

# **Strengthening and Institutionalization of Education Management Information System (EMIS)**

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## **POLICY FOR EDUCATION MANAGEMENT INFORMATION SYSTEM (EMIS) FOR BALOCHISTAN PROVINCE**

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## INTRODUCTION:

### The importance of Education Management Information System

The Education Management Information System (EMIS) is an important part of the Education Department. This component is responsible for carrying out various activities resulting in the provision of reliable data. Often these activities include the following:

- collection of data
- data entry into a specially designed computer software
- report generation
- data management
- capacity building of education department officials on use of EMIS for planning and management

Improvement in the quality of services in the public education sector is entirely dependent on information-based decision making. Some of the major services integrally dependent on EMIS for the prospect of quality may include:

- planning and management of facilities
- increasing access (Establishment of new schools or expanding capacity of existing schools)
- human resource management
- financial allocations
- improving quality of education
- enhancing coordination between support sections of education department
- policy based research
- analysis
- monitoring and evaluation

In order to help education managers and planners realize the process of transformation of educational inputs into educational outputs, the success of EMIS is imperative for any educational system. In the absence of an EMIS the decisions will not be based on evidence and educational inputs are often unlikely to translate into educational outputs.

The decentralization of educational services has created more awareness in general public about educational inputs and has caused increased responsibility for governments to show practical results of educational inputs. Now, instead of showing only basic data about schools, enrolment and teachers, an EMIS is required to provide more sophisticated information which,

along with its use in planning and management, can also provide solid grounds for monitoring and evaluation.

Moreover, a rise in the number of private schools and Dini Maddaris, from the time when EMIS was first introduced in Pakistan, requires EMIS to gather and present educational data for both public and private sectors (including ALP and other NFE Centers) in order to keep education planner and managers informed about the overall trends of enrolment, inputs and