To keep foreign and international stakeholders updated on the initiative's progress (3)
- ◻ To advocate for the adoption or implementation of the initiative (4)
- ◻ To make budgetary or resource allocation decisions (5)
- ◻ To identify the [[Q6: Policy Area]] policy problems that were most critical to solve (6)
- ◻ To design or inform specific implementation strategies (7)
- ◻ To foster a broader partnership with [[Q53: Domestic Organization]] (8)
- ◻ To monitor progress made towards solving specific [[Q6: Policy Area]] policy problems (9)
- ◻ To petition for resources from authorizing entities or external partners (10)
- ◻ To make course corrections during the implementation of the initiative (11)
- ◻ Another reason (Please describe): (12) _____
- ◻ Don't know / Not sure (13)
- ◻ None of these (14)
- ◻ Prefer not to say (15)

Q57 [SG1-4]: What did this information help your team to accomplish?

Q58 [SG1-4]: You identified that information from [[Q53: Domestic Organization]] could have been more helpful. What were the biggest challenges your team faced when trying to use information provided by [[Q53: Domestic Organization]]? For the purposes of this survey, we define helpful as being of assistance in implementing policy changes. (Please check up to 3 boxes.)

- ◻ It was hard to understand (1)
- ◻ It was hard to adapt for a new purpose (2)
- ◻ It did not contain enough information that government officials cared about (3)
- ◻ It did not provide any new insights (4)
- ◻ It did not reflect an understanding of the local context [[Q1: Country]] (5)
- ◻ It was untimely and out-of-date (6)
- ◻ It did not provide a concrete set of policy recommendations (7)
- ◻ It had not been used by other governments that we could emulate (8)
- ◻ It did not draw upon data or analysis produced by the government (9)
- ◻ It was not transparent in its methods or assumptions (10)
- ◻ It was seen as biased and untrustworthy (11)
- ◻ It was not accompanied by critical financial, material, or technical support (12)
- ◻ It was received at a time when there was not much opportunity for change (13)
- ◻ It was not specific enough (for example, with respect to stakeholder group or geography) (14)
- ◻ Another reason (Please describe): (15) _____
- ◻ Don't know / Not sure (16)
- ◻ None of these (17)
- ◻ Prefer not to say (18)

The 2017 Education Snap Poll

Q1 Thank you for your interest in our snap poll, which should take you about 10 minutes to complete. We are inviting you to participate in this study because we believe you are knowledgeable about the education sector and education data in [[Q2: Country]] between 2010 and 2015. Your participation will help us ensure that our findings accurately represent the diverse opinions and observations of those with experience in education. Researchers from the College of William and Mary will use the results from this survey to undertake independent analysis of how education data is being used, and how it could be improved.

This questionnaire is unique. We are seeking your individual observations and opinions based upon your own experiences. We are not seeking the official positions of any institutions with which you have been affiliated. Please complete as many questions as you can and feel free to express your views openly and honestly. If you do not feel comfortable answering a particular question for any reason, you are welcome to select the "don't know" response and move on.

Participation in this survey is completely voluntary. All of your responses will be kept strictly confidential. They will only be used in a statistical summary and will never be associated with your name. We do not believe that there are any risks to participating in this survey. Every individual who chooses to participate in the survey will be granted access to our findings.

If you have questions or need assistance in any way, please send an email to our research team (brad.parks@aiddata.org). Any ethical concerns with the conduct of the study should be directed to Thomas Ward, Ph.D., Chair of the Protection of Human Subjects Committee at the College of William and Mary, at tjward@wm.edu 757-221-2358. If you would like to learn more about AidData's survey work, please visit our website at www.aiddata.org/listening-to-leaders.

Q2 In what country do you currently work? If your work is focused on more than one country, please select your country of greatest focus.

