Data Systems and Data Use Challenges in 18 GPE Partner Countries of the Europe | Asia | Pacific Region

Report
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GPE KIX
KNOWLEDGE INNOVATION EXCHANGE

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List of Acronyms and Abbreviations

ACER	Australian Council for Educational Research
CSO	Civil Society Organizations
DHIS2	District Health Information Software 2
DP	Development Partner
EAP	Europe – Asia – Pacific
EiE	Education in Emergencies
EMIS	Education Management Information System
ESA	Education Sector Analysis
ESP	Education Sector Plan
ESPIG	Education Sector Program Implementation Grant
GIS	Geographic Information System
GPE	Global Partnership for Education
IDRC	International Development Research Centre
KIX	Knowledge and Innovation Exchange
MIS	Management Information System
MoE	Ministry of Education
NORRAG	Network for International Policies and Cooperation in Education + Training
OOSC	Out-Of-School Children
SAHE	Society for Advancement of Education
TEP	Transitional Education Plan

Executive Summary

This report presents the findings from an empirical study on thematic priorities, challenges, and innovations in regards to data systems and data use in the following 18 countries of the East – Asia – Pacific (EAP) region that are partner countries of the Global Partnership for Education (GPE): Bangladesh, Bhutan, Cambodia, Georgia, Kyrgyz Republic, Lao People's Democratic Republic (PDR), Maldives, Moldova, Mongolia, Nepal, Pakistan, Papua New Guinea, Sudan, Tajikistan, Timor-Leste, Uzbekistan, Vietnam, and Yemen.

Methodologically, the study draws on data collected by means of content analysis (18 Education Sector Plans/Transitional Education Plans as well as other national policy documents), an online survey that was administered in English to KIX EAP National Coordinators, and 12 interviews with national, regional, and international experts on data systems and data use. In total, the findings are based on a content analysis of 70 documents and data collected from 24 individuals. 18 countries are represented in the study, albeit with a great variation in terms of participation.

The following highlights those thematic priorities that are considered essential for future actionable research regarding data systems and data use for policy and planning:

Capacity Strengthening for Data Analysis & Interpretation

Coordination & Harmonization of Data Systems

Timely, Accurate, & Accessible Data

School-Level & Student-Level Data

School Mapping

Financing Mechanisms & Sustainability of Data Systems

Connecting Policy & Data

The thematic priorities above apply to all 18 countries of the EAP region. An additional priority that spans across the seven priorities listed above is data for inclusion, which includes data on vulnerable populations such as out-of-school children (OOSC), children with disabilities, gender-disaggregated data, and data on education in emergencies.

The following research recommendations have been developed for consideration to address the gaps in these thematic priorities.

1. Applied research on capacity strengthening. What training/frameworks/guidelines need to be developed to ensure the technical capacity needed to strengthen and sustain data systems and data use at every level from the national to the

subnational? Which actors need to be targeted for technical capacity building and which relevant experts need to be involved for maximum efficiency?

2. Applied research on horizontal and vertical harmonization and coordination of different data systems used for education. How can national data systems and processes engage at the subnational level? How can Management Information Systems (MIS) be simplified to facilitate use of data for policy and planning across sectors and across levels of government? Which subnational actors need to be incentivized to use data for planning, monitoring, and evaluation?
3. Ensuring timely data is accurate and accessible. How can open data be made more accessible to educational actors and institutions to encourage evidence-based decision making? How to ensure timely data is accurate? What accountability and accuracy mechanisms can be used that ensure quality data is available to decision makers in a timely manner?
4. Applied research on sophisticated school mapping techniques. How to connect current Education Management Information Systems (EMIS) to Geographic Information Systems (GIS) and other relevant data sources inside and outside the education sector? What are the barriers to accurate and useful school mapping? How can school mapping be more sensitive for massive changes to the environment, climate changes, and flows of refugees and displaced peoples?
5. Implementation of sustainable financing mechanisms to bolster data systems and data use for policy and planning. How to finance data management and usage with limited resources? How to design sustainable data management projects?
6. Applied research strengthening the connection between policy & data. How to establish uptake of quality, accurate, and timely data for policy and planning? How can Monitoring & Evaluation frameworks be improved to encourage completion of the “measure/act/re-measure” cycle? What kinds of incentives would make an education system more likely to use data?
7. Equipping governmental agencies with flexible, user-friendly tools to collect data on vulnerable populations to better inform targeted policy and planning. Which vulnerable groups should be counted, but are not being counted in data collection (refugees, students with disabilities, IDPs, minority groups)? What are the barriers to including these populations? How can EMIS provide customization and versatility to capture useful data of various vulnerable groups in different contexts while remaining user-friendly?

