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The Role of Delivery Approaches in Education Systems Reform: Evidence from a Multi-Country Study

DeliverEd Initiative Working Paper

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DeliverEd Research Products

Anderson, K., Ibarra, A., & Javaid, N. (December 2022). [The Education Commission. A Case Study of the Sierra Leone Delivery Unit](#). DeliverEd Initiative Policy Note.

Bell, S., Asim, M., Mundy, K., Pius Nuzdor, H., Boakye-Yiadom, M., & Mensah Adosi, C. (May 2023). How do regions, districts and schools respond to the introduction of a delivery approach: Evidence from Ghana. DeliverEd Initiative Working Paper.

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Executive summary

One of the most common reform strategies to improve education delivery worldwide is the adoption of “delivery units” or “delivery approaches.” These often take the form of dedicated units, located in ministerial offices, that aim to improve the performance of the education service delivery chain and combine a common repertoire of functions—prioritization and target setting, measurement and monitoring, leveraging political sponsorship, accountability and incentives, and problem-solving—in various ways. Such delivery approaches are often modeled on high-profile examples, such as the UK Prime Minister’s Delivery Unit (PMDU) or Malaysia’s Performance Management and Delivery Unit (PEMANDU).

This report synthesizes the findings of a multi-country, multi-team research project into the effectiveness of delivery approaches at improving education service delivery. The main countries studied were Ghana, Jordan, and Pakistan, with smaller studies in Sierra Leone and a soon-to-be-completed study in Tanzania. We also conducted a global mapping of the design and adoption of delivery approaches. Both quantitative and qualitative methods were employed in different ways across our country cases, and all research was based on a common conceptual framework developed by Williams et al. (2021), under the DeliverEd program, which enabled us to synthesize a disparate set of research studies into a common portrait of the ways delivery approaches impacted the education systems across these cases.

Key takeaways

Origin and design

- Delivery approaches are increasingly common. We identified 152 instances of their use in 80 different countries, with an accelerating trend of adoption since 2010. Of these cases, 142 approaches have been structured as units. The majority include education as a focus sector; 61 percent of cross-sectoral approaches and 39 percent of single-sector approaches focus on education. As in our country cases, delivery approaches frequently include a special delivery unit.
- There is no single model for delivery approaches; they can be designed in many different ways, both in terms of how they are structured and what they do.
- Country case studies suggest that delivery approaches often evolve from their original design.

Impact on managerial practices and routines

- Overall, the delivery approaches were fairly effective at the central level of

education administrations. The delivery approaches studied were able to leverage political sponsorship, focus attention on key priorities, improve coordination of national actors around these priorities, and achieve formal/legal/structural changes at the central level.

- Delivery approaches were less effective at embedding improved management practices or achieving positive behavior changes among downstream actors. There are several reasons for this:
 - Downstream and frontline actors were often limited in their ability to respond to the activities of the delivery approach by constraints that fell outside the scope of the delivery approach itself, such as multiple lines of accountability and the lack of resources or authority.
 - Delivery approaches were generally not designed to support the full range of delivery practices at subnational levels.
- New and enhanced availability of data on performance accompanied the introduction of delivery approaches. At the central level, delivery units played an important role in spotlighting issues, provoking discussions, and making abstract issues tangible. However, data appeared to be channeled mainly for centralized decision making. At central levels, the data was more useful in driving problem-solving and coordination than when it was used to direct rewards or sanctions.
- Delivery approaches sometimes generated opportunities for organizational learning, albeit often as an unintended benefit rather than by design. This effect was stronger in cases in which delivery approaches created both formal and informal channels and routines for organizational learning that were integrated with the mainstream civil service.

Sustainability

- The effective lifespan of delivery approaches was generally linked to that of particular political leaders or administrations, and to the availability of external funding. That said, across the country cases reviewed, delivery approaches appeared to have strong support from central bodies in the education bureaucracy.
- However, there was very little evidence of education officials spreading or transferring delivery approach-inspired practices more widely. Some organizational forms and management practices predated and/or outlived the delivery approach. Some changes and routines were sustained after their effective end date, but most were not.
- Housing delivery approaches in newly created units, and staffing them with staff

who are not on civil service contracts, appeared to undermine sustainability and inhibit the broader uptake of practices.

Future research considerations

This report also discusses key lessons and considerations for future research on delivery approaches. First, we highlight the need for more research on management practices that link centralized management reforms to improved capacity among decentralized managers. For multi-country comparative policy research, we also highlight the value of jointly developing a common conceptual framework and integrating research from different disciplines and with different methods.

Considerations for policymakers

- **Because delivery approaches are used in different contexts for different purposes, it is difficult to establish a set of prescriptive policy recommendations based on our research.** We instead present a set of policy considerations: key factors for design and implementation that governmental leaders and donors may wish to consider if they are thinking of adopting a delivery approach.
- **The structure and financing of a delivery approach affects its sustainability.** Parallel units with external staff rarely remain active and effective beyond the term of a single political leader or donor funding program.
- **Different goals and priorities require different approaches.** Delivery approaches seem to be good at enhancing clarity and awareness of priorities among key agencies and their leaders, and delivery approaches create opportunities for coordination and alignment around key reforms. High-stakes accountability routines attract attention, generate activity, and appear to do best when addressing goals that improve operational inputs in education systems, such as delivering textbooks, building schools, training staff, and tackling teacher allocation. However, problem-solving and support for staff are needed to drive behavioral change at the frontline. In general, delivery approaches tended to be designed more through “forward mapping” thinking about how to translate high-level policies into frontline changes than through “backward mapping” thinking about how central actors can enable frontline workers to be more effective (Elmore, 1979).
- **Political sponsorship can be used in different ways.** Combining political

sponsorship with high-stakes accountability stimulates attention. Political sponsorship that is combined with support and opportunities for ownership may better support the ownership of reforms across the education system. However, political sponsorship is difficult to sustain.

- **Harnessing data to improve delivery requires careful consideration.** Delivery approaches typically generate rich new sources and types of data and are often accompanied by new platforms for aggregating and visualizing data. However, they often emphasize executive or central leaders as the main users of the data and miss opportunities to provide feedback loops. It is important at the design stage to develop a “use case” for data among managers at all levels of the system, particularly among frontline managers.
- **Building learning and problem-solving into the delivery approach needs greater emphasis.** Organizational learning is an assumed mechanism in most delivery approaches, but it could be better achieved if approached more deliberately, and with a better focus on the engagement of subnational actors with responsibility for frontline delivery.

It is important to emphasize that while our research speaks to some of the pros and cons of delivery approaches and identifies opportunities for improving their use, it does not compare the effectiveness of delivery approaches with alternative system-wide methods of improving management and education service delivery. Our research should therefore not be read as either encouraging or discouraging the use of delivery units or delivery approaches.

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1. Introduction

The past three decades have seen a proliferation of new efforts to improve the delivery of public services. Some of these new efforts introduce an integrated process or structure that is designed to catalyze and coordinate a set of management functions deemed essential for the effective delivery of services. Such “delivery approaches” aim to shift administrative focus to the achievement of key outputs and outcomes. Delivery approaches leverage political sponsorship and emphasize the use of data, target setting, and high stakes accountability. They often manifest in the creation of new organizational structures—“delivery units”—and are often modeled, at least in part, on high-profile examples, such as the UK Prime Minister’s Delivery Unit (PMDU) or Malaysia’s Performance Management and Delivery Unit (PEMANDU).

The introduction of delivery approaches is particularly widespread in the field of education. However, research that independently examines the design and effectiveness of delivery approaches in education is relatively scarce. Thus, in 2020, a group of international researchers were commissioned by the Education Commission, with funding from the UK Foreign, Commonwealth & Development Office (FCDO), to conduct a comparative study of delivery approaches, with the explicit objective of helping policymakers design and implement delivery approaches that are effective for their national contexts. The motivating question for the researchers was: Are delivery approaches and delivery units effective in improving policy implementation and service delivery? If so, how and why?

This report presents a synthesis of the answers to these research questions, drawing on a literature review, a global mapping of the adoption and design of delivery approaches, and empirical research in four countries—Ghana, Jordan, Pakistan, and Tanzania —where delivery approaches were deployed over the last decade. We also draw on findings from a Sierra Leone policy note prepared by the Education Commission. This research is based on a common conceptual framework and combines both qualitative and quantitative methods.

The paper is organized as follows: The first section provides an overview of the conceptual framework used to underpin our analysis, drawing on an initial literature review conducted for the study. We provide: an overview of our key questions and research design; a short summary of a global mapping of delivery approaches; and findings from research in our selected countries. We then use findings from our cases to present key insights and takeaways emerging across the various country

cases. We conclude by reflecting on considerations for future research and for policymakers who are considering adopting delivery approaches.

2. Definitions and conceptual framework

For the purpose of this research, we define a delivery approach as “an institutionalized unit or structured process within a government bureaucracy that aims to rapidly improve bureaucratic functioning and policy delivery by combining a set of managerial functions in a novel way to shift attention from inputs and processes to outputs and outcomes.” A popular example of one such approach is the UK’s PMDU, which functioned as a monitoring structure bringing together high-frequency stock-take meetings, data-gathering and scrutiny, and problem-solving to drive performance across key areas of public reform (CPI, 2016a). Another well-known model is Malaysia’s PEMANDU, which was innovative in the way that targets were set for public reform and citizens were engaged in community discussions around which services needed to be prioritized for the short, medium, and long term (CPI, 2016b). PEMANDU played a key role in coordinating across line ministries and aligning their efforts toward national goals and utilizing monitoring routines, data collection, and analysis efforts to improve the implementation process (CPI, 2016b).

Such approaches are often heterogenous, but they do share commonalities in the functions they perform and the structures they adopt. These functions and structures are not only commonly observed across many of the delivery approaches documented in our global mapping study but also have been identified in the policy and academic literature on implementation and governance, performance management, and public administration (World Bank, 2003; Laffont & Martimort, 2002; Hood, 1991; Locke & Latham, 1984).

To characterize these functions and structures, we conducted a literature review of key academic and policy publications on delivery approaches used to resolve implementation challenges (e.g. World Bank, 2003; World Bank, 2010(a), 2010(b); Hood & Dixon, 2010; Scharff, 2013; Simson, 2013; Shostak et al., 2014; Andrews, 2014; Gold, 2017; Barber, 2015; Harrison, 2016; Lafuente & Gonzalez, 2018; Todd & Waistell, 2019). Delivery approaches typically involve the establishment of a new or reformed organizational structure. They are often placed under the authority of a central political sponsor (a minister or president). Furthermore, in order to catalyze

² The Tanzania case study is still in progress, so this synthesis document does not report on its findings.

action and achieve a set of prioritized targets, the delivery approaches aim to redesign management practices at central and decentralized levels, in ways that are expected to affect the quality of services. We refer to these practices under the headings of five delivery functions:

- **Prioritization and target setting:** The establishment of a set of key priorities and objectives, measurable indicators to characterize progress against these objectives, and benchmark levels of performance to be achieved in a specified time period.
- **Measurement and monitoring:** The establishment and execution of mechanisms to collect, report, and analyze information about the performance of divisions, districts, teams, schools, and/or individuals across the organization or sector.
- **Leveraging political sponsorship:** The leveraging and communication of high-level political backing for policy and service delivery. The audience for this signaling of political sponsorship of bureaucratic initiatives can be either the bureaucracy itself (to add pressure or legitimacy) or external stakeholders (to increase external pressure on the bureaucracy or serve as a commitment device for government to hold itself accountable).
- **Accountability and incentives:** The establishment and execution of rewards and/or sanctions linked to performance—the “carrots and sticks” associated with delivery approaches. This can include a range of types of incentives, including monetary incentives, the threat of firing or other formal career incentives, reporting through high-stakes meetings, which create strong reputational concerns, “naming and shaming,” or negative social perceptions.
- **Problem-solving and organizational learning:** The routinization of mechanisms of dialogue, coordination, and problem-solving across multiple individuals, divisions, or organizations that can improve performance through better sharing of information, performance data, and ideas. This can include horizontal collaboration and convening across teams, sectors, or actors, as well as the facilitation of “bottom-up” approaches that catalyze organizational learning across bureaucratic levels, through local problem-solving, adaptation, issue escalation, and policy feedback across the delivery chain.

A delivery approach does not necessarily introduce these functions as entirely new management practices, in most cases. Many of these practices predate the adoption of a delivery approach and are typically performed across multiple ministerial departments, such as monitoring units, data collection, and IT departments, or policy and strategic planning committees or departments, and similar setups. However, a delivery approach is unique in its bundling of either several or all of these functions

in a novel configuration that is intended to yield more efficient results and higher impact on the way in which bureaucrats operate. While a delivery approach usually centralizes these functions into a single structure close to political leadership or the apex of a particular bureaucracy, some models may leverage downstream administrations to carry out management functions and report upstream or delegate functions to preexisting units, which then streamline reporting and communication vis-à-vis the delivery approach. In other words, the design of a delivery approach can take many different forms, depending on the context in which it is being introduced and the goals for which it is being adopted.