- ☐ Afghanistan
- ☐ Albania
- ☐ Algeria
- ☐ Angola
- ☐ Armenia
- ☐ Azerbaijan
- ☐ Bangladesh
- ☐ Belarus
- ☐ Belize
- ☐ Benin
- ☐ Bhutan
- ☐ Bolivia
- ☐ Bosnia and Herzegovina
- ☐ Botswana
- ☐ Brazil
- ☐ Bulgaria

- Burkina Faso
- Burundi
- Cambodia
- Cameroon
- Cape Verde
- Central African Republic
- Chad
- China
- Colombia
- Comoros
- DRC
- Congo
- Côte D'Ivoire
- Cuba
- Djibouti
- Dominican Republic
- Ecuador
- Egypt
- El Salvador
- Equatorial Guinea
- Eritrea
- Ethiopia
- Fiji
- Gambia
- Georgia
- Ghana
- Guatemala
- Guinea
- Guinea-Bissau
- Guyana
- Haiti
- Honduras
- India
- Indonesia
- Iran
- Iraq
- Jamaica
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- North Korea
- Kosovo
- Kurdistan
- Kyrgyzstan
- Laos
- Lesotho
- Liberia
- Macedonia
- Madagascar
- Malawi
- Maldives
- Mali
- Marshall Islands
- Mauritania
- Federated States of Micronesia
- Moldova
- Mongolia
- Montenegro
- Morocco
- Mozambique
- Myanmar
- Namibia
- Nepal
- Nicaragua
- Niger
- Nigeria
- Pakistan
- Palestine
- Papua New Guinea
- Paraguay
- Peru
- Philippines
- Puntland
- Romania
- Rwanda
- Samoa
- Sao Tome and Principe
- Senegal
- Serbia
- Sierra Leone
- Solomon Islands
- Somalia
- Somaliland
- South Africa
- South Sudan
- Sri Lanka
- Sudan
- Suriname
- Swaziland
- Syria
- Tajikistan
- Tanzania
- Thailand
- Timor-Leste
- Togo

- ☐ Tonga
- ☐ Tunisia
- ☐ Turkey
- ☐ Turkmenistan
- ☐ Tuvalu
- ☐ Uganda
- ☐ Ukraine
- ☐ Uzbekistan
- ☐ Vanuatu
- ☐ Vietnam
- ☐ Yemen
- ☐ Zambia
- ☐ Zanzibar
- ☐ Zimbabwe
- ☐ I do not work in or study one of these countries.

Q3 Which of the following education activities are you involved in?
Select and any all that apply.

- ☐ Designing and defining programs of study and course content
- ☐ Designing and implementing support activities for students (e.g., after school remedial education)
- ☐ Creating or closing/abolishing schools or grades
- ☐ Testing, assessing, and/or credentialing students
- ☐ Hiring and deploying teachers and/or principals
- ☐ Developing careers and assessing performance of teachers and/or principals
- ☐ Determining compensation of teachers and/or principals
- ☐ Budgeting and allocating financial resources for education
- ☐ Ensuring provision of school inputs (e.g., school supplies, desks)
- ☐ Planning and developing strategies (e.g., writing a strategy, monitoring & evaluation)
- ☐ Other _____
- ☐ I am not involved in any of these activities

Q4 What is the nature of your involvement in those activities in [[Q3: Activities]]?

	I make the final decision related to this activity.	I provide support to policymakers who make decisions related to this activity.	I advocate for a course of action related to this activity.	I play another role related to this activity.
Designing and defining programs of study and course content	☐	☐	☐	☐

Designing and implementing support activities for students (e.g., after school remedial education)	☐	☐	☐	☐
Creating or closing/abolishing schools or grades	☐	☐	☐	☐
Testing, assessing, and/or credentialing students	☐	☐	☐	☐
Hiring and deploying teachers and/or principals	☐	☐	☐	☐
Developing careers and assessing performance of teachers and/or principals	☐	☐	☐	☐
Determining compensation of teachers and/or principals	☐	☐	☐	☐
Budgeting and allocating financial resources for education	☐	☐	☐	☐
Ensuring provision of school inputs (e.g., school supplies, desks)	☐	☐	☐	☐
Planning and developing strategies (e.g., writing a strategy, monitoring & evaluation)	☐	☐	☐	☐
Other	☐	☐	☐	☐
Other	☐	☐	☐	☐
I am not involved in any of these activities	☐	☐	☐	☐

Q5 What is the most important factor in making or influencing decisions within these activities?

