

## **Scenario 1: Scattered data collection for the Mid-Decade Review**

The Ministry of Basic Education, Science and Culture needs to compile data from all education departments and relevant ministries to produce statistics for the Mid-Decade Review. With these statistics, progress in Education 3000 is meant to be analysed and subsequent policies formulated to address and mitigate any shortcomings in the following 5 years. Some data is collected by different departments, and some by different ministries. A data mapping shows there are data gaps for all the education subsectors, such as in higher education, TVET, ECE and Non-formal education, etc.

The department in-charge of compiling the data faces many difficulties and can currently not produce information for all relevant SDG 4 indicators, due to:

- ECE data is collected by the Ministry of Infancy and collected from household surveys
- TVET is scattered across different education departments and other ministries,
- Lack of human resources and technical capacities to compile and analytically report information
- No education department has complete data on TVET, and the collected TVET data has different definitions varying by department
- The different data producers from the departments/ministries are unsure which data is relevant to be shared, and in what format and detail to share
- Due to uncertainties in data collaboration, one ministry in charge of ECE monitoring doesn't share any data

***1) Given the challenges, is the MBESC able to analyse the situation realistically and would they be able to create effective policy recommendations? If so, how?***

***2) What would you recommend to overcome each obstacle and improve the data collection system to produce all required indicators?***

## **Scenario 2: A flawed EMIS upgrade**

The Ministry of Education instructed its EMIS department to expand its system to collect more data on SDG 4. Following the instruction, it revised its annual school census questionnaire for

- basic education (school education)
- TVET
- higher education and;
- early childhood education.

After revising the questionnaire, the database structure and data collection tools have been updated. The orientation programmes on the new data collection tools were organized at the provincial and district levels. A data collection guideline for schools was prepared. The questionnaire is paper based, and the revision made the census questionnaire more complex and lengthier.

The following happened when implementing the new questionnaire:

- a) The school response rate was lower than previously
- b) Many missing data/information for relevant indicators
- c) The verification and validation process at district and provincial level took more time
- d) Delays in submitting data from the school to the district level
- e) Not all the collected data was processed

Eventually, the publication of the data has been delayed. It is even considered not to publish any data. The EMIS team calls for a meeting to discuss the situation.

- 1. What do you believe was a fundamental flaw in the design of the new questionnaire? What should have been done, or what should have been avoided doing?***
- 2. For a) to e), what led to each incident? How would you remedy the situation?***

### **Scenario 3: A holistic monitoring system for the country**

The Ministry of Education and Wellbeing has recently adapted SDG 4 to their national education planning. The MEW realized that there is a need of a better monitoring system to report on the participating stakeholders and required resources in the context of SDG 4. The MEW reviewed the existing education monitoring system for its data production capacities. The review showed that a holistic education monitoring system require more data from all subsectors beyond basic education, and beyond aspects of enrolment and attainments, such as on the level and type of learning outcomes (skills and knowledge). Also, household surveys have been found to contain relevant information.

The work is not straightforward as there are many data producers and many actors. To realise the new system a range of aspects need to be considered from:

- a) political commitments (national laws and institutional policies);
- b) the institutional mechanisms (roles and responsibilities);
- c) methodological processes (standards, definitions, concepts);
- d) technical capacity (human resources and technology) for data management; and
- e) finances.

***1. What challenges would you expect for each category a) to e) for the MEW to realise the system?***

***2. How would you approach the situation?***

#### **Scenario 4: The impact of 91-VIDOC on education statistics**

Due to a health pandemic caused by the alien virus 91-VIDOC, the national basic education schools were required suspend all activities for 8 months. During the time, education delivery was attempted through various Internet-based platforms.

When schools reopened, uncertainties arose whether all students were able to learn effectively during the time period, and all students returned to school.

The central government asked the statistical unit of the Ministry of Comprehensive Education to provide urgent statistics on enrollments and learning status in literacy and numeracy and other aspects. As this was an unprecedented situation, the statistical unit is not prepared to produce the required statistics due to incomplete or unavailable data at this moment in time.

The unit prepared a report but acknowledged the data gaps at this moment in time, leaving the data quality and statistical relevance questionable. The central government realizes that data collection in education needs to be improved to respond to future unforeseeable events.

- 1. Thinking about real life events, did or does your face a similar situation? How did you or would you respond to producing the required data?***
- 2. More specifically, what would you suggest making the education data system more resilient in such events?***

## **Scenario 5: Unaligned statistical productions across ministries**

The agenda Education 3000 was adopted by world governments. Several new education targets were established in addition to already existing targets. Each target of the agenda has several indicators which require different data from different education sectors. Annual statistics need to be created from the existing and new indicators to produce monitoring reports for education planning at the central level. The current education data is collected by different ministries in charge of each ECE, TVET, Basic Education, Higher Education, Non-Formal Education and Lifelong Learning. The country has a dedicated bureau of national statistics collecting data on socio-economic relevance.

The central government conducted an audit on the data quality for all its education related ministries. The audit found that many data are incomparable, and many statistics could not be produced. Common challenges are:

- Technical capacities in data processing are varied across the ministries
- Definitions and calculation methods vary by ministry, such as reference time, age groups, qualifications, etc.
- Indicator concepts have changed in alignment with international standards, but interpretation guidelines not provided
- Existing guidelines from the past were found not being followed
- Techniques for imputing missing data are unknown among most of the ministries
- Financial statistics commonly insufficient in detail
- Each ministry has its own database as well as fractured individual databases for different programmes

- 1. Given the missing uniform working methods and missing capacities, how can the data production system for the country be improved? Who would be a key player and how?***
- 2. What institutional mechanisms would be required to align all education data production?***