Our research project looks at five different contexts in which at least one delivery approach was adopted. While our cases do share some design and operational features, they also exhibit unique characteristics that emerge from the local political and bureaucratic landscape in which they function. In Section 3, we summarize each case study we explored, along with the research methodology. Section 4 provides more detailed findings about what kinds of delivery approaches were set up, how they functioned, how they shaped management practices and bureaucratic behavior and attitudes, and what kinds of results they were able to achieve during their tenures. Finally, we provide a brief summary of the political economy factors that either influenced the adoption of the delivery approach or affected how the approach was executed.

3. Research questions and approach

The research presented in this report is organized around four areas of inquiry, and each has aimed to shed light on the design and cascade of the delivery approaches and their effectiveness. These research questions are shown below:

Overarching question

Are delivery approaches effective in improving policy implementation and service delivery? If so, how and why?

Sub-questions

- What type of delivery approach was adopted? What were its goals and targets, and at what level(s) did it sit? How did it come about? For whom, by whom, and why?
- How did the introduction of the delivery approach change: a) management routines and practices, and (b) attitudes and behaviors, across different levels?
- To what extent did the delivery approach contribute toward achieving

improvement in inputs, outputs, and outcomes? To what extent can this be attributed to the use of the different delivery functions identified in the conceptual framework and global mapping exercise?

- What institutional or political features (at national and subnational levels) affected the adoption and operation of the delivery approach and its contributions to improvements in service delivery?

In addition to these research questions, our research was alert to the possibility of tradeoffs between those delivery functions that emphasize centralized, high-stakes accountability and those that leverage greater problem-solving and bottom-up accountability.

To answer our research questions, this project conducted qualitative and quantitative research in four countries, completed a global mapping study to better understand the use of delivery approaches and delivery units, and finally integrated findings from each of these into a cross-case analysis, as described below.

Global mapping study. At the beginning of this project, a comprehensive and systematic search of multiple secondary sources and literature was conducted across 199 countries to create a database of 142 unique examples of the use of delivery units in 80 countries. The design features were coded based on the definitions in the DeliverEd conceptual framework, and they were then analyzed to present comprehensive information about the characteristics of delivery approaches. This global mapping study served to give a “big picture” view of the adoption and design of delivery units worldwide and to help contextualize the specific country cases that we studied empirically.

Country-level qualitative process-tracing case studies. The research designs for each country case varied and were both retrospective and prospective in nature. In all four country cases, a qualitative, process-tracing study was conducted, involving a review of administrative data and policy documents, interviews with key actors, and/or focus groups. Data was collected at both the national/central and the subnational/district levels, though in one case (Jordan), the research focused on national/central level actors alone. Qualitative data was transcribed, coded, and analyzed using thematic categories derived from the four research questions and the conceptual framework’s articulation of the delivery functions. More details about the

³ The Jordan study was designed with a narrow scope to focus on investigating accountability dynamics among national-level actors.

² More details about the sampling and analysis used for each case are provided in the individual country studies, available here: <https://educationcommission.org/delivered-initiative/>

sampling and analysis used for each case is provided in the individual country studies.

Country-level quantitative research. Innovative quantitative studies were also conducted in two of the four case countries, providing triangulation for some of the qualitative research findings, as well as new tools and approaches that can aid in the understanding and use of specific management practices under the delivery functions. In Ghana, a nationally representative sample of district and school leaders was selected. These leaders were surveyed using an instrument with modules designed to capture: the use of management practices (associated with delivery functions) in district education offices; the performance of districts (activity intensity of directors and their staff, tasks completed, staff understanding of priorities and roles, staff attitudes and satisfaction); the performance of schools (activity intensity of head teachers, head teacher attitudes, teacher attendance and classroom practices); and contextual factors. In Pakistan, a research team used administrative data generated on primary and middle schools to help policymakers flag the performance of schools and districts in meeting specific targets. The quantitative study looked retrospectively at both the flagged indicators and other input and outcome data from this monitoring system to detect whether the flagging system yielded any impact on school-level outcomes in the short and longer term.

Cross-case comparison. Using the qualitative and quantitative country studies, as well as the global mapping study, a final step in the research involved a comparative cross-case analysis. Here, we used the four research questions and the conceptual framework of delivery functions to systematically draw out the commonalities and variations in the design, implementation, and, where possible, effectiveness of the delivery approaches across the four case countries.

Limitations. The research we conducted faced two main limitations. First, three of our studies were retrospective in nature and relied heavily on the memories of key informants. Every effort was made to offset this limitation, through triangulation across interviews and fact-checking in administrative documents. Second, this research was conducted in the context of the COVID-19 pandemic. The pandemic led to delays in data collection, and, in the case of Ghana, the pandemic changed the timeline for the rollout of the delivery approach. The pandemic may also have shaped our findings, insofar as it shifted the attitudes, practices, and perspectives of key informants, and educational outcomes, in all four countries. Each research team made extraordinary efforts to maintain continuity in the research by adjusting

research timelines. In addition, where needed, country studies include reflection on the potential impact of COVID-19 on the delivery approach.

4. Findings from the global mapping study

This section provides a brief summary of the global mapping exercise the DeliverEd team conducted to identify the different delivery approaches adopted around the world, systematically coding the variation in design and operationalization based on the features and functions characterizing a delivery approach (see Williams et al., 2021).

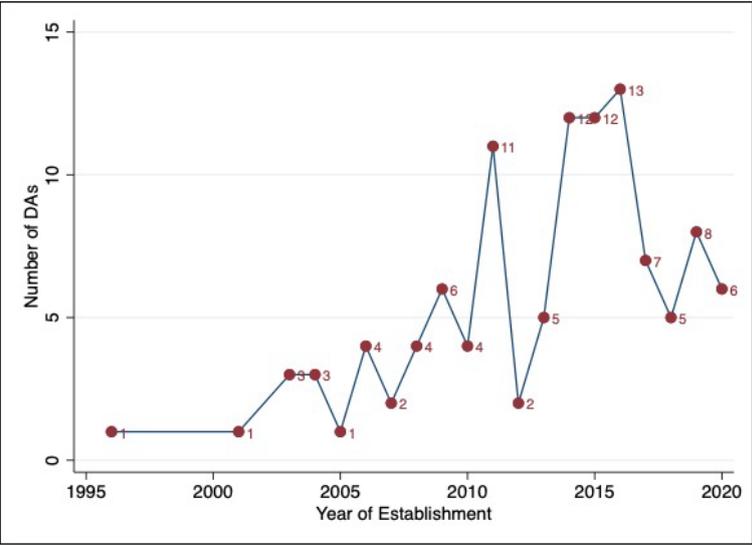
Methodology: The research team conducted a systematic desk-based review of delivery approaches around the world, covering 199 countries. Our online search identified delivery approaches based on the definition provided by the conceptual framework described in Section 2 of this report. Due to time constraints, the systematic search focused primarily on approaches within national governments rather than subnational jurisdictions for all countries. However, our mapping did involve a systematic review of subnational delivery approaches across six countries: Australia, Canada, China, India, Pakistan, and the United States. The coding protocol was developed based on the DeliverEd conceptual framework. The search drew on various online sources, including existing mappings of delivery units (e.g. Alessandro et al., 2014; Harrison, 2016; Gold, 2017; Lafuente & Gonzales, 2018), as well as the AidData donor projects database, the World Bank's project repository, the Global Delivery Initiative database, the Inter-American Development Bank and the African Development Bank databases, and the Institute for State Effectiveness Reform Sequencing Tracker. Moreover, the team relied on systematic keyword searches of internet search engines, such as Google and Google Scholar, in addition to the University of Oxford's online library search engine. The mapping was limited to publicly available information online.

Findings

The adoption of delivery approaches has increased significantly in the last decade.

Our global mapping of delivery approaches found that while the vast majority of delivery approaches were structured as units, the cases reflected a diversity of configurations across many different countries. In the last 30 years, regions across the globe have adopted delivery units (see Figure 1). In the last decade or so alone, around 85 delivery units were adopted (Mansoor et al., 2021).

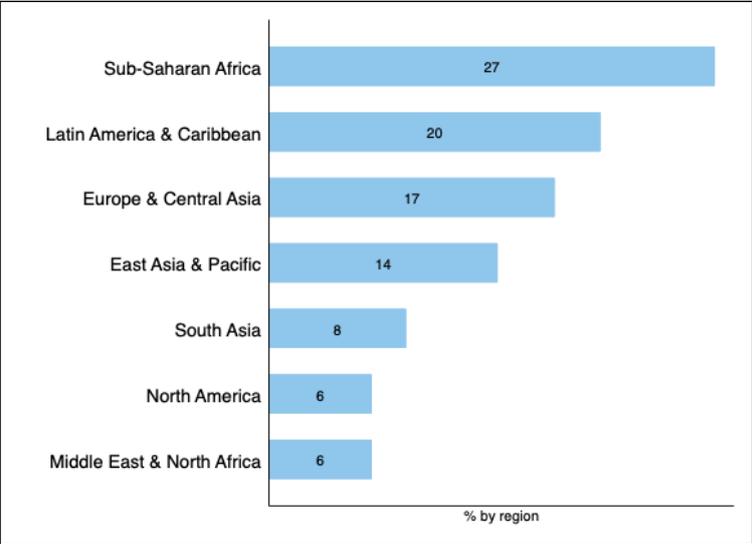
Figure 1. Core Functions of a Delivery Approach



Delivery approaches have been adopted worldwide, including in low- and middle-income countries.

Forty percent of countries have adopted at least one delivery unit; these are widely distributed across sub-Saharan Africa (27 percent), Latin America and the Caribbean (20 percent), Europe and Central Asia (18 percent), East Asia and the Pacific (13 percent), North America (6 percent), and the Middle East and North Africa (6 percent, see Figure 2). Almost one-third of the cases (31 percent) are in high-income countries. Another 28 percent of cases are in upper middle-income countries, 23 percent are in lower middle-income countries, and 18 percent are in low-income countries. Of these units, 39 percent were in education alone, and 61 percent of multisectoral delivery units monitored education as one of their priority sectors (Mansoor et al., 2021).

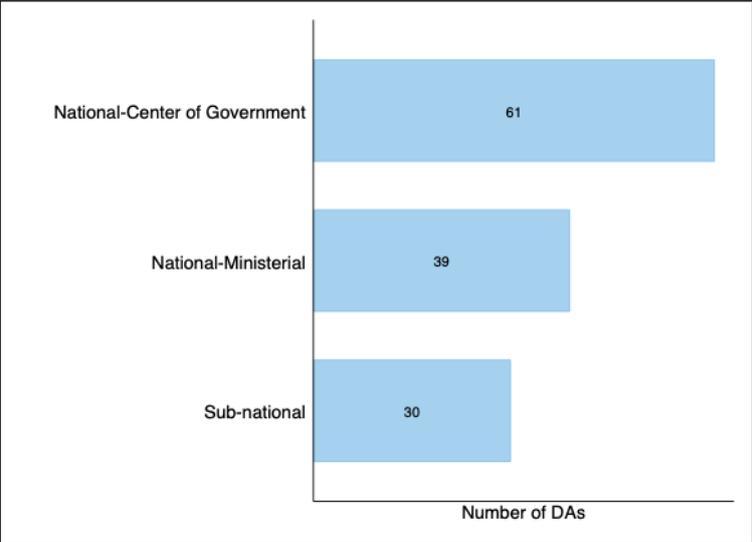
Figure 2: Regional Distribution of Delivery Approaches



Most approaches are adopted at the national level.

Just under half of the units (47 percent) were introduced at the national or central level (e.g. Office of the President or Office of the Prime Minister), 30 percent were introduced at the national ministerial level (e.g. within a line ministry), and 23 percent were set up at the subnational level (e.g. state- or district-level administration or frontline level) (see Figure 3). Around half of the units (52 percent) were staffed exclusively by existing civil servants; however, the rest were staffed by either external consultants alone or a combination of both civil servants and consultants.

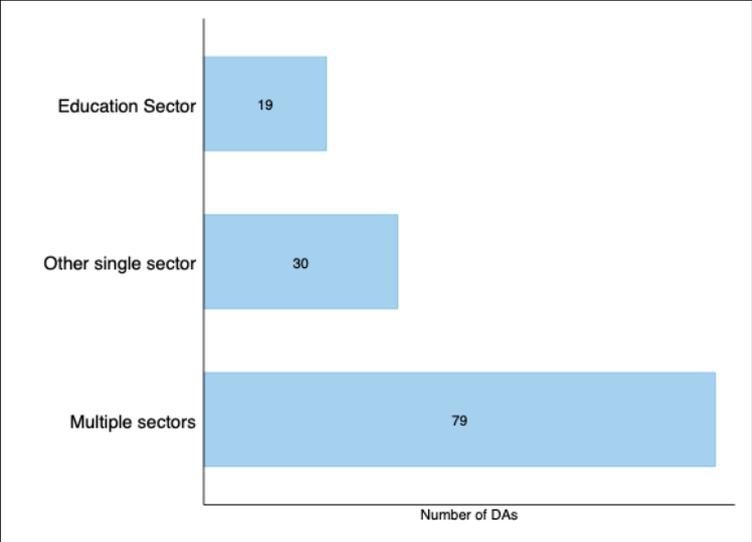
Figure 3: Adoption of Delivery Approaches by Administrative Level



Most approaches have a cross-sectoral remit.