	There is enough information	There are sufficient financial resources	There is public and political support	The government has sufficient capacity	Another factor
Designing and defining programs of study and course content	☐	☐	☐	☐	☐
Designing and implementing support activities for students (e.g., after school remedial education)	☐	☐	☐	☐	☐
Creating or closing/abolishing schools or grades	☐	☐	☐	☐	☐
Testing, assessing, and/or credentialing students	☐	☐	☐	☐	☐
Hiring and deploying teachers and/or principals	☐	☐	☐	☐	☐
Developing careers and assessing performance of teachers and/or principals	☐	☐	☐	☐	☐
Determining compensation of teachers and/or principals	☐	☐	☐	☐	☐
Budgeting and allocating financial resources for education	☐	☐	☐	☐	☐
Ensuring provision of school inputs (e.g., school supplies, desks)	☐	☐	☐	☐	☐
Planning and developing strategies (e.g., writing a strategy, monitoring & evaluation)	☐	☐	☐	☐	☐
Other	☐	☐	☐	☐	☐
Other	☐	☐	☐	☐	☐
I am not involved in any of these activities	☐	☐	☐	☐	☐

Q6 You previously indicated involvement in the activities listed below. Which is most important to your work?

- ◻ Designing and defining programs of study and course content
- ◻ Designing and implementing support activities for students (e.g., after school remedial education)
- ◻ Creating or closing/abolishing schools or grades
- ◻ Testing, assessing, and/or credentialing students
- ◻ Hiring and deploying teachers and/or principals
- ◻ Developing careers and assessing performance of teachers and/or principals
- ◻ Determining compensation of teachers and/or principals
- ◻ Budgeting and allocating financial resources for education
- ◻ Ensuring provision of school inputs (e.g., school supplies, desks)
- ◻ Planning and developing strategies (e.g., writing a strategy, monitoring & evaluation)
- ◻ Other
- ◻ I am not involved in any of these activities

Q7 Which of the following types of information are most essential to your work on [[Q6: Domain]]? *Please select up to three.*

- ◻ Education administrative data (example: enrollment figures, number of schools)
- ◻ Student-level assessment data
- ◻ School-level data (example: pass/fail rates, share of minority students)
- ◻ Teacher performance data
- ◻ Survey data (examples: household surveys, income surveys)
- ◻ Citizen opinion data (example: survey data on citizen preferences)
- ◻ Program/project performance and evaluation data and analysis
- ◻ Government budget and expenditure data
- ◻ Aid and/or philanthropic finance data
- ◻ Other: _____
- ◻ I do not use any of these types of information in my work.

Q8 Which of the following types of information do you wish existed for your work on [[Q6: Domain]]? *Please select up to three.*

- ◻ I have access to the types of information I need for my work.
- ◻ Education administrative data (example: enrollment figures, number of schools)
- ◻ Student-level assessment data
- ◻ School-level data (example: pass/fail rates, share of minority students)
- ◻ Teacher performance data
- ◻ Survey data (examples: household surveys, income surveys)
- ◻ Citizen opinion data (example: survey data on citizen preferences)
- ◻ Program/project performance and evaluation data and analysis
- ◻ Government budget and expenditure data
- ◻ Aid and/or philanthropic finance data
- ◻ Other: _____

Q9 Which of the following sources of information are most helpful to you in your work on [[Q6: Domain]]?
Please select up to three choices.