1 Introduction

This report presents the findings from an empirical study carried out in 18 countries of the KIX Europe | Asia | Pacific (EAP) region that are partner countries of the Global Partnership for Education (GPE). The study was commissioned by the International Development Research Centre (IDRC) with inputs from the Knowledge and Innovation Exchange (KIX) EAP hub which serves 21 GPE partner countries. The following 18 GPE partner countries were included in this study: Bangladesh, Bhutan, Cambodia, Georgia, Kyrgyz Republic, Lao People’s Democratic Republic (PDR), Maldives, Moldova,

Mongolia, Nepal, Pakistan, Papua New Guinea, Sudan, Tajikistan, Timor-Leste, Uzbekistan, Vietnam, and Yemen. Afghanistan, Albania, and Myanmar were unable to participate and were not included in this study.

This paper is a follow-up study to one of the top thematic priorities identified in the 2020 KIX EAP Hub report “Thematic Priorities in 21 GPE Partner Countries of the Europe | Asia | Pacific Region”. The purpose of this report is more narrow in scope and focuses solely on one of the top thematic priorities identified in 2020: data systems and data use. In the age of Big Data, it is important to spotlight issues, challenges, and opportunities for data systems and data use in education because “planning without data is like flying blind. If you can’t see it, you can’t solve it” (Annan, 2018).

The study and report was coordinated and written by Alexandria Rodriquez.

2 Methodology

This section of the report presents the methodology for this study and provides detailed information on the following three data collection methods: content analysis of relevant policy documents, online survey, and expert interviews.

2.1 Content Analysis

The desk review included 18 Education Sector Plans (ESP). An additional 52 documents were identified to supplement the ESPs. These additional documents included Transitional Education Plans (TEP), Education Sector Analyses (ESA), relevant documents from development partners, and regional reports on data issues. A list of key words and phrases related to “data” were generated to extract relevant themes surrounding the use of data in education, especially for planning and policy purposes.

The results of the content analysis are summarized, by country and sub-region, in the Desk Review Report. The results of the content analysis were used to inform the questionnaire items for the online survey and to guide the development of the individual interview questionnaires.

2.2 Online Survey

An online survey, administered in English through the survey platform Survey Monkey, was distributed to KIX EAP national coordinators, and 12 survey responses were recorded. The survey contained general questions about the respondent and questions on data use and data systems in the country they represent. In total, the survey was 17 questions long with a mix of closed and open-ended questions. Most respondents took about 10 minutes to complete the survey. The survey was open from February 14, 2023 until February 27, 2023. Three invitations were sent by email to a list of KIX EAP national coordinators.

The survey respondents were composed of GPE Focal Points, National KIX Coordinators, members of a KIX steering committee, and past participants in a KIX EAP activity. The survey was able to capture information from half of the participating EAP countries including Bhutan, Georgia, Kyrgyz Republic, Lao People's Democratic Republic, Mongolia, Nepal, Papua New Guinea, and Tajikistan. The survey was unable to capture information from Bangladesh, Cambodia, Maldives, Moldova, Pakistan, Sudan, Timor-Leste, Uzbekistan, Vietnam, and Yemen. Although survey data on these countries is lacking, the content analysis and individual interviews have provided sufficient information in order to identify key knowledge gaps and research needs and make specific recommendations.

2.3 Interviews

The individuals selected for interviews were suggested by the KIX EAP Hub team based on their close engagement with data systems and data use at the national level. From the suggested list of EAP national coordinators, 6 were selected for formal interviews. In addition to the interviews with KIX national coordinators, 6 meetings were included with representatives of development partners (DPs) and regional and global experts on data systems and data use. The interviews helped to inform the current narrative on data use in education in a particular context, and to probe for knowledge gaps, promising practices or programs, and identification of key issues for applied research.

3 Limitations of Research

During the month this project was developed, the annual CIES conference was taking place which affected the rate of return on the survey. In addition, the specificity of the topic may have led to a lower rate of return due to a scarcity of experts. However, this paper was able to triangulate the results through the desk review and individual interviews to accurately assess key challenges and issues on data systems and data use in the EAP region.