Most of the delivery approaches (62 percent) operated across multiple sectors, and of the multisectoral delivery approaches, 61 percent monitor education. Thirty nine percent of the delivery approaches that have a single-sector remit focus on education alone (see Figure 4).

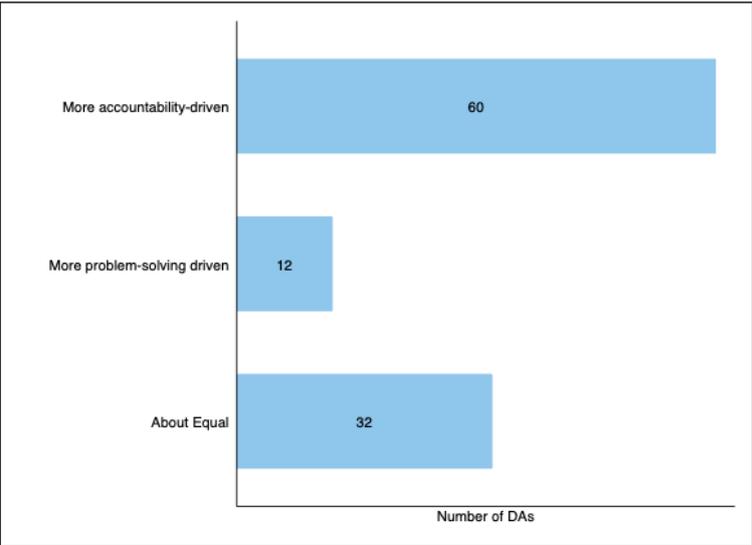
Figure 4: Sectoral Remit of Delivery Approaches



Most approaches rely on accountability routines and incentives to drive performance.

We also looked at the types of management functions these delivery approaches leverage the most to achieve their goals. More than half of the approaches (58 percent) appear to focus more intensively on accountability and incentive-driven routines, while 11 percent focus predominantly on management practices that promote more problem-solving and organizational learning (see Figure 5). The cases that were classified as relying more heavily on accountability routines exhibited more monitoring and data-reporting practices, such as performance tracking, high-stakes stock-take meetings, data dashboards, performance rewards and sanctions, etc. The cases that were seen as being more focused on problem-solving had routines that involved frequent meetings for data reviews and troubleshooting as well as structures or processes for collaborations and coordination, etc. Around a third of the approaches (31 percent) adopt a combination of both types of routines in more or less equal measure.

Figure 5: Managerial Focus of Delivery Approaches



The global mapping exercise suggests that the design of a delivery approach can vary widely across different contexts. There is no one way to design and operationalize a delivery approach, although we do find some trends around the globe on the administrative level at which they typically function, the multisectoral mandate they adopt, and the management routines they carry out to drive performance.

⁵ These are percentages of delivery approaches for which we have information regarding the sector(s) in which they operated.

b.

5. Country studies

Ghana

Overview of the delivery approach: Ghana's National Education Reform Secretariat (NERS) was established in 2019 under the Ministry of Education with funding and technical support from the United Kingdom. The secretariat concentrated initially on national goals and targets related to the delivery and coordination of core functions across the 17 agencies that make up the administration of Ghana's education sector. NERS initially focused on setting targets, establishing performance contracts with agency heads, and quarterly "accounting to the minister" meetings. Its work quickly evolved, and it became more focused on problem-solving and coordination across agencies. In August 2021, the delivery approach cascaded downward, primarily through the creation of performance contracts with regional and district directors and the establishment of common performance targets at these levels. The sustainability of the approach is uncertain, given the ending of UK support for the program.

DeliverEd Ghana research design: Ghana is the only prospective case within the DeliverEd research. At the national level, the process-tracing research included a policy document review and several rounds of interviews conducted between 2020 and 2023 with key actors and staff in the NERS, the Ministry of Education, the 17 national education agencies, and key donors. Subnationally, the research included a qualitative baseline mapping of delivery functions in 3 regions, 5 districts, and 10 schools in April 2021, and a follow up study in May/June 2022, comprising 69 interviews/focus groups and a document review.

The research also included a large-scale survey of the staff and leaders of districts and schools from May to July 2022. The survey included a representative sample of actors across the subnational delivery chain, including 174 district directors, 341 deputy district directors, 348 school improvement support officers (SISOs) and 1,035 head teachers at the school level. This study explores the associations among the district office's use of management practices (captured in a management index of 16 practices that includes but is not limited to those in Ghana's delivery approach cascade), district performance (inputs and outputs), and school performance (outcomes).

Given the fact that the delivery approach only cascaded subnationally in August 2021, the subnational survey and process-tracing research conducted from May to

July 2022 can only capture the early implementation of the approach. Follow-up interviews at the national level in March 2023 provided additional information on subnational implementation.

Findings

Adoption of the delivery approach (RQ1)

In 2017, Ghana elected a new president. The new minister of education was tasked with delivering on a key campaign promise of free senior high school. In May 2017, the minister learned about delivery approaches from Michael Barber at the Harvard Ministerial Leadership Forum. During this time, a new Education Sector Plan (ESP) was being finalized. With the support of the Department for International Development (DFID, now the Foreign, Commonwealth and Development Office, FCDO), a delivery approach was included as part of the 2018–2030 ESP to facilitate the achievement of the ESP goals and targets (which were sector-wide but included free senior high school) (Ghana Ministry of Education, 2018b).

Described by one of the development partner architects as “the Ghana way,” the design of Ghana’s delivery approach blended accountability, coordination, and problem-solving functions. In 2018, the National Education Reform Secretariat (NERS) was established within the Ministry of Education. Led by a retired senior leader from the Ministry of Education, and staffed with nationally recruited technical specialists, the unit reported directly to the minister. Ghana’s delivery approach initially focused on national-level policy reforms and revolved around the creation of key performance indicators (KPIs) for each of Ghana’s education agencies.

In 2021, under the leadership of a new minister of education, the Ghana Education Service (GES)—the agency that employs all subnational education officials and teachers, and which is also responsible for the management and oversight of regional, district, and school administration—was given responsibility for cascading the delivery approach subnationally. Annual performance contracts with common KPIs were established for all subnational leaders: regional directors signed performance contracts with the GES director-general; district directors and heads of senior high schools signed performance contracts with regional directors; and the heads of all basic schools signed performance contracts with their district directors. The performance contracts emphasized improvements in learning outcomes (e.g. improvement in Basic Education Certificate Exam, or BECE, scores and primary-level learning assessment results). The contracts also included process targets related to management and governance practices, such as the timely

conduct of school monitoring missions, operation of school management committees, and implementation of programs to support underperforming students.

Changes in management routines and behaviors (RQ2)

The delivery approach in Ghana introduced new delivery functions and management practices at both the national and subnational levels. Findings from the process tracing and survey research highlight substantial variation in the implementation of the delivery functions across regions, districts, and schools between May and July 2022.

a. Prioritization and target setting

At the national level, the delivery approach was initially designed to strengthen the work of agencies in delivering on the 2018–2030 Education Sector Plan. Annual performance agreements were signed between the “big six” agency heads (called “reform owners”) and the minister of education. These were later expanded to all 17 agencies. These performance agreements included output-level targets and “lagging indicators” that focused on outcomes. National actors reported stronger awareness of ESP goals and greater clarity on the key actions needed from their agencies as a result of these new target-setting exercises. The delivery approach also created an important awareness of the need to work collaboratively across agencies to deliver on key targets.

At the subnational level, annual targets and priorities were set centrally by the GES, reflecting the KPIs in GES’s own performance agreement. Quarterly targets were then set bilaterally, between the supervising official and the performance contract holder (e.g. district director and head teacher). These targets overlapped with existing target-setting routines. These included those set forth in the Annual District Education Operating Plans (ADEOPs) and the staff performance appraisal system, or those within donor-funded projects, such as the World Bank’s Ghana Accountability for Learning Outcomes Project (GALOP) and the Secondary Education Improvement Project (SEIP). However, district performance contracts typically had a narrower set of KPIs. As a result, the contracts in some instances did strengthen prioritization, especially on matters of pedagogical improvement.

The qualitative research showed that performance contracts were signed by all directors and school heads across fieldwork sites. This was echoed in the large-scale survey, where districts showed a high mean score for priority setting. However, qualitative interviews highlighted great variation in local understandings of

the targets and goals in the performance contracts. In some districts, the staff were familiar with the KPIs in the performance agreements of their managers and viewed these KPIs as leading to a greater focus on district and school monitoring and key programs (e.g. professional learning communities, school management committees). In other district offices and schools, the knowledge of contract specifics and implementation processes did not filter down below the director level. Staff were not aware of the targets, and they indicated that as a result, these targets did not impact their priorities or activities.

b. Measurement and monitoring

At the national level, performance agreements included outcome- and output-level KPIs and quarterly targets, which were operationalized through annual roadmaps. The NERS provided capacity-building support to reform owner agencies to identify KPIs, set targets, and monitor their performance. Performance data were submitted in NERS-developed reporting templates and presented in “accounting to the minister” meetings. The introduction of these new routines led to some friction with the existing data monitoring and reporting practices within the Ministry of Education’s Planning, Budget, Monitoring and Evaluation Unit (PBME). The NERS and PBME worked to align reporting processes to reduce the burden on agencies. As a result of these new routines, national agencies reported changes in their internal management practices, for example, with the introduction of target setting and the review of data within their agencies.

Another strong output at the national level was the development of the Comprehensive Data Management System (CDMS), a national integrated data-management system that includes learning, administrative, and inspection data. The CDMS was nearly complete as of March 2023. The NERS supported the CDMS development, notably in terms of facilitation of cross-agency review and feedback of the tool and capacity building at national and subnational levels.

Subnationally, the data to track performance on contract KPIs were collected using a template, annually or quarterly, depending on the nature of the indicator, by district statistics officers. The research found that in three districts and in two regional offices, these new KPIs did shift the focus of the monitoring activities and data collection. However, annual targets were not always broken down into appropriate quarterly targets, sometimes due to limited capacity. Both the national survey and the qualitative research suggest that the management practices around setting KPIs and targets were less developed than the practices for prioritization.

c. Leveraging political sponsorship

The delivery approach at the national level had strong political sponsorship throughout the tenures of two ministers of education. The presence and attention of the minister in quarterly “accounting to the minister” meetings served as a very powerful incentive for reform owners to achieve performance agreement targets.

At the subnational level, our qualitative research found no evidence of sponsorship of the agreed performance goals from the ministerial level or local political authorities. In fact, district assembly officials in the districts studied were not aware of the delivery approach performance contracts, despite the fact that subnational political actors play an important role in funding education infrastructure and shaping community-level priorities (and they are especially sensitive to rankings in national end-of-cycle examination results). The quantitative survey found that regular visits from an MP was correlated to the use of management practices.

d. Accountability and incentives

At the national level, a steering committee comprising the reform owners and the NERS met quarterly to account directly to the minister of education on progress toward the targets. As noted above, these meetings reflected an emphasis on high-stakes accountability, especially in the early months of the delivery approach. They helped spread strong awareness of the minister’s goals and priorities. Annual independent evaluations of performance agreements ranked agencies and also assigned them a score for their performance, ranging from excellent to unsatisfactory.

Subnationally, schools, districts, and regions had performance contract documents, which included performance-based rewards (for example, merit awards) and sanctions (such as reprimanding or removal), for high and low performance, respectively. However, at the time of the subnational fieldwork, 10 months into the new approach, it was too early to see how these incentives would be utilized by the GES. As of March 2023, performance on the KPIs in the performance contract for subnational actors was not being used in the GES staff annual performance appraisal system. We also did not find evidence of any cases of removal or other sanctions for directors or head teachers who performed poorly on the performance contracts.

By March 2023, 3 out of 16 regions had held an “accounting to the GES

director-general” forum, wherein schools and districts presented outcomes on the KPIs in their performance contracts to the GES leadership. Although these forums may have been introduced to strengthen accountability routines, they were described by the GES as a way to share good practices and discuss implementation challenges on a select set of priorities, rather than a means to reward or sanction districts or schools based on performance.

e. Problem-solving

At the national level, the research highlights an initial shift in the delivery approach and the work of the NERS between 2020 and 2021, from its initial focus on high-stakes accountability to efforts to improve coordination and problem-solving across the agencies. With support from the NERS, a national technical working group was established among agency specialists to work out the “nitty gritty” details of implementation. Several data-driven, deep-dive presentations on cross-cutting issues (e.g., pupil absenteeism) were held each year by the NERS for national reform owners. Improved interagency coordination was attributed to these problem-solving routines (deep dives, technical working group meetings). Importantly, the agencies came to view the NERS less as a “policeman” and more as a vehicle for support and capacity building across the sector at the national level, particularly by the newer, smaller, more specialized education agencies.

A further area in which the delivery approach had an impact was in the area of donor coordination. It increasingly became the interlocutor for donors seeking access to the minister, to implement programs that required cross-agency coordination, or to help with the data and information needed to design and adapt funding programs. While ministry officials expressed frustration at the ministry’s inability to monitor external financing to districts and schools, they regarded the delivery unit as one way of enhancing joint problem-solving with donors.