- ☐ Data provided by the Government of [[Q2: Country]]
- ☐ Data provided by the government at the local level (district, province, municipality)
- ☐ Data provided by local organizations (example: non-governmental organizations)
- ☐ Data provided by development partners/donors (example: UNESCO, World Bank, DFID)
- ☐ Citizen-generated data (example: parent feedback on schools)
- ☐ School-generated data (example: student and teacher absences)
- ☐ Policy and/or education experts (e.g., think tanks, academics)
- ☐ News media
- ☐ Other _____
- ☐ I do not use any of these sources of information in my work

Q10 How do you usually access this information?
Please select up to three options.

- ☐ Email/e-newsletters
- ☐ Informal communication (example: face-to-face, phone calls)
- ☐ Memorandum/policy brief/short technical papers
- ☐ Social media
- ☐ Formal meeting or consultation
- ☐ Internet search (example: visiting websites related to education)
- ☐ Traditional media (example: print newspaper, radio, television)
- ☐ Online media (example: online newspaper, online magazine)
- ☐ Information or data portal (example: EMIS)
- ☐ Don't know/not sure
- ☐ Other _____

Q11 What improvements would make information from these sources more helpful?
You may select up to three improvements for each data source.
Responses from [[Q8]]

	More timely	Easier to understand and use	More trustworthy	More disaggregated	More accessible	More comparable over time	More accurate	Another improvement	The source does not need improvement
Data provided by the Government of [[Q2: Country]]}	☐	☐	☐	☐	☐	☐	☐	☐	☐

Data provided by the government at the local level (district, province, municipality)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Data provided by local organizations (example: non-governmental organizations)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Data provided by development partners/donors (example: UNESCO, World Bank, DFID)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Citizen-generated data (example: parent feedback on schools)	☐	☐	☐	☐	☐	☐	☐	☐	☐
School-generated data (example: student and teacher absences)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Policy and/or education experts (e.g., think tanks, academics)	☐	☐	☐	☐	☐	☐	☐	☐	☐
News media	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other	☐	☐	☐	☐	☐	☐	☐	☐	☐
I do not use any of these sources of information in my work.	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q12 Thinking about the improvements you recommended above, how important is each of the possible solutions below?

	Extremely important	Very important	Moderately important	Slightly important	Not at all important
Strengthen the Education Management and Information System within the Ministry of Education	☐	☐	☐	☐	☐
Collect more data at the school and student levels	☐	☐	☐	☐	☐
Stakeholders at various levels in the education system should use data and analysis	☐	☐	☐	☐	☐
All education data and evidence should be publicly accessible, or any required permission to use data should be easy to obtain	☐	☐	☐	☐	☐
Citizens and parents should demand more open data at the school and student levels	☐	☐	☐	☐	☐
Education spending should be monitored and evaluated for impact	☐	☐	☐	☐	☐
External education funders should require that all countries maintain good-quality and timely education data	☐	☐	☐	☐	☐

Q13 Where do you work? (example: Ministry of Education)

_____

Q14 What is your title? (example: Director of Primary Education Curriculum)

_____

Q15 What is the most advanced degree you have received? (example: BA in Communications)

_____

Q16 Where did you receive your highest degree?

- ◻ Afghanistan
- ◻ Albania
- ◻ Algeria
- ◻ Andorra
- ◻ Angola
- ◻ Antigua and Barbuda
- ◻ Argentina
- ◻ Armenia
- ◻ Australia
- ◻ Austria
- ◻ Azerbaijan
- ◻ Bahamas
- ◻ Bahrain
- ◻ Bangladesh
- ◻ Barbados
- ◻ Belarus
- ◻ Belgium
- ◻ Belize
- ◻ Benin
- ◻ Bhutan
- ◻ Bolivia
- ◻ Bosnia and Herzegovina
- ◻ Botswana
- ◻ Brazil
- ◻ Brunei Darussalam
- ◻ Bulgaria
- ◻ Burkina Faso
- ◻ Burundi
- ◻ Cambodia
- ◻ Cameroon
- ◻ Canada
- ◻ Cape Verde
- ◻ Chad
- ◻ Chile
- ◻ China