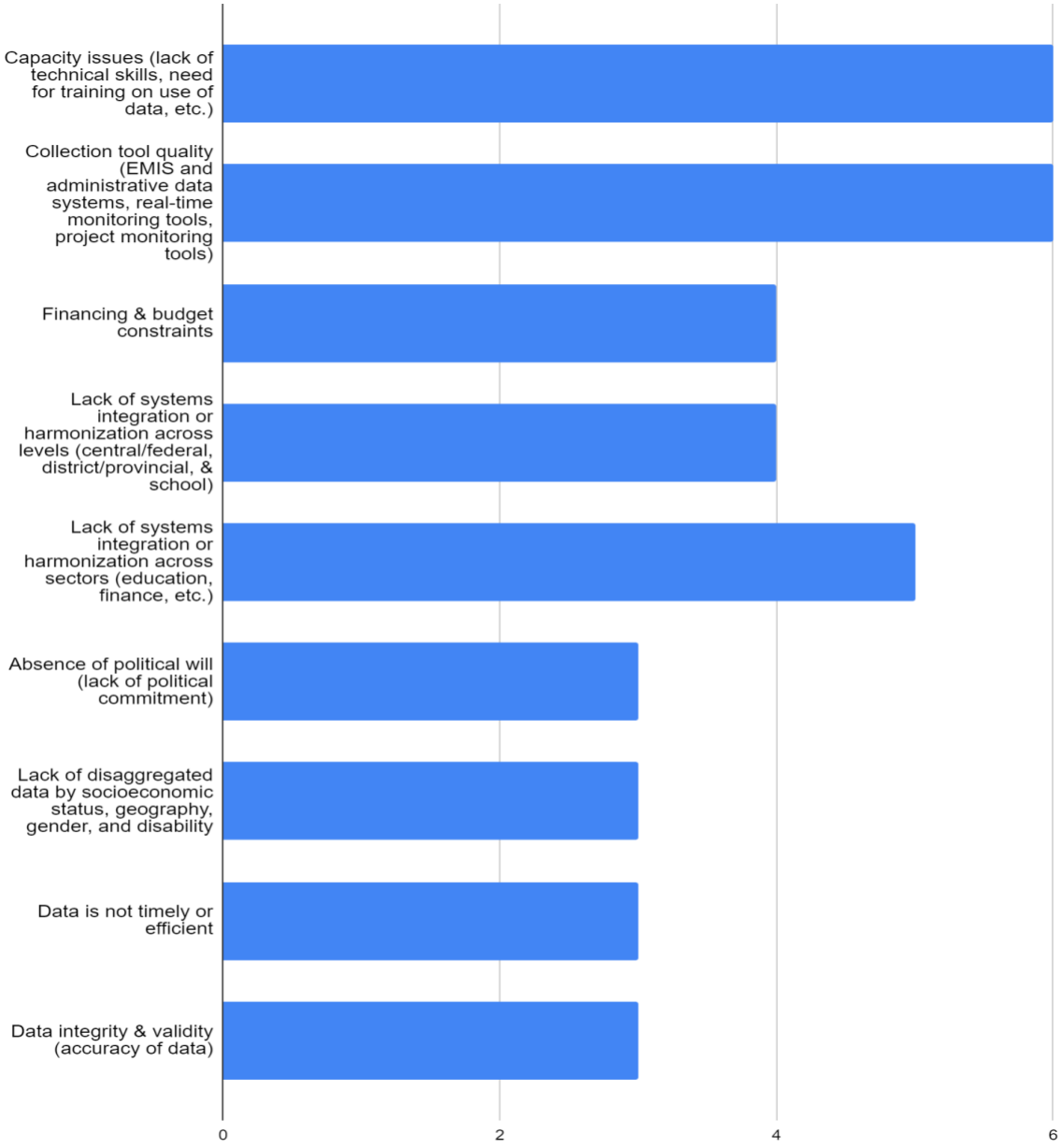
4 Findings

This section presents the findings from the content analysis, survey, and individual interviews. These findings reflect the key gaps in thematic priorities for data systems and data use in the 18 EAP countries identified through the desk review of country documents, the online survey, and interviews with key national, regional, and global experts. It is important to keep in mind that the issues and challenges identified below are interconnected and interrelated.