At the subnational level, the GES designed performance agreements that aimed to improve existing routines and practices for problem-solving and coordination. Some of these are policies and practices that have been mandated but neglected for many years: for example, KPIs included targets to ensure routine visits to schools, meetings of school management committees, and school performance appraisal meetings. In addition, three regional “accounting to the director-general” forums served as venues for feedback and the exchange of good practices among districts and schools to the GES leadership on issues related to the achievement of performance contract targets.

However, sustained channels of support for coordination and problem-solving at the subnational level, similar to that provided by the NERS at the national level, was not initially provided through the delivery approach. Instead, longstanding problem-solving routines (like school visits and school management committee meetings) were established as contract KPIs. The research found that in some regional and district offices, such KPIs did not improve, as expected. Such gaps were attributed by some participants to a lack of resources.

Follow-up research in 2023 suggested that a new program, “Communities of Excellence” had been adopted by the minister and was being piloted in two regions by two third-party providers (T-TEL and UNICEF). The implementation of this program had been added as a KPI for the GES in mid-2022. This program aims to improve subnational capacity for problem-solving and coordination across schools and districts, including by engaging potential supporters from the local community.

Contribution to improved inputs, outputs, and outcomes (RQ3)

At the national level, the first year of the delivery approach (2019) resulted in the achievement of all 12 KPIs, all of which were largely policy-related goals, such as the reform of human resources policies in the GES, and the development of policy frameworks for teacher education, technical and vocational education and training, and inspection and supervision. The reform owners appreciated the role of the delivery approach in achieving these KPIs.

Subnationally, our research took place before the end of the first annual performance-reporting cycle, and it was therefore too early to detect the full impact of the delivery approach at the district and school levels. However, as noted above, both the process tracing and the survey research findings highlight important variation in the subnational reception of the new delivery approaches and in the management practices used at the district and school levels.

Our qualitative research, which looked at management practices in two time periods, potentially suggests that performance agreements may have begun to change and increase activities such as school monitoring and support for school management committees and professional learning communities in some districts. However, officials at the district and school levels noted that there were ongoing challenges in conducting monitoring visits and/or school performance appraisal meetings (SPAMs), which they attributed to the inconsistent release of budgets. In addition, the district offices had little control over the allocation of new teachers, which hampered

their ability to adequately staff the schools with the greatest implementation challenges.

While the quantitative study is not an impact evaluation of the delivery approach subnational cascade, its results provide two significant insights that warrant further attention.

a. First, substantial variation exists in the use of management practices across Ghana's district education offices. Data from the large-scale survey of 174 district offices suggest that these differences may be driven by external factors. There is a strong positive association between higher district office management scores (measuring how the office uses different delivery functions) and both donor support and political engagement by MPs. Interestingly, there is no evidence that management scores are higher in offices with access to greater resources (proportion of budget received, access to vehicles and fuel, staff skills). Of course, the activities (such as school monitoring visits) undertaken by the district staff may reflect these resources, as found in the qualitative study.

b. Second, the survey highlights positive associations between district office management practices and performance at the district and school levels. Not all of the underlying delivery functions in the management index matter equally, however. There are positive associations between a district office's use of problem-solving and three dimensions of performance: district staff job satisfaction, teacher presence at school, and classroom practice. To illustrate, a one standard deviation increase in the problem-solving sub-index is associated with a 3 percentage point reduction in teacher absenteeism (against a mean of 13 percent). In contrast, there are negative associations between a district office's use of top-down accountability and two dimensions of performance: teacher presence at school and classroom practice. The work of Rasul and Rogger (2018) and Rasul et al. (2021) suggests that high-stakes accountability practices may not be the way to drive task completion by national bureaucracies. The results from the DeliverEd survey extend this conclusion to middle-tier bureaucracies and to performance more broadly defined.

At the time of our subnational research, it was clear that the GES had emphasized the strengthening of the prioritization and accountability functions in its cascade of the delivery approach to the subnational level. Given both the qualitative and quantitative results of the research, it will be important to better understand the potential of the problem-solving function and how it can best be supported and fostered.

Institutional and political features that shaped the delivery approach (RQ4)

The design of Ghana’s national and subnational delivery approach responded to the unique education system in Ghana, notably the need for an independent actor to support coordination and collaboration across its 17 agencies. The subnational cascade was not led by the delivery unit but by the Ghana Education Service. Features of this agency may have impacted the downstream implementation of the delivery approach. The GES carries much of the responsibility for human resources and education delivery in Ghana’s education system, and it is undergoing its own institutional reform. While the GES staff are paid according to the civil service pay scale, the NERS staff received more competitive salaries, due to the delivery unit’s external funding. The GES is also relatively new to the use of KPI-based performance management and has limited expertise in the use of data to track system-level performance.

Additionally, widely recognized institutional barriers to education delivery at the district and school levels—namely delayed and insufficient operational budgets, and a lack of control over the placement of new teachers—were not addressed in the subnational delivery approach design. This hampered the abilities of subnational offices and schools to achieve the KPIs set out in their performance contract targets. We also see that at the subnational level, preexisting donor-supported reforms (for example the performance contracts for head teachers linked to the learning grants for schools under the GALOP program) and routine GES monitoring processes sometimes contributed to overlap and confusion between different types of performance contracts and other accountability initiatives. On the other hand, senior secondary schools in particular were already familiar with the use of KPIs and targets and this institutionalization meant that they could more easily adapt to the delivery approach.

The political context also shaped Ghana’s delivery approach. As noted above, political sponsorship by two newly appointed ministers was a key feature of the national delivery approach. The research found that when ministers changed, targets also changed, sometimes quite substantially. At the subnational level, the delivery approach did not include direct political sponsorship from the minister or subnational political leaders. Instead, the GES director was the main sponsor. Nonetheless, engagement of local MPs was correlated with the use of management practices.

⁶ For more information on the Ministry of Education’s GALOP program, supported by the World Bank, see: <https://projects.worldbank.org/en/projects-operations/project-detail/P165557>

Finally, it is important to note that external financing has influenced the way in which Ghana's delivery approach was designed and how it has evolved. External financing led to the recruitment of staff outside the civil service ranks and at higher salaries than those offered internally; this contributed to the creation of a unit with overlapping functions with preexisting units (such as the PBME). A proposal presented to potential donors in 2023 suggests that the PBME will, in the future, take on the performance agreement development, as well as the data and monitoring and accounting routines that have been managed by the NERS; however, it was unclear how this would be handled in terms of staff remuneration and inclusion in the civil service.

Pakistan

Overview of the delivery approach: In Pakistan's Punjab province, an education roadmap and a delivery approach to support its implementation was introduced in 2012 and operated until 2018, under the leadership of Punjab's chief minister. The reforms were top-down and relied on high-stakes accountability routines that held district executives responsible for meeting a set of school- and district-level targets, with data-intensive monitoring routines, such as the use of a heatmap to show progress made by each district against its targets and a flagging system for underperforming clusters of schools, called the markaz.

DeliverEd research design: The Pakistan research team studied the Punjab delivery approach from two perspectives. The qualitative team examined the overall Punjab delivery approach, from origin to implementation and lasting impact, through over 70 interviews and extensive document review. The study also compared political economies in Sindh and Punjab to identify factors that explain the variation in the pace of development and adoption of reforms in both provinces. As the delivery approach was established over a decade before the research began, the team adopted certain techniques, such as talking through the key documents produced at that time, to assist informants as they recalled the details of the reform effort. The interviews included federal and provincial-level political, bureaucratic, and donor leaders, interviews with 25 district executive administrators (responsible for delivery) in 12 districts, and 38 interviews with education bureaucrats from the sub-district level in 5 districts. The quantitative team utilized the rich administrative data, collected in datapacks, as part of the delivery approach's monitoring to assess the impact of one important component of the delivery approach: the district and markaz flagging system. These datapacks reported the aggregate school performance at the markaz and district levels along several dimensions, including teacher presence,

student attendance, visitation by district education authorities (DEAs), status of school facilities (e.g. electricity, drinking water, toilets, and boundary wall), and standardized math, English, and Urdu test scores. The quantitative study looked retrospectively at both the flagged indicators and the other input and outcome data from this monitoring system to detect whether the schools that were flagged improved their performance trajectory following the flagging incident in the short and longer term. To detect the impact of the flagging system, the research team carefully constructed a counterfactual where the treatment (flagging) was absent.

Findings

Adoption of the delivery approach (RQ1)

The 2010 Millennium Development Goal (MDG) review revealed that Punjab was not on track for achieving the targets of universalizing primary school enrollment (Dawn, 2012; Muhummad, 2012; Malik & Bari, 2023). Punjab province had low enrollment rates and learning outcomes, and it faced chronic issues of teacher absenteeism and “ghost schools,” or nonfunctioning schools that exist only on paper. These challenges persisted despite the provincial government’s investments to improve service delivery, including reforming teacher recruitment and expanding its management information systems.

It was in this context that the political leadership of Pakistan convened an Education Task Force (ETF), with funding and technical advice from the Department for International Development (DfID, now the FCDO). The ETF explored the possibilities of introducing delivery approaches in four provinces to make rapid changes to education service delivery and improve outcomes. At the time, the chief minister (CM) of Punjab took immediately to the philosophy and process of the delivery approach and was keen to adopt it under the Punjab education roadmap. With the assistance of international management consultants from McKinsey International, the chief minister instituted a centralized delivery approach by which high-stakes accountability and routine data monitoring, collection, and analysis were used to drive performance across the education bureaucracy, focusing on the district level. It was designed as a top-down reform, emphasizing political oversight of the CM to orient bureaucratic structures to find “efficiency gains,” particularly through the use of disaggregated data.

The provincial government and donors identified key priorities between 2012 and 2013 that the delivery approach would address, including: 1) setting targets for reform in the short, medium, and long term, as well as establishing routines for

monitoring school performance; 2) improving the service delivery capability of the districts; 3) enhancing the professional development of teachers; and 4) supporting education foundations to expand the supply of schooling through the private sector. The priorities for 2013 and 2014 extended to: 1) reforming school textbooks; 2) investing in routine and robust student testing; and 3) strengthening school-level leadership (Malik & Bari, 2023).

The preexisting education service delivery infrastructure in Punjab lent itself effectively to the newly adopted delivery approach. While the chief minister oversaw overall reform across multiple sectors in Punjab, the School Education Department (SED) was responsible for education reform in the province. Information about school performance was channeled upward to the SED and the Chief Minister's Office (CMO) through the Project Management Implementation Unit (PMIU), a long-established unit which was the repository for the Punjab Education Management Information System (EMIS). As such, it had very strong capacity in administrative data collection and monitoring at the subnational level through its network of monitoring and evaluation assistants (MEAs). At the district level, those initially known as education district officers (EDO), who were later known as district education authorities (DEAs), managed the education finances and administration. However, under the School Education Department, DEAs were chaired by district administrative executives, who reported directly to the CM and had a broader sectoral mandate. It was these executives, as well as the education chief of the EDOs/DEAs, who were held accountable for district performance in stock-take meetings in the Punjab delivery approach. Three years into the implementation of the delivery approach, a dedicated delivery unit (Special Monitoring Unit, or SMU) was established within the chief minister's office, in 2014, to monitor public reform across multiple sectors, including education. The SMU oversaw reform progress under the education roadmap and was staffed with external consultants from an international management consulting firm. The SMU worked closely with the PMIU to gather data on the reform process and report upstream to the chief minister during stock-take meetings.

Changes in management routines and behaviors (RQ2)

At the provincial level, the delivery approach introduced a set of routines that focused on target setting and the use of administrative data for monitoring progress on indicators related to priority reform areas. The delivery approach in Punjab involved all departments at the district level. The delivery approach in Punjab was notably effective in setting targets across the delivery chain and introducing routines for data

collection and monitoring at the provincial and district levels.

a. Prioritization and target setting

Reform priorities and district targets were set at the provincial level and communicated downstream to the district authorities. These targets included achieving a 100-percent enrollment rate among school-aged children, acquiring all basic school facilities and infrastructure, and ensuring that the teacher attendance rate reached 100 percent. While Punjab had a history of target setting, the delivery approach introduced some significant new routines and practices: setting targets for much shorter periods of time (three months, or quarterly); establishing routines on the review of targets; disaggregating targets by district; and making the district executive responsible for achieving the targets that were set.

b. Measurement and monitoring

District monitoring officers (DMOs) and monitoring and evaluation assistants (MEAs) were responsible for the collection and upward reporting of school data (including data on the delivery approach indicators). The district education department (DEAs) oversaw the implementation of education activities. One component of the district-level performance monitoring approach was the system of flagging markaz, or school clusters. This was a data-driven practice that was used to signal to district actors which markaz in their jurisdictions had unsatisfactory performances on the roadmap KPIs (the focus of the quantitative study). Moreover, the approach utilized heatmaps to show how well or how poorly the districts were progressing toward their targets.

c. Leveraging political sponsorship

High-stakes stock-take meetings chaired by the chief minister were used to foster informal competition among district executives based on school district rankings, as well as to use reputational incentives and bonuses for the highest performing districts.

d. Accountability and incentives

Accountability-focused routines were also introduced and leveraged to drive bureaucratic and school performance. At the central level, the CM regularly chaired a series of high-stakes quarterly stock-take meetings with bureaucrats from all 36

⁷ They were called district coordinating officers (DCOs) until 2016 and had considerable financial autonomy to use and distribute funds to districts. After this time, they were renamed district commissioners (DCs) and had significantly less financial autonomy.

districts, reviewing data curated by the delivery team of international consultants and representatives of the PMIU and SMU on school and district performance. In addition to introducing the informal reputational risks of underperforming, the delivery approach also introduced a set of rewards to incentivize strong performance across the delivery chain. The senior district executives of the three top-performing districts received signed certificates and even monetary rewards (bonuses). These rewards did not extend to any other education staff at the level of the district education authorities. The research did not find evidence of formal sanctions (such as transfer to a less desirable location).

e. Problem-solving and organizational learning

At the district level, the district administrative executives conducted a series of meetings (with district review committees, or DRCs, and pre-district review committees) to review the data on school performance and prepare for debriefings in the high-stakes stock-take meetings. The DRC meetings, held monthly or as needed, served as a forum that district education department staff could use to problem-solve around delivery challenges. However, school-level problem-solving was not emphasized in the overall delivery approach.