- Colombia
- Congo
- Costa Rica
- Côte d'Ivoire
- Croatia
- Cuba
- Cyprus
- Czech Republic
- Democratic Republic of the Congo
- Denmark
- Djibouti
- Dominica
- Ecuador
- Egypt
- El Salvador
- Equatorial Guinea
- Eritrea
- Estonia
- Ethiopia
- Fiji
- Finland
- France
- Gabon
- Georgia
- Germany
- Ghana
- Greece
- Grenada
- Guatemala
- Guinea
- Guinea-Bissau
- Guyana
- Haiti
- Honduras
- Hungary
- Iceland
- India
- Indonesia
- Iran
- Iraq
- Ireland
- Israel
- Italy
- Jamaica
- Japan
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kosovo
- Kuwait
- Kyrgyzstan
- Laos
- Latvia
- Lebanon
- Lesotho
- Liberia
- Libya
- Liechtenstein
- Lithuania
- Luxembourg
- Macedonia
- Madagascar
- Malawi
- Malaysia
- Mali
- Malta
- Mauritania
- Mauritius
- Mexico
- Moldova
- Monaco
- Mongolia
- Montenegro
- Morocco
- Mozambique
- Myanmar
- Namibia
- Nauru
- Nepal
- New Zealand
- Nicaragua
- Niger
- Nigeria
- North Korea
- Norway
- Oman
- Pakistan
- Palau
- Palestine
- Panama
- Papua New Guinea
- Paraguay
- Peru
- Philippines
- Poland

- Portugal
- Qatar
- Romania
- Russia
- Rwanda
- Saint Kitts and Nevis
- Saint Lucia
- Saint Vincent and the Grenadines
- Samoa
- San Marino
- Sao Tome and Principe
- Saudi Arabia
- Senegal
- Serbia
- Seychelles
- Sierra Leone
- Singapore
- Slovakia
- Slovenia
- Somalia
- South Africa
- South Korea
- South Sudan
- Spain
- Sri Lanka
- Sudan
- Suriname
- Swaziland
- Sweden
- Switzerland
- Syria
- Taiwan
- Tajikistan
- Tanzania
- Thailand
- The Central African Republic
- The Comoros
- The Dominican Republic
- The Federated States of Micronesia
- The Gambia
- The Maldives
- The Marshall Islands
- the Netherlands
- The Solomon Islands
- Timor-Leste
- Togo
- Tonga
- Trinidad and Tobago
- Tunisia
- Turkey
- Turkmenistan
- Tuvalu
- Uganda
- Ukraine
- United Arab Emirates
- United Kingdom
- United States
- Uruguay
- Uzbekistan
- Vanuatu
- Vatican City
- Venezuela
- Vietnam
- Yemen
- Zambia
- Zimbabwe

Q17 In what year were you born?

- ☐ 1937
- ☐ 1938
- ☐ 1939
- ☐ 1940
- ☐ 1941
- ☐ 1942
- ☐ 1943
- ☐ 1944
- ☐ 1945
- ☐ 1946
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- ☐ 1981
- ☐ 1982
- ☐ 1983

- 1984
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- 1987
- 1988
- 1989
- 1990
- 1991
- 1992
- 1993
- 1994
- 1995
- 1996
- 1997

Q18 Thank you for taking the time to complete this survey. Please click the next button to submit your answers.

We will share the results with you when they are published later this year and your answers will remain confidential. They will never be associated with your name and will be reported as statistical summaries. If you have any questions, please don't hesitate to contact our research team at survey@aiddata.wm.edu.


B
Center for
Universal Education
at BROOKINGS


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