4.1 Identified Data System and Data Use Thematic Priorities Across the Region

The following figure (Figure 1) presents the survey results of what national experts identified as the most pervasive issues and challenges for data systems and data use in their respective countries. The question allowed respondents to select more than one answer.

Figure 1. The most prevalent challenges to data use.



Every EAP country is gathering data on education to some extent. However, it is important to note that each country has a different system or multiple systems of various capabilities and levels of uptake for managing education sector data. All EAP countries included in this study have implemented some form of functioning EMIS, although there are a few countries that do not have an EMIS with operability suited for policy and planning purposes. These countries include: Moldova, Papua New Guinea, Timor-Leste (UNICEF, 2020), and Yemen. A functioning EMIS is necessary for evidence-based decision making at all levels of education. Special consideration to examine the barriers for developing a functioning EMIS system in these countries is encouraged. For example, Yemen's lack of a robust and functioning EMIS system to inform policy and planning is due to instability and insecurity (Yemen Ministry of Education, 2019), while Papua New Guinea faces low internet connectivity and a lack of political will (Papua New Guinea Department of Education, 2020). Contextualized and adaptive solutions are necessary to address the barriers to non-functioning EMIS in these countries.

In addition, the desk review of ESPs, TEPs, and ESAs revealed that education sector development in most EAP countries is heavily donor-driven. Data is driven at the national level and used for international projects and may not reflect national wants and needs. This has led to a mismatch between national priorities and donor priorities for data systems and data use. A national expert for Papua New Guinea reported that since most of the data system strengthening projects are donor-led, policy-makers don't trust the data and feel reluctant to use it. In Bangladesh, according to a national expert, donor agencies like the World Bank and UNICEF are collecting and using macro-level education data, but only policy-makers at the highest national level are using that data and in a very restrictive way. The data is not very useful for contextualized planning and policy formulation.

Capacity Strengthening to Use Data for Policy and Planning

Across the board, all countries have identified capacity issues as a main challenge to data use in the education sector. Depending on the country, the exact type of capacity required varies, but all countries identified the need to build technical knowledge and skills. Technical knowledge and skills include how to read and analyze the data and how to use that data to formulate policy and inform planning. Building technical capacity can deepen understanding and ownership of the system. Furthermore, all EAP countries identified the lack of effective utilization or strengthening of existing institutional capacity as a serious barrier to improving data systems and data use. Building institutional capacity could entail recruiting or involving relevant experts in data use and data systems at all levels from the national to the subnational; reallocation of resources to aid existing personnel to efficiently and effectively collect, collate, analyze, disseminate, and use data; and assigning clear roles and responsibilities to better utilize the skills and knowledge of existing personnel.

The need for capacity building at every level was a common theme across all EAP countries. At the school, local, and sub-national level, countries such as Bangladesh, Bhutan, Cambodia, Georgia, Kyrgyz Republic, Laos, Maldives, Mongolia, Nepal, Pakistan, Tajikistan, Timor-Leste, Uzbekistan, Vietnam, and Yemen identified principals,

school administrators, and education managers as important actors that are in need of technical capacity building to improve data coverage, quality, and consistency; build understanding for the uses of data for evidence-based planning at the school level; and foster a culture of data use.

Lack of technical capacity at the national level was identified as a key concern for Bangladesh, Bhutan, Cambodia, Georgia, Kyrgyz Republic, Laos, Maldives, Mongolia, Pakistan, Papua New Guinea, Tajikistan, Timor-Leste, Uzbekistan, Vietnam, and Yemen. The lack of capacity to understand and use the data at the national level has translated into poor political will behind data systems improvements and scarcity of evidence-based decision-making for policy and planning. A national expert from Kyrgyz Republic said decision-makers at all levels of the government see data collection as too “time-consuming” because there is a lack of understanding for what purposes data is being collected. One international expert suggested the lack of technical knowledge on data use among ministers of education has led to the de-emphasis of data because data systems strengthening is not seen as a “flashy legacy”.

Without political will, uptake for new innovations and best practices of data systems and data use will stagnate. Cultivating a data-driven culture through technical capacity building can ensure ownership of data systems; improve data quality, reliability, and validity; and develop an environment of evidence-based decision-making.