These practices were perceived differently across administrative levels. The accountability routines were perceived as positive by the district executives. However, at the district level, district executive authorities often felt they needed to enter “firefighting” mode, especially around the DRC and high-level stock-take meetings. They needed to attend to time-sensitive service delivery issues that were of concern to the PMIU and SMU for the very specific purpose of reporting to the CM. Senior district executives were reportedly energized by the competition among districts and the promise of financial rewards. More junior administrative education staff at the subdistrict level reported feeling a great deal of stress and pressure from these frequent monitoring and review routines, which often cultivated a culture of fear and affected their productivity and motivation levels.

Contribution to improved inputs, outputs, and outcomes (RQ3)

Punjab’s delivery approach aimed to increase enrollment rates, increase teacher attendance, and improve school infrastructure. The DeliverEd research undertook both a qualitative and quantitative approach to understand and evaluate how well the

⁸ These individuals were district executives at the top level of management at the district level. They were called district coordinating officers (DCOs) before 2016, and after 2016 they were called district commissioners.

delivery approach achieved its intended goals.

The quantitative component assessed the markaz system for flagging the performance of clusters of schools and districts, which was a subset of the data for the monitoring and accountability routines that were introduced within the delivery approach. The study evaluated whether flagging low-performing schools had an impact on the trajectory of school-level performance. The study found that the flagging system had no effect on output-type or outcome-type metrics, which included district rankings, teacher and student attendance, functional facilities, and scores in math, English, or Urdu. Furthermore, there was no relative effect on school rankings during the study period. One interpretation of these limited impacts is that the centralized management systems that attempted to target the causes of highly variable, short-term fluctuations in outcomes were poorly equipped to respond to more structural issues. Thus, underlying structural issues related to poor performance were not resolved by the flagging system.

Looking at the overall delivery approach, the qualitative study showed that the approach was perceived to have positive effects on the education sector and school systems. For the first time, district-level staff within the education department understood the importance of utilizing school-level data to make informed decisions, and there was a better understanding of how to best support the school leaders and teachers to improve school performance. Furthermore, bureaucrats noted that the routine review meetings, such as the stock-take meetings, and the upstream reporting requirements enabled the district to focus toward common priority targets. The accountability-associated routines also signaled the importance of education reform, focusing both resources and attention on key education reform areas that received political support across different administrative levels in the education sector. Moreover, the heatmaps helped illustrate to district officials where they were lagging across key performance indicators.

However, the interviews with district executives suggest that these positive management practices only lasted as long as the Punjab roadmap and its corresponding delivery approach. The delivery approach in Punjab did not effectively achieve sustainability in the types of management practices it introduced at each level of administration across the education bureaucracy.

Institutional and political features that shaped the delivery approach (RQ4)

Punjab's government was seen as an ideal candidate for the adoption of an

ambitious reform plan—the Punjab roadmap—and a delivery approach, due in part to its decade-long investments in teacher policies, data systems, and school infrastructure. In particular, the education system had strong data capacity which supported the regular reporting on KPI progress. Donor involvement in education reform in Punjab provided important inputs into the delivery approach design and funding. DfID’s role in facilitating the ETF and funding the Punjab roadmap led to a strong influence of the UK PMDU model in the delivery approach design. In terms of the design, there may also have been a misalignment in rewards and sanctions, as senior district officials, but not district education officers or school-level leaders, were rewarded for strong performance. Lastly, decentralization reforms affected the roles and capacities of district executives to deliver on key reforms; during the roadmap years, the powers of the district executives were reduced (Cheema & Farooqi, 2019). At the start of the reform in 2012, the district executives had financial, administrative, and executive authority over 11 services, which meant that when they set targets and needed to take steps to achieve those targets, they had the authority as well as the financial and administrative tools to do so. After 2016, the financial authorities were removed, and the majority of the administrative authority was moved to the district education authorities (DEAs). Interviews with the district executives revealed that it was difficult to be responsible or answerable for targets when there were no tools to achieve them.

Education was a political priority at the time of the delivery approach’s adoption in Pakistan. Electoral competition between two large political parties at the national level drove some of the appetite for drastic reform at the provincial level. This political competition, along with the need to gain approval from electoral constituencies, is considered one of the main drivers of the delivery approach’s adoption. In a politically fragmented and electorally weak state, a streamlined approach to reform with a clear set of targets developed through political consensus would be difficult to introduce (Hasnain, 2008). The Punjab roadmap education reform required convening power and compliance across the delivery chain to succeed. The chief minister’s strong political sponsorship of the delivery approach, notably through high-stakes stock-take meetings, facilitated this compliance and the resulting temporary changes in the practices and activities observed in the DeliverEd research. Punjab’s political sponsorship and enabling political environment for the adoption of the delivery approach sharply contrasted with the political landscape in Sindh, a province that did not commit to improving service delivery in the same way as Punjab. In Sindh, political fragmentation along ethnic lines made political consensus around reform impossible. Furthermore, the polarization of political parties allowed patronage

politics to reign for decades in the province; political and bureaucratic assignments were made to secure political loyalty rather than to improve the quality of public services. Unlike Punjab, which invested heavily in devolving education service delivery to district authorities and building data management capacities throughout the education bureaucracy, Sindh did not have the incentive to build its education apparatuses to divorce political interests from policy decisions. For instance, teacher hiring very much relied on political interference and interests in Sindh, while Punjab's recruitment and assignment pipeline underwent a series of reforms that sought to weaken political influences and instead focus on improving learning. These political economy features were important in determining which provincial governments were more inclined to adopt a delivery approach.

Jordan

Overview of the delivery approaches: The Jordan case study covers the period from 2010 to 2019, when three different delivery approaches were introduced to enhance the achievement of education sector goals. These were: a) the Prime Minister's Delivery Unit (PMDU), which was placed under the prime minister with a multisectoral focus; b) the Development Coordination Unit (DCU), which evolved from a more traditional donor project management unit to a de facto delivery unit embedded within the Ministry of Education; c) and the Results and Effectiveness Unit (R&E Unit), established the within the Royal Hashemite Court.

DeliverEd research design: The Jordan research team explored the dynamics of accountability within the education sector with the co-existence of three delivery units. The qualitative study relied on 37 semi-structured interviews with representatives from various organizations, such as the three different delivery units, the Ministry of Education, the Prime Minister's Office, the Royal Hashemite Court, the donor community, and both international and local NGOs that were directly or indirectly involved in service provision. The interviews targeted officials who were involved in education reform between 2010 and 2019. In addition to the interviews, the team relied on internal memos from the ministry, relevant secondary research, and various documents for reform plans and project appraisals to triangulate the findings from the interviews.

Findings

Adoption of the delivery approach(es) (RQ1)

Between 2010 and 2019, Jordan's education sector had three separate delivery units monitoring education reform. Each unit was set up at a different administrative level

across the executive government. In 2009, Samir Al-Rifai was appointed prime minister (PM) of Jordan; he was tasked with overseeing over 120 public agencies and implementing public reforms during a time of economic instability, and, after the Arab Spring, political uncertainty. Prime Minister Al-Rifai's approach to effective public sector reform grounded itself in the UK's delivery unit model, its reputation of perceived success having reached the topmost level of the Jordanian government. In 2010, Jordan's prime minister set up the Prime Minister's Delivery Unit (PMDU) within the Prime Minister's Office (PMO) to help him identify several key priorities that the government would adopt in the short and medium term. When the PMDU was first conceived, it was introduced as a parallel structure staffed with highly skilled consultants from outside the civil service. In 2012, PM Al-Rifai resigned, and the first iteration of the PMDU was disbanded. In 2014, the concept of the PMDU was revived under PM Abdullah Ensour; however, this time, the unit was integrated into the organizational hierarchy of the PMO. The PMDU had a cross-sectoral remit, following up with all line ministries to ensure progress was made in each of the priority areas to which each line minister was committed. Education was only one of the sectors that the PMDU monitored.

In 2016, the 2016–2025 National Human Resource Development (NHRD) strategy was launched to outline the reform pathway for Jordan's basic, secondary, higher, and technical and vocational education sectors. At the time, the average Jordanian student was still not academically performing at grade level, despite a decade of reform (OECD, 2018; NCHRD, 2016). The strategy recommended the adoption of a Results and Effectiveness (R&E) Unit to monitor the progress toward strategy targets and hold ministers accountable for outcomes. The R&E Unit was set up in the Royal Hashemite Court (RHC), since the latter was perceived to be the most stable political structure in the country and could weather the high turnover in government, thus ensuring a sustained commitment to the reform priorities. Meanwhile, at the Ministry of Education (MoE), a project implementation unit that had been established in 2003—called the Development Coordination Unit (DCU)—evolved into a de facto delivery unit in 2017, coordinating across the sector to align donors, service providers, and nongovernmental organizations toward common, coherent, and standardized goals. While education reform had been primarily driven by donor demand between 2003 and 2018, the DCU recognized the need for a locally led sector-wide plan that mobilized a whole-system development approach to coherent target setting and implementation. Instead of donors recommending reform projects with corresponding funds, the MoE's Education Sector Plan (ESP) would organize donor and service provider contributions to the government's programs of reform.

The DCU spearheaded the development of the ESP and was responsible for monitoring the progress made toward its preset targets.

Changes in management routines and behaviors (RQ2)

The three delivery units in Jordan introduced a set of management routines that mimicked the international models that they sought to replicate, such as the UK's PMDU. These management routines were not necessarily new to each of the institutions that adopted a delivery unit, but they were uniquely centralized through a single structure that bundled several functions to improve policy implementation.

a. Prioritization and target setting

All of the delivery units in Jordan were involved in the prioritization of reform projects and setting targets for line ministries and departments. The PMDU worked closely with the Cabinet members and the PM to identify short- and medium-term national priorities across the country's critical sectors. The unit then worked closely with line ministries to set targets and milestones to mark key achievements along the delivery journey. The R&E Unit conducted a similar exercise, consulting with the ministers of basic and secondary education, higher education, and the technical and vocational education and training committee, as well as the mid-level management across those ministries, with individuals who were involved in the implementation of the reform plan. The priorities and targets were based on the recommendations and KPIs outlined in the HRD strategy. The DCU facilitated the development of the ESP in close collaboration with the heads of departments across the ministry and the donor organizations. The ESP outlined the work plans for reform between 2018 and 2022 and highlighted the key priorities for the first phase of the plan, between 2018 and 2020.

b. Measurement and monitoring

The MoE adopted a set of new structures and monitoring routines for the implementation of the ESP on top of the DCU's ongoing stock-takes with donors, the minister, and the secretary-general of the MoE on a weekly basis. The ESP monitoring routines included a monthly Policy, Planning and Coordination Committee (PPCC) meetings, monthly Technical Working Group (TWG) meetings including representative bureaucrats across departments responsible for implementation, and quarterly steering committee meetings, which consisted of the minister, donor representatives, representatives from foundations affiliated with Queen Rania, the R&E Unit, and other key ministry personnel responsible for the implementation of the ESP. To report on the status of education reform, the ministry's monitoring and

evaluation function, supervised by the DCU, published annual narrative reports summarizing implementation progress to date. The R&E Unit met with the minister of education on a weekly basis, in addition to ad hoc meeting with ministry staff at the departmental level. They also met with King Abdullah II and Queen Rania on a quarterly basis to report on progress toward the HRD KPIs. The DCU also fed into those quarterly meetings, providing the necessary information to report on policy and program implementation. At the PMO, the PMDU held biweekly meetings with the Cabinet, in addition to holding monthly check-ins with line ministries, either in person or via email.

c. Leveraging political sponsorship

Both the PMDU and the R&E Unit benefited from having the sponsorship of their respective political leaders or institutions. The PMDU leveraged frequent informal stock-takes with the PM, as well as biweekly Cabinet meetings, to hold ministers accountable for results. The unit also leveraged this political sponsorship to legitimize the frequent data requests they made to the line ministries. The R&E Unit's relationship to the Royal Hashemite Court equipped it with the authority it needed to access relevant and timely information about the reform process within the education sector. The R&E Unit also organized quarterly stock-take meetings with the king and queen, with the minister of education and the prime minister in attendance. These stock-takes generated a great deal of activity within the MoE, to respond to the update requests sent by the R&E Unit in advance of those meetings. This helped focus the attention of bureaucrats on the key reform areas that were high priorities during that particular time.

d. Accountability and incentives

The PMDU, R&E Unit, and DCU all introduced routine data collection and monitoring practices to the policy and program implementation process. After 2018, the PMDU started publishing national priorities and progress toward targets on an online dashboard for the wider public, in an attempt to leverage public accountability to improve government performance. The R&E Unit helped with quarterly stock-take meetings with the king and queen, each meeting focusing on key priorities that were relevant and time-sensitive to the royal court at the time of the meeting.

e. Problem-solving and organizational learning

While all of the delivery units held stock-take meetings, the DCU and R&E Unit in particular played a more intensive role in problem-solving with ministry departments to understand where implementation bottlenecks emerged and how they could be

resolved. The PMDU also held ad hoc meetings with ministers and bureaucrats to discuss implementation lags and potential solutions. The R&E Unit staff also met with mid-level bureaucrats at the MoE formally, on a monthly basis, alongside ad hoc meetings to discuss implementation challenges in several reform areas that were particularly high priority at the time. The R&E staff sometimes worked closely with these bureaucrats to problem-solve as needed.

The role of the DCU was widely perceived to be positive, based on interviews with bureaucrats within the MoE. While the R&E Unit's involvement in reform was also reportedly conducive to resolving high-level bottlenecks related to procurement procedures, funding, and legislation, some interviews with bureaucrats at the MoE suggested that there was tension at times between the staff at the Royal Hashemite Court (RHC) and the MoE, which limited the potential for collaborative problem-solving. This was, reportedly, mainly due to the fact that the MoE bureaucrats were under huge amounts of pressure to accommodate different requests for project implementation, as well as to comply with the taxing monitoring routines imposed on them by donors and other executive government entities.

The R&E Unit's proximity to the center of government and royal institutions was perceived as a point of leverage to impose their own authority where civil servants at the MoE otherwise had more discretion. The R&E Unit's monitoring added another layer of both reporting and accountability that bureaucrats needed to manage and navigate, along with their other competing responsibilities. Despite these challenges in implementation, both the DCU and the R&E Unit helped the MoE secure high-level political and financial support when needed. The R&E Unit's political sponsorship enabled it to unblock financial barriers, expedite procurement processes, and pass legislation in a timely manner to enable certain reforms. There is no evidence from the interviews with key informants across the education sector that the PMDU played a significant role in facilitating education reform. It collected data on a monthly basis and provided little feedback to the DCU on what the monitoring data revealed or what could be done to improve implementation.

Contribution to improved inputs, outputs, and outcomes (RQ3).

There are four notable areas where the involvement of the DCU and the R&E Unit was conducive to achieving national education priorities. First, the R&E Unit played a pivotal role in ensuring that Jordan's first initial teacher education program was established and providing high-quality training to student teachers within the timeframe outlined in the NHRD strategy. To set up the teachers college, the R&E

Unit had to ensure that the central government allocated sufficient resources to fund the staff, construct the building, and procure technical assistance from a world-renowned academic institution specialized in teacher training. The R&E Unit's political capital also enabled it to establish a partnership with the University of Jordan, which agreed to both host the teachers college and provide the land for construction, free of charge. By 2016, the teachers college was welcoming its first cohort of student teachers.

The same kind of problem-solving occurred for another key national priority: the establishment of the National Center for Curriculum Development (NCCD). In addition to securing the funding and facilitating an efficient procurement process to collaborate with HarperCollins Publishers on producing new school textbooks, the R&E Unit made sure that the legislation decreeing the establishment of the NCCD was passed in a timely manner. The NCCD was set up in 2017, as intended. At the school level, the DCU facilitated the implementation of the USAID-funded Reading and Mathematics Program (RAMP) and the multi-donor-funded School and Directorate Development Program (SDDP), both of which improved school-level outcomes. While the RAMP improved early-grade literacy and numeracy, the SDDP devolved responsibility of school improvement to school leaders, strengthening their capabilities in school educational and transformational leadership and school planning (Brombacher et al., 2012; Jordan MoE DCU, 2014; World Bank, 2017). On the other hand, the involvement of the delivery units alongside multiple stakeholders with their own sets of accountability relationships and monitoring routines with the MoE led to task delays and inefficiencies in implementation. For example, the adoption of teaching standards was delayed by two years due to the conflicting technical advice provided by the various stakeholders who were involved in either funding or implementing the project. The R&E Unit and the DCU were not able to streamline the accountability for results and standardize the instructions for implementation since they were not able to supersede the accountability lines imposed by donors, each of which had their own technical advice and timelines.

Furthermore, the adoption of the teacher licensing policy and release of the new school textbooks failed due to public scrutiny and the role of the teachers' union in mobilizing teachers and the media against the proposed reforms. Both the R&E Unit and the DCU had no authority to engage with the public or teachers' union directly. Moreover, they could not resolve the implementation problems that fell outside the parameters of state function, such as issues related to budget allocation, political signaling of priorities, and working across the bureaucracy to improve management

performance. Consequently, 20 percent of teachers were not licensed by 2020, as outlined in the HRD strategy, and the licensing policy was also not passed in 2019 (during the time of the study). Similarly, instead of rolling out all new textbooks for three grades in the first phase, the NCCD was preparing to release only the new math and science textbooks. In 2019, the remaining textbooks were not on track to be fully rolled out by 2021.

Institutional and political features that shaped the delivery approach (RQ4)

Jordan's political nature and organization both inspired the adoption of a delivery unit within the Royal Hashemite Court (RHC) and created a complex dynamic of multiple accountabilities for reform outcomes. Jordan has both the RHC and the executive government. While there is a tacit understanding among government bureaucrats that policymaking and implementation is the sole responsibility of the executive government, constitutionally and practically, the RHC plays a significant role in both. Given this role, the RHC had a vested interest in ensuring that progress was made toward reform goals. Moreover, the RHC was a much more stable political structure in Jordan than the executive government, which faced a high turnover rate among its ministers. Due to its political longevity and the tenure of its own staff, the RHC was perceived as the best possible host for the R&E Unit to weather the fluctuations in government and sustain the commitment to national priorities. However, this effort of streamlining accountability was more difficult in practice. The reality of the accountability dynamic in Jordan's education reform sector was quite complex.

There were over 12 donors involved in education reform, each with their own accountability lines with the MoE, whether through results-based financing or service contracts with service providers. Furthermore, bureaucrats had to respond to hierarchical forms of accountability channeled through their organizational charts and human resource policies. Finally, there was no clear hierarchy between the RHC and the PMO, resulting in an ambiguous landscape where multiple delivery units operated in the sector without necessarily streamlining or coordinating their management functions and targets. Nonetheless, there were some notable successes from having the R&E Unit housed within the royal court; its proximity to the center of government enabled it to unblock financial, legislative, and procedural barriers to effective implementation. The DCU's nested position within the MoE, however, did equip it with the comparative advantage of being physically and relationally close with the implementing bureaucrats, thereby enabling it to perform its problem-solving function much more effectively than any of the other delivery units in the sector.

Sierra Leone

Overview of the delivery approach: In 2020, David Sengeh, Sierra Leone’s Minister of Basic and Senior Secondary Education, set up a delivery unit to support the president’s vision for education transformation and the implementation of the Free Quality School Education (FQSE) program. The delivery unit was set up by the minister to implement his vision, address key issues in the system to deliver on key interventions, and improve bureaucratic functioning. Leveraging data systems and analytical support, the delivery unit seeks to improve policy implementation by tackling key delivery bottlenecks at the central level, better coordinating across ministerial departments and with donors, building capacity, and improving communication to accelerate reform progress. As stated by the head of the delivery unit “we (the delivery team) came in as enablers to serve the ministry to bridge the gap and create synergy between policymakers and implementers.”

DeliverEd research design: The Sierra Leone team conducted semi-structured interviews with 15 government officials, policymakers, and other international and local agencies involved in service delivery in Sierra Leone between late 2021 and early 2022. The research team also reviewed policy documents, secondary research, and relevant documentation provided by the interviewees to supplement the themes from the key informant interviews. This case study was conducted to generate policy lessons and recommendations.

Findings

The Sierra Leone case study set out to understand how the delivery unit in Sierra Leone operated, especially during the outbreak of the COVID-19 pandemic and show how effectively it navigated the education reform space. Since the policy note was developed to present how the unit’s functions map onto the core functions of a delivery approach and what challenges it faced in achieving its goals, the summary below does not follow the same format as all of the other case studies, which were designed to answer our four core research questions.

When he set up the delivery unit, Sengeh envisioned a team of highly skilled technical experts to both fill capacity gaps within the ministry and build the skills and data-gathering and monitoring systems needed across the bureaucracy to enable effective policy implementation in the long term. The delivery unit was set up as a parallel structure that operated within the Ministry of Basic and Senior Secondary Education (MBSSE) but outside its organizational hierarchy (bureaucracy). The unit

is staffed by a small team and experts are seconded from various international donor agencies and international NGOs. The delivery unit is also supported by internship programs with Harvard and Yale universities.

a. Prioritization and target setting

Overall education priorities were set forth in Sierra Leone's 2022–2026 Education Sector Plan and the FQSE program, and the priorities include setting up data collection and analysis systems and routines, as well as coordination and alignment among different stakeholders, such as the ministry, donors, and NGOs. The delivery unit was tasked with further prioritizing reform projects to make implementation more effective. The delivery unit works closely with the minister to establish and regularly review a list of priorities. However, at times, the delivery unit's team expressed that it was challenging to address a high number of priorities; therefore, it responded more to immediate challenges than to medium- and long-term goals. Key performance indicators (KPIs) with timelines for when certain milestones need to be achieved have not yet been formally introduced by the delivery unit.

b. Measurement and monitoring

One of the key goals of the delivery unit is to strengthen data-gathering and monitoring systems that could enable education bureaucrats to track key indicators related to the education sector's performance and identify implementation challenges in a timely manner. Interviews with key informants found that the delivery unit has been effective at improving data systems and building data analysis capacity. The delivery unit has worked with the MBSSE on enhancing key aspects of data collection and digitalization to improve the quality and accessibility of data. However, no formal structures have yet been introduced to measure and monitor the progress and achievement of the key priorities and targets of the delivery unit or the MBSSE.

c. Leveraging political sponsorship

The minister established, led, and assumed complete ownership of the delivery unit. The delivery unit's proximity to the minister equipped the team with a certain authority and signaled to education bureaucrats that the delivery unit's role and projects were important. Moreover, that political sponsorship allowed the delivery unit to secure high-level support for reform, including funding and Cabinet approval of key policies in a short period of time.

d. Accountability and incentives

Interviews with key informants suggested that accountability mechanisms have not been introduced by the delivery unit, as of the time of research. There are also no high-stakes consequences attached to the performance of the delivery unit or MBSSE departments, and there is no clear set of expectations around whether there would be rewards or sanctions associated with the delivery of priority projects. That said, the unit was still at a relatively early stage when the study was conducted, and interviewees reported that the objectives set could not be attributed to the delivery unit entirely, as there were other actors engaged in the policy formulation and implementation as well as systemic challenges which affected effectiveness.

e. Problem-solving

The delivery unit established informal routines of engaging with ministry staff to discuss implementation progress and bottlenecks. The frequent, albeit ad hoc meetings allowed the delivery unit and ministry staff to collaboratively develop solutions to problems they faced with implementation. Collaboration between the delivery unit and the formal MBSSE structure, however, was an issue in the beginning. The delivery unit team members were not always well received by ministry staff and faced opposition when they tried to support problem-solving routines or the monitoring of implementation progress. Interviews with key informants suggested that the gaps between the two teams in terms of educational and national background, salaries, and organizational culture made a collaborative working relationship difficult to achieve. With time and strong support from the minister, the relationships between the delivery unit and the MBSSE's civil servants improved; the MBSSE staff saw the efficacy of the unit, making it easier to work as a team.

The delivery unit has been also key to mapping and coordinating partners and to aligning their efforts with the government's agenda. The delivery unit has also been able to communicate effectively and share its accomplishments with stakeholders within and outside of the MBSSE.

Contribution to improved inputs, outputs, and outcomes (RQ3).

The Sierra Leone delivery unit is a homegrown initiative, established in 2020 and set up to deliver on the president and MBSSE minister's vision for human capital and education reform in Sierra Leone. The delivery unit has played a critical role in identifying key gaps in policy development and implementation plans, and it has contributed to improving data collection and digitalization to make data more relevant, reliable, and accessible. This, in turn, has helped the MBSSE in promoting

inclusion in the system, building safe and sustainable infrastructure, and expanding early childhood education. The MBSSE delivery unit model is currently being replicated across other agencies, such as the Ministry of Health and the Teaching Service Commission in Sierra Leone.

Tanzania (ongoing)

Overview of the delivery approach: The Government of Tanzania adopted a delivery approach between 2011 and 2015 that was called Big Results Now! (BRN), which identified six national areas for accelerated transformation (water, energy, education, agriculture, transport, and resource mobilization). BRN was strongly influenced by the Malaysian delivery approach model (the Performance Management & Delivery Unit, PEMANDU) and its intensive initial problem-solving lab to diagnose implementation challenges. Thus, the BRN began with an eight-week lab session involving over 250 participants from the public and private sectors, as well as international development experts and partners. The delivery approach utilized political sponsorship and top-down accountability through a minister's scorecard that detailed each minister's progress on BRN KPIs. The delivery approach also included the Presidential Performance Dialogue, a biannual meeting in which the ministers were held to account by the president, prime minister, and the presidential delivery bureau chief executive officer. There were also several institutional coordination working groups established to meet on a weekly basis to facilitate BRN achievements, including the establishment of ministerial delivery units. BRN included a mix of long- and short-term goals, with important changes to education management practices (for example, official school rankings and the direct transfer of school capitation grants).

DeliverEd research design: A retrospective case currently in progress, the project will largely comprise a qualitative comparative evaluation of the specifics of BRN implementation across different sectors: education, water, and healthcare. The first two sectors were part of the BRN delivery unit approach. Healthcare was not. The goal of this comparative exercise will be to highlight the specific ways in which the variation in ministerial-level organizational features influenced the implementation strategies adopted and the successes or failures under BRN. Comparing BRN sectors to healthcare will also reveal whether the BRN approach differed from other reform initiatives implemented by the Government of Tanzania during the same period. The data collection process includes interviews with current and former government officials within some of the target ministries that were identified as national key results areas (NKRAs). The data collection process also includes

interviews with teachers, district education officials, and other stakeholders in the education sector in Tanzania. Lastly, a process-tracing approach will be used to analyze published government strategy documents and policy statements, official statistics from the Government of Tanzania, disaggregated budget allocations by sector, and other publicly available data. As the research is still in progress, the end of grant synthesis report does not draw on the Tanzania study findings.

Cross-case takeaways

This section presents a set of nine broader “takeaways” based on our synthesis of our empirical work. Whereas the last section focused narrowly on the findings of our country case studies and global mapping work, in this section we discuss the broader implications of our empirical findings for scholars’ and practitioners’ understandings of delivery approaches as a policy tool. The themes drawn out in this section are thus somewhat more open to interpretation than the results presented in the previous section, while still being grounded in our empirical research.

We focus our synthesis on the features, strengths, and limitations of delivery approaches as actually observed in our study countries and global mapping, not on any of the various normative models or policy recommendations proposed by other authors or practitioners about how delivery approaches ought to look or work. Thus, our analysis does not imply that these takeaways are true of every delivery approach worldwide or will necessarily pertain to all future attempts at implementing delivery approaches. Instead, they represent our best effort to draw out broader patterns about how delivery approaches actually tend to function in practice, based on our empirical research described above.

1. Delivery approaches can be designed in many different ways, both in terms of how they are structured and in terms of what they do.

- Discussions around adopting delivery approaches or delivery units often assume that there is a single model of what a delivery approach is and does, which can simply be copied or adapted. This assumption is often implicitly based on a handful of high-profile examples, in particular the UK PMDU.
- Two features are common to nearly all delivery approaches, including:
 1. The creation of a unit or organization that bundles together a set of management functions and routines that previously did not exist or were dispersed throughout the bureaucracy; and
 2. The location of this unit/organization, being close to political or executive leadership, thus centralizing control over these functions, as well as

communication and delegation of instructions, targets, and management routines (see the global mapping report).

- However, while the adoption and some features of delivery approaches are often inspired by examples from other countries, governments usually make significant changes to these models during the design process. These changes occur through a mix of deliberate adaptations to better fit local contexts, compromises to fit institutional and political constraints, and (perhaps in some cases) misconceptions about the models from which the governments are drawing inspiration.
- Thus, delivery approaches around the world exhibit huge variation in their:

Goals: the type of improvements they aim to achieve;

1. Functions: the management practices or “levers” they use to try to achieve their goals;
 2. Structure: where the core unit sits, and the extent to which it is integrated with the mainstream civil service;
 3. Staffing: who runs and operates the unit, in particular; and
 4. Financing: whether externally or domestically funded (see the global mapping report).
- In particular, delivery approaches vary in which functions they deploy, in different combinations and intensities, often in response to contextual imperatives, constraints, or political priorities. In practice, there is no fixed set of tools or routines on which all, or even most, delivery approaches draw.

2. Delivery approaches were fairly effective at leveraging political sponsorship and focusing attention on key national priorities, improving coordination around them, and achieving formal/legal/structural changes at the central level.

The delivery approaches increased the overall salience of and attention to targeted issue areas, and these approaches created routines that forced repeated discussion of the issue area (see, for example, Punjab and Jordan).

- The delivery approaches also created institutional focal points for broad/cross-cutting issues. These focal points played an important role in improving coordination across institutions and teams, through both routine and ad hoc channels (see, for example, Ghana).
- These factors combined meant that delivery approaches were also relatively effective at achieving goals that required political authorization and could be achieved through the actions of a relatively small number of central actors, such as the creation of new policies or passing of laws (see, for example, Ghana and Jordan).

- The leveraging of political sponsorship played a key role in driving these successes.
- The delivery approaches' diagnoses of implementation challenges in service delivery did not always lead to effective solutions or desired results, especially when challenges were related to resource constraints and limited autonomy at subnational levels (see, for example, Ghana).

3. Delivery approaches were less effective at embedding improved management practices or achieving positive behavioral changes among downstream actors and at improving longer-term outcomes.

- The most important education delivery outcomes, from improved teacher attendance to better teaching practices to increased learning outcomes, are driven by the actions of many downstream actors (e.g. school leaders, teachers, district-level bureaucrats).
- However, there is limited evidence that delivery approaches were able to consistently and sustainably direct the changes in downstream behaviors, especially at the school level (see, for example, Pakistan).
- Delivery approaches were somewhat more effective at spurring changes in management practices at the level of middle management, such as greater demand for data and some acceptance of the idea of accountability for results—albeit still with limited success.
- High-stakes top-down accountability routines were largely effective at generating activity in direct response to the routines and pressures brought to bear by the delivery approach, but these routines tended to make downstream actors react through short-term “firefighting” focused on the targeted indicators rather than by taking the more complex actions needed to improve the longer-term system performance (see, for example, Punjab).
- There was a tension between the demand for immediate action and direct accountability (from political pressure and associated delivery approach routines) and the nature of many education system outcomes, which tend to be slow-moving and driven by multiple factors.
- Education administrators in different parts of a system varied, both in the nature and quality of management practices they were using prior to the delivery approach, and in their responses to the delivery approach. This variation suggests that delivery approaches are likely to face challenges in producing consistent changes in service delivery across different settings in the school system.

4. Downstream and frontline actors were often limited in their abilities to respond to the activities and requirements of the delivery approach by constraints that fell outside the scope of the delivery approach itself, such as multiple lines of accountability and the lack of resources or authority.

- Despite having strong political sponsorship at the central level, delivery approaches did not always simplify lines of accountability, and they sometimes complicated them by duplicating reporting requirements and introducing competing incentives and instructions for reform. This made it hard for officials to respond even to strong political signals and accountability pressures (see, for example, Ghana and Jordan).
- Donors played a role in complicating accountability relationships, since they introduced additional reporting routines and incentives (e.g. results-based financing) on top of preexisting routines and incentives provided within the bureaucracy itself. However, the main source of multiple accountabilities was from within governments, from the existence of multiple executive authorities and even multiple delivery approaches, as well as from the civil service rules limiting managers' abilities to make financial and personnel decisions (see, for example, Jordan).
- The delivery approaches were successful, in some cases, at alleviating the constraints that were legal or political in nature for central-level actors, but the delivery approaches were less successful at alleviating downstream actors' resource constraints or increasing their autonomy, for example, regarding decisions about personnel management (see, for example, Ghana and Pakistan).
- One reason the preexisting constraints were such a challenge may have been because the delivery approaches were not designed with an eye to leveraging the capacity of downstream and frontline leaders with responsibility for improving service delivery. To put it another way, delivery approaches tended to be designed more through "forward mapping" (thinking about how to translate high-level policies into frontline changes) than through "backward mapping" (thinking about how central actors can enable frontline workers to be more effective) (Elmore 1979).

5. Data played an important role in spotlighting issues, provoking discussions, and making abstract issues tangible. However, data appeared to be more useful in driving problem-solving and coordination than as an indicator used to direct rewards or sanctions.

Data was useful for deep dives and clarifying targets and standards, in conjunction with clear communication of political priorities.

- However, data-inspired deep dives occurred primarily at central level. Data tended to flow upward and was less consistently used for problem-solving among frontline actors (see, for example, Ghana).
- In some cases, downstream actors were provided with structured opportunities to use data to solve problems (see, for example, Ghana), while in other cases these were absent (see, for example, Jordan). Data tended to flow upward, often for the purpose of top-down accountability routines. Access to data alone did not lead downstream actors to use data for decision making.
- Gaps in staff capacity to design targets and analyze data at decentralized levels sometimes inhibited the use of data for problem-solving. Data was not always analyzed and leveraged to inform improvements in the education system. In some cases, this was due to limited skills within the bureaucracy, and in other cases the tight deadlines assigned to targets could not accommodate the time and human capital required for such level of data analysis and utilization to take place (see, for example, Sierra Leone).

6. Delivery approaches sometimes generated opportunities for organizational learning, albeit often as an unintended benefit rather than by design.

This effect was stronger in cases in which the delivery approaches created both formal and informal channels and routines for organizational learning that were integrated with the mainstream civil service.

- As focal points with a mandate for reform, actors involved in delivery approaches learned over time about challenges in their policy issue areas, about their own roles, and about broader systemic strengths and weaknesses. This learning occurred through both formal and informal channels (see, for example, Pakistan and Ghana's national delivery approach).
- However, this function was not always explicitly articulated or prioritized, and few opportunities for shared learning or discussion were created in the downstream parts of the education system.
- Broad-based organizational learning may also have been undermined by the tensions between delivery approach staff and other actors, such as civil servants within the education bureaucracy, due to resentment over salary and span of control, and/or the fear induced by high-stakes accountability routines.

7. The effective lifespans of delivery approaches were generally linked to the tenures of particular political leaders or administrations (and often donor funding, where applicable).

Some changes and routines were sustained after the effective end dates of the delivery approaches, but most were not. There was very little evidence of subnational and frontline education officials more widely spreading or transferring delivery approach-inspired practices.

- Delivery approaches tended only to be focal points for reform activity under the political leader who created them. Many delivery approaches were closed after the leadership changed, while others continued to exist, but with greatly reduced political sponsorship and de facto authority (see, for example, Pakistan and Jordan). There are exceptions to this trend, however, such as Ghana's case.
- Locating the delivery approach within a preexisting unit may help the organizational structure of the approach continue to exist beyond the specific lifespan of the delivery approach, although its activities are likely to reduce in intensity as political sponsorship wanes (see, for example, Jordan).
- The end of donor programs poses a major challenge for delivery approaches that rely on external funding, as is common. Although this eventuality is easy to foresee, transitional arrangements are often not made and are difficult to achieve, due to changes in resourcing and the complexities of integrating the new practices into existing structures and processes.

8. Housing delivery approaches in newly created units and staffing them with staff who are not on civil service contracts may undermine sustainability and the broader uptake of practices.

- Bureaucrats and teachers in education bureaucracies and schools often perceived the delivery approach staff as threats or "police" especially initially.
- In some cases, the delivery approach staff were able to overcome this perception by gradually proving that they could be useful, for example, in coordination and unblocking challenges (see, for example, Ghana and Sierra Leone).
- However, the common practice of paying delivery approach staff at higher rates than their civil service counterparts poses challenges for sustainability, and in some cases the pay difference caused resentment and tension.
- Recruiting externally for delivery approach staff also created culture clashes in some cases, due to different educational backgrounds, professional norms, career progression, and overlapping mandates (see, for example, Ghana and Sierra Leone).

- Using non-permanent staff also created a built-in sustainability problem at the end of donor programs, as staff had to leave unless they were made permanent, but they could only be made permanent staff at significantly reduced salaries.
- The non-integration of personnel and structures may have also reduced the likelihood of practices and routines being sustained or integrated after the contracts of non-permanent delivery approach staff expired.
- That said, the use of external and contract staff had some benefits in bringing in fresh perspectives and new skills. There is evidence, for example, in Jordan, that these new skills and practices spread to mainstream civil service staff in some instances, but not in others.

9. Delivery approaches typically evolved over time, both through deliberate decisions and emergent changes.

- Many delivery approaches started off with the intent to rely heavily on top-down accountability mechanisms as a lever for change, but the intensity of these practices often declined within a couple of years. In some cases, this reduction in intensity was a deliberate decision, as officials realized that high-stakes accountability tools were not suitable to the goals they were trying to achieve, while in other cases, the reduction may have been due to bureaucratic or political resistance (see, for example, Ghana).
- In most cases, the type and level of targets also changed over time. This change was sometimes due to efforts to include broader or more important goals or outcomes, and at other times it happened in response to changing political priorities.

Future research considerations

The research conducted through the DeliverEd project has made both methodological and conceptual contributions, and it lays an important foundation for future research on how to improve managerial practices to strengthen implementation and delivery capacity in the education sector.

The project makes a number of methodological contributions. The first is a way to approach multi-country, qualitative research. Each country study was anchored around a set of common research questions developed from a common conceptual framework and intended to process-trace the introduction and evolution of the delivery approaches. This common analytical structure made it feasible to draw insights across cases into complex changes in large bureaucracies. The second contribution, from the Ghana study, is to pilot a rich, quantitative survey instrument

that can be used to map management practices and multiple dimensions of performance (from process-oriented metrics of activities and tasks completed to broader metrics of understanding, attitudes, and satisfaction) at the district and school levels, both at a baseline and after a management reform effort. The third contribution, from the Pakistan study, is to demonstrate how the wealth of data that is often collected as part of a delivery approach could be analyzed in real-time (using appropriate methods) as a tool for improving diagnoses of delivery challenges and discovering opportunities for improved service delivery.

The project also points to methodological horizons for research on how to improve management practices and delivery. The multi-disciplinary teams have learned a great deal about how to integrate quantitative and qualitative methods, and the teams see opportunities to further combine the methods in future study. In particular, developing a common conceptual framework at the start of the project within which all the empirical studies were nested was critical for our ability to compare and synthesize findings across studies. Having a common conceptual framework that we developed together allowed researchers from different disciplines, studying different contexts, using different methods, to produce studies that complemented and spoke to each other, yielding a cohesive picture of findings rather than a disparate set of case studies. Each research team also joined regular all-team calls multiple times per year in order to discuss emerging questions and patterns, ensure harmonization in the application of the framework, identify opportunities for methodological parallels, and cross-pollinate ideas.

In terms of thematic areas for further research, the studies in the DeliverEd project focused on delivery approaches that used delivery units and often emphasized centralized accountability routines. However, we show that one of the major limitations of centralized, high stakes accountability approaches is their ability to engage frontline actors in ways that not only shift their behaviors but also build their capacity for solving delivery problems. Some of the emerging findings from the case studies point to the importance of human resources and funding in enabling the effective uptake and sustainability of delivery approaches. While our research did not comprehensively investigate these issues, our findings do suggest future research pathways into the topic of human capital and financial resource constraints related to the effectiveness of delivery approaches. Our research has helped to highlight, conceptually and methodologically, how to study the synergies and tradeoffs among different managerial practices that can be leveraged, especially between high-stakes centralized forms of accountability and incentives and local problem-solving and

innovation.

Policy considerations for designing and implementing a delivery approach

As this research has shown, there no “one best” model for delivery approaches. Although delivery approaches often include common practices and functions and are typically coordinated by a unit that is situated close to a minister or head of state, the delivery approaches themselves vary substantially. While all of the country cases in this research involved the creation of highly centralized units that were responsible for goal setting and accountability routines, these units were structured and staffed differently, and they leveraged distinctive forms of goal setting, accountability, political sponsorship, data collection, and problem-solving at both central and decentralized levels to improve service delivery. Similarly, the opportunities and challenges relevant for delivery approaches depend on what they aim to achieve, the preexisting statement of the education system, and other aspects of the context.

Because of this wide variation in design, context, and goals, it is difficult to establish a set of prescriptive policy recommendations. Therefore, in this concluding section, we present a set of policy considerations: key factors in the design and implementation of delivery approaches that governmental leaders and donors may wish to consider.

The points presented here do not constitute a roadmap or toolkit for how to design a delivery approach. Rather, leveraging our research and its focus on unpacking underlying delivery functions, these considerations seek to capture lessons learned from the achievements and limitations of the different delivery approaches we studied, so that other leaders can better understand the strengths and limitations of delivery approaches and be aware of key challenges that have emerged in other contexts.

The structure and financing of a delivery approach impacts its sustainability. This research highlights the finding that decisions about where to situate a delivery unit and how to finance a unit can impact its sustainability. If institutionalizing the delivery approach into the education system is a goal for those considering adopting a delivery approach, sustainability should be a key design consideration from the start.

- Common structural features of delivery units include the creation of a parallel unit, staffed by external consultants, under executive leadership. These features are attractive to political leaders who want to jump-start a set of reforms and stimulate action. However, the research presented here highlights that such units

are rarely sustained and often fail to reach leaders and change management behaviors at decentralized levels effectively.

- The financing of delivery units also creates sustainability challenges. In low-income and lower-middle-income countries, the funding for delivery units is often provided by external donors, and the units are often dismantled when the donor funding ends.
- Many of the functions and practices that accompany the delivery approach could potentially be housed within existing bureaucratic structures, using line staffing. Whether such an approach is part of a sustainability plan or adopted from the outset, it may increase the likelihood that the approach (or elements of it) will be sustained beyond the tenure of the political leader who initiated it.

Different goals and priorities require different approaches. No delivery approach can do everything, and different goals may require different types of system change, entailing different functions and structures for the delivery approach.

- Coordination and alignment at the central level: Delivery approaches seem to be good at enhancing clarity and awareness of priorities among key agencies and their leaders. Delivery approaches create opportunities for coordination and alignment around key reforms when educational governance structures are complex.
- Problem-solving and support are needed to drive behavioral change at the frontline: If the approach's main goals require complex behavioral change in frontline service delivery—including changes in teaching and learning practices in classrooms—the use of high-stakes accountability seems to have less traction. It may be useful here to carefully plan for management routines that link educational managers across the delivery chain. It is important to ensure that frontline managers are engaged in the analysis and design of solutions that are implementable in their context. It is also important to have plans for providing training and support to underperforming districts and schools.
- Updating goals and targets is important. One of the most important outputs from the delivery approaches are the new sources of evidence and the data they yield. Using this evidence to update and iterate priorities and goals on an ongoing basis is an underutilized feature of delivery approaches.

Political sponsorship can be used in different ways. Political sponsorship is a powerful tool that is uniquely leveraged by delivery approaches.

- Combining political sponsorship with high stakes accountability stimulates

attention: Delivery approaches typically seek to leverage political sponsorship through top-down accountability pressures that include reporting to the executive. Such routines are good at stimulating action from senior managers. However, political sponsorship that revolves around top-down accountability is harder to sustain at decentralized levels in educational systems. In decentralized settings, it may produce compliance, but it rarely stimulates behavioral change or local innovation.

- Political sponsorship that is combined with support and opportunities for ownership may better support the ownership of reforms across the education system: An underappreciated feature of political sponsorship is its ability to clearly communicate goals and priorities and build momentum for reform. This research suggests the importance of combining political sponsorship opportunities for problem-solving across the delivery chain.
- Political sponsorship is difficult to sustain: Delivery approaches that are tied to political leaders help focus attention but often cease when political leadership changes. The design of delivery approaches should include, at the outset, plans for the sustainability of specific management functions beyond the tenure of the political leader who initiated the delivery approach.

Harnessing data to improve delivery requires careful consideration. Delivery approaches typically generate rich new sources and types of data and are often accompanied by new platforms for aggregating and visualizing data.

However, they often emphasize executive or central leaders as the main users of the data, and they miss opportunities to provide feedback loops.

- Develop a “use case”: It is important at the design stage to develop a “use case” for data among managers at all levels of the system, particularly among frontline managers.
- Update targets: As mentioned below, it is also important to plan opportunities for using the data to update the targets and goals and fine-tune the systems for flagging underperformance and ensuring accountability.

Organizational learning and problem-solving at a subnational level needs greater emphasis. Delivery approaches promise to help downstream officials and school leaders do their jobs better so that service delivery is improved. However, most of the delivery approaches that we studied focused primarily on setting centralized targets and cascading these down to decentralized managers through accountability routines. Going forward, it may be helpful to complement the focus on target setting

and accountability with greater attention to what downstream officials need to be more effective and engaged in delivery. This might include:

- Frequent communication and clarity on goals/targets/priorities;
- Convening groups of stakeholders that do not usually interact with each other along the delivery chain to identify and solve problems;
- Providing support that allows decentralized managers to utilize data to identify and solve performance problems; and
- Creating more frequent opportunities for political sponsorship at decentralized levels.

Actively create opportunities for organizational learning. Organizational learning is an assumed but underdeveloped mechanism in most delivery approaches. The importance of supporting problem identification and problem-solving among those responsible for delivery is clearly articulated in the original UK-based model for delivery approaches (e.g., Barber, 2015).

Findings from this research highlight the importance of designing delivery approaches with stronger attention to organizational learning, particularly at the decentralized levels of the educational system. Delivery approaches can be strengthened by ensuring that managers at all levels of the system are engaged in joint goal-setting; that accountability routines are combined with support and opportunities for solution-seeking across managerial levels; and that there is ongoing adaptation and iteration among leaders at the central and decentralized levels.

Ensuring that organizational learning features in the design of delivery approaches, and that such learning is not crowded out by other components or demands of the

approach, should figure prominently in the design of future delivery approaches.

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DeliverEd: Building knowledge on how to use delivery approaches to advance education reforms

The DeliverEd Initiative was launched in 2019 to strengthen the evidence base for how governments can achieve their policy priorities through delivery units and other delivery approaches. Globally, more than 80 countries have used such approaches to achieve better outcomes for policy reform and implementation. Forty-seven percent of those include an education focus, either as a single focus sector or as part of a multisector approach. But there was little empirical evidence, especially from developing countries, on the effectiveness of delivery approaches in delivering education outcomes or on the design choices, contextual features, and enabling factors that contribute to their performance.

DeliverEd has helped to fill this evidence gap and create a better understanding of the practices leaders can adopt to improve their policy delivery and reform efforts. It has conducted research within and across countries on the effectiveness of delivery approaches in improving reform implementation, with the key findings included in this final report. It has facilitated knowledge and experience sharing among countries—for example, through the Africa Policy Forum—to equip policymakers with a deeper understanding of delivery challenges and solutions to make informed decisions. It continues to increase awareness and the uptake of research to improve schooling and learning in low-income countries.

The Education Commission leads DeliverEd with Oxford University's Blavatnik School of Government and funding from the UK Foreign, Commonwealth, and Development Office (FCDO). Other partners include the University of Toronto, the Institute for Educational Planning and Administration (under the Auspices of UNESCO), University of Cape Coast, Ghana, Institute of Development and Economic Alternatives (IDEAS) in Pakistan, World Bank, and Georgetown University in the U.S. For more information about DeliverEd, and to view the country studies and other related research and policy engagement materials, please visit www.educationcommission.org/delivered-initiative.

We are very grateful to the Blavatnik School of Government and all our research partners for their in-depth research, especially during the COVID-19 pandemic. This DeliverEd Final report is the Education Commission's interpretation of the research. For the detailed research papers themselves, please see the next page.

List of Acronyms

The overall priorities are set by the 2022–2026 Education Sector Plan or ESP

ADEOP	Annual District Education Operating Plans (Ghana)
BRN	Big Results Now! (Tanzania)
CDMS	Comprehensive Data Management System (Ghana)
CM	chief minister (Pakistan)
CMO	Chief Minister's Office (Pakistan)
CPI	Centre for Public Impact
DC	district commissioner (Pakistan)
DCO	district coordinating officer (Pakistan)
DCU	Development Coordination Unit (Jordan)
DEA	district education authorities (Pakistan)
DEA	district education authority/department (Pakistan)
DFID/DfID	Department for International Development (UK, predecessor of FCDO)
DMO	District monitoring officer (Pakistan)
EDO	education district officer (Pakistan)
EMIS	Education Management Information System (Pakistan)
EPG	Education Partnerships Group
ESP	Education Sector Plan (Ghana, Jordan)
ETF	Education Task Force (Pakistan)
FCDO	Foreign, Commonwealth & Development Office (UK, successor of DFID)
FQSE	Free Quality School Education program (Sierra Leone)
GALOP	Ghana Accountability for Learning Outcomes Project
GES	Ghana Education Service
GET	Global Expert Team (World Bank)
KII	Key Informant Interview (Sierra Leone)
KPI	Key Performance Indicator
MBSSE	Ministry of Basic and Senior Secondary Education (Sierra Leone)
MDG	Millennium Development Goal

MEA	Monitoring And Evaluation Assistant (Pakistan)
MoE	Ministry of Education (Jordan)
NCCD	National Center for Curriculum Development (Jordan)
NCHRD	National Centre for Human Resources Development (Jordan)
NERS	National Education Reform Secretariat (Ghana)
NHRD	National Human Resource Development (Jordan)
NKRA	National Key Results Area (Tanzania)
OECD	Organisation for Economic Co-operation and Development
PBME	Planning, Budget, Monitoring and Evaluation (Ghana)
PEMANDU	Performance Management and Delivery Unit (Malaysia)
PM	Prime Minister
PMDU	Prime Minister's Delivery Unit (UK, Jordan)
PMIU	Project Management Implementation Unit (Pakistan)
PMO	Prime Minister's Office (Jordan)
PPCC	Policy, Planning and Coordination Committee (Jordan)
R&E Unit	Results and Effectiveness Unit (Jordan)
RAMP	Reading and Mathematics Program (Jordan)
RHC	Royal Hashemite Court (Jordan)
RQ	Research Question
SDDP	School and Directorate Development Program (Jordan)
SED	School Education Department (Pakistan)
SEIP	Secondary Education Improvement Project (Ghana)
SISO	school improvement support officer (Ghana)
SMU	Special Monitoring Unit (Pakistan)
SPAM	School Performance Appraisal Meetings
TBI	Tony Blair Institute
T-TEL	Transforming Teaching, Education & Learning nonprofit (Ghana)
TWG	Technical Working Group (Jordan)
UNICEF	United Nations Children's Fund, formerly the United Nations International Children's Emergency Fund