Coordination and Harmonization Across Levels and Sectors

A common problem in many developing countries' data systems is the lack of vertical (national, sub-national, regional/district/provincial, school, individual) and horizontal (cross-sector, ministries, departments, and donors) coordination of resources and actors; cooperation on data collection, sharing, and analysis; and harmonization of data systems. These deficits have far-reaching implications and ultimately impact the ability of policy makers to produce effective policy based on reliable data. The following countries have identified this thematic area as a central issue preventing data use: Bangladesh, Bhutan, Cambodia, Laos, Mongolia, Nepal, the Khyber and Punjab regions of Pakistan, Papua New Guinea, Tajikistan, Timor-Leste, Uzbekistan, Vietnam, and Yemen.

In many cases, there are multiple, different data collection instruments, indicators, frameworks, actors & MIS used to collect and analyze data in the education sector and across sectors. For example, many EAP countries have different MISs to manage finance, human resources, and general statistics data all operated independently by their respective governing ministries with little harmonization of these systems across sectors. Every EAP country identified the lack of an integrated system as a serious barrier to data use. A lack of an integrated and consolidated EMIS system impedes information sharing across sectors and levels, and leads to a misalignment of data.

These diverse and disconnected efforts from different ministries, development organizations, and education agencies to collect data are inefficient, costly, and result in a

plethora of duplicated data of variable quality, which inhibits necessary data comparison to develop targeted policy and localized solutions.

The misdivision of labor within education sectors from the national to the sub-national level for data collection, collation, analysis, dissemination, and use has been identified as a significant barrier to data system strengthening and data use. A “bottom-up” approach to data collection, analysis, and dissemination leads to siloing of information at the highest levels of education management and ensures only evidence-based decision making happens at the national level. According to a national expert from Bangladesh, this “bottom-up” approach to data collection, analysis, dissemination, and use has alienated sub-national actors from the decision-making process and produced non-contextualized policy changes forcing decision-makers at the school level to develop informal, localized, and parallel policies.

Accessible, Timely, and Accurate Data

The availability of data has also been identified as a barrier to data use for policy and planning. In Bangladesh, Georgia, Laos, Mongolia, Pakistan, Sudan, Tajikistan, Timor-Leste, and Vietnam, open data is not available or not robust enough which may inhibit regional and local level education actors and providers, civil society organizations (CSOs), and other stakeholders from providing vital support. Even if open data is available, if the data is not user-friendly and customizable, then it cannot be used for planning purposes. For example, a key informant from Krygryz Republic reported that although the country uses open data there still persists low data use and analysis capacity on all levels.

The lack of timely, accurate data has affected Bangladesh, Bhutan, Cambodia, Georgia, Laos, Sudan, Vietnam, and Yemen’s capability to use data to inform decision-making. For example, Vietnam’s most recent education sector analysis could not evaluate whether certain key performance indicator targets had been reached because of the shortage of timely data (Ministry of Education and Training Vietnam, 2020).UNESCO recently identified timeliness and consistency as major barriers to data dissemination and use in Yemen (UNESCO, 2022). The lack of timely data translates to mismatched policy solutions.

Since collecting and disseminating timely data is not institutionalized or routine, several of these countries are looking to implement real-time monitoring, feedback, and reporting mechanisms in EMIS especially to track student progression and to monitor and evaluate educational programming. Cambodia aims to fully migrate EMIS online with OpenEMIS within 6 years, and a key expert hopes that timely availability of data will aid policy makers and planners in decision-making.

School-Level and Student-Level Data

A lack of school- and student-level data with sufficient granularity was identified as a key gap in Bhutan, Georgia, Moldova, Nepal, Pakistan, Tajikistan, Timor-Leste, Uzbekistan,

and Yemen. School and student level data is necessary to track student achievement and progression trends, teacher management, and financial information such as infrastructure cost. This barrier is often linked to centralized management of EMIS, as is the case in Timor-Leste, where centralized data collection processes limit student-level data updates to once a year resulting in a lack of timely data and limited uses for planning.

Countries like Mongolia that have implemented student-level tracking systems and integrated those systems into EMIS have reported positive results that have allowed for more efficient allocation of resources, identification of children at risk, and aided in understanding school progress against national objectives (UNICEF, 2020). Mongolia has linked EMIS to the Civil Registration System which has facilitated the transition to individual student data.

District Health Information Software 2, more commonly known as DHIS2, and OpenEMIS are two projects that are worth mentioning as both aim to collect and report on timely, individual-level data using a customizable, versatile, open source, and intuitive MIS. DHIS2, developed originally for the health sector, has been scaled nationally to 69 low- and middle-income countries. GPE KIX has helped financially support the piloting of DHIS2 as an EMIS using DHIS2 functionality and data model to track student and teacher records, school reports cards, and allocate resources (HISP Group, 2023). Both DHIS2, a health data platform, and OpenEMIS, an education data platform, have shown promising results (OpenEMIS, 2023; HISP Group, 2023).

Another promising project that aims to address the issue of school-level data is the Society for Advancement of Education (SAHE)'s project, funded by KIX GPE, "Data-Driven School Improvement–Opportunities, Challenges, and Scalable Solutions" in Pakistan and Nepal. The project developed a framework for individual schools to improve data use for decision making at the school level (KIX GPE, 2021). The project developed a series of key educational indicators for school-level use, but the project also emphasizes the translation of data into actionable information for schools. However, capacity and financing issues are still significant barriers to the successful implementation of this project.

Sophisticated School Mapping Techniques

School mapping data links geospatial data with other types of education indicators and data, like available resources, demographic data, and internal dynamics to provide an estimate of current and future needs and plan accordingly. School mapping can assist with Disaster Risk Reduction (DDR), planning for school building, efficient allocation of resources including human resources, and develop localized responses and targeted policies.

Although school mapping has been a data collection tool used since the 1980s and this technique has the ability to produce sophisticated granularity of data, school mapping in the education sector lags behind other innovative technologies in other sectors because school mapping is often not utilized to its full potential. School mapping often does not

cross-reference other data sources outside of the education sector. Two international experts interviewed stressed the importance of sophisticated school mapping to accurately assess the interactions between different markers, like data on OOSC or data on school achievement, and geospatial data. Geospatial data can provide a more complete picture of an education system's strengths and weaknesses.

Well-designed, user-friendly, and integrated Geographic Information Systems (GIS), which connect student- and school-level information and relevant data from other sectors such as sociodemographic data and finance data with geographic information, could help decision-makers at all levels of government to more accurately allocate resources such as deployment of teachers, formulate relevant policy, and develop targeted planning interventions. A national expert from Papua New Guinea suggests implementing a GIS could reduce the country's overreliance on projections and lead to more efficient allocation of resources and responsive planning.

Financing Mechanisms and Sustainability of Data Systems

Bangladesh, Cambodia, Georgia, Lao PDR, Pakistan, Papua New Guinea, and Sudan fail to meet the SDGs benchmark to spend at least 4% of GDP on public education (World Bank, 2023). In light of inadequate funding, dynamic and sustainable funding methods are necessary to strengthen data systems and data use. A common theme across countries of the EAP region was the dearth of reliable financing mechanisms and financial commitment needed to implement effective and sustainable data collection, management, analysis, dissemination, and use. Limited funding to strengthen data systems lead to gaps in the data which lead to gaps in funding (NORRAG, 2021).

Many of the data systems and data use projects in the EAP region are donor-funded. Once the project timeline has finished, the financing for these projects stops often before the project is sustainable without donor-intervention. Bangladesh, Georgia, Kyrgyz Republic, Maldives, and Yemen explicitly referenced the lack of financing mechanisms for data systems improvements and sustainability. Kyrgyz Republic has gone through several EMIS systems because funding and technical assistance were pulled before the projects were completed, before ownership was transferred to the government, and before sustainability of the system could be ensured.

Strengthening the Connection between Policy and Data

Applied research is needed to strengthen the connection between policy & data to encourage evidence-based decision-making. Strengthening the connection between policy and data will, in turn, strengthen political will for evidence-based decision-making and cultivate a data-driven organizational culture. Randomized controlled trials (RCTs) and other research endeavors to establish the impact of data-driven policy reforms could strengthen the connection between data-driven decision-making and policy reforms. Research can increase transparency and accountability around the evaluation of policy reforms, and identify potential barriers and solutions to policy implementation (Banerjee et

al., 2010). In addition, RCTs can ensure objective evaluations of policy reforms by preventing selection and publication biases (Duflo et al., 2006).

Although this gap was not explicitly identified within most countries' ESPs and ESAs, it was established as a major barrier for data use in decision-making in the individual interviews, and has been the subject of some recent promising projects such as the Australian Council for Educational Research's (ACER) framework toolkit developed for decision-makers on how to improve data use to develop evidence-based policy and planning and UNICEF's MICS-EAGLE project, which aims, in part, to build the capacity of decision-makers and empower them to use data to inform policy-formulation and planning (ACER, 2023; UNICEF, 2018).

Data on Vulnerable Groups

Some EAP countries are collecting data for inclusion. For example, Vietnam already collects data through the national census on disadvantaged ethnic groups (UNDESA, 2017). Many countries have indicated that there is a scarcity of data on certain, vulnerable populations to target interventions. Bangladesh, Laos, Maldives, Mongolia, Pakistan, Tajikistan, and Uzbekistan have remarked on the lack of data on out of school children (OOSC). Children with disabilities were another population identified by Bhutan, Cambodia, Kyrgyz Republic, Laos, Maldives, Mongolia, Pakistan, Tajikistan, Timor-Leste, and Vietnam as in dire need of data collection. Gender equity was another topic discussed within some of the documents analyzed. However, many in-roads have been made towards collecting, analyzing, and using data to inform gender responsive solutions and, as such, challenges to gender equity through data collection and analysis were not as heavily emphasized as was expected.

In countries that are experiencing emergency situations or in host countries, there are robust conversations around data on education in emergencies (EiE). The NORRAG Missing Data Summit in 2021, which aims to address the issue of "counting the uncounted", and the INEE EiE Data and Evidence Summit, organized in 2019 by NORRAG, US Agency for International Development (USAID), and MEERS, convened to discuss key challenges and priority themes around data systems and data use in EiE (NORRAG, 2021; INEE, 2019). The key priorities that emerged align with the priorities identified through the interviews and survey in regards to education in emergencies. These priorities include the need for strengthening and integrating national and regional data systems, the need for funding to improve capacity, the lack of data coverage especially for non-primary school learners, and the lack of timely, accurate data (NORRAG, 2021; INEE, 2019)

5 Recommendations for Research

Applied research on data systems and data use in the EAP region is necessary to identify innovative, sustainable solutions. Based on the key challenges identified above, the following research questions would lend themselves to analytical research.

Capacity Building

Research Questions:

- What training/frameworks/guidelines need to be developed to ensure the technical capacity needed to strengthen and sustain data systems and data use at every level from the national to the subnational?
- Which actors need to be targeted for technical capacity building and which relevant experts need to be involved for maximum efficiency?

Coordination and Harmonization Across Levels and Sectors

Research Questions:

- How can national data systems and processes engage at the subnational level?
- How can MIS be simplified to facilitate use of data for policy and planning across sectors and across levels of government?
- Which subnational actors need to be incentivized to use data for planning?

Open Data

Research Questions:

- How can open data be made more accessible to educational actors and institutions to encourage evidence-based decision making?

Timely and Accurate Data

Research Questions:

- How to ensure timely data is accurate? What accountability and accuracy mechanisms can be used that ensure quality data is available to decision makers in a timely manner?

School-level and Student-level Data

Research Questions:

- What school-level and student-level data is most useful for localized policy and planning?
- What organizational structures and data processes are needed to improve school-level and student-level data?

School Mapping

Research Questions:

- How to connect current EMIS to GIS and other relevant data sources inside and outside the education sector?
- What are the barriers to accurate and useful school mapping?
- How can school mapping be more sensitive for massive changes to the environment, climate changes, and flows of refugees and displaced peoples?

Financing

Research Questions:

- How to finance data management and usage with limited resources?
- How to design sustainable data management projects?

Strengthening the Connection between Policy, Planning, & Data

Research Questions:

- How to establish uptake of quality, accurate, and timely data for policy and planning?
- How can Monitoring & Evaluation frameworks be improved to encourage completion of the “measure/act/re-measure” cycle?
- What kinds of incentives would make an education system more likely to use data?

Data on Vulnerable Groups

Research Questions:

- Counting the uncounted. Which vulnerable groups, in your country, should be counted, but are not being counted in data collection (refugees, students with disabilities, IDPs, minority groups)? What are the barriers to including these populations?
- How can EMIS provide customization and versatility to capture useful data of various vulnerable groups in different contexts while remaining user-friendly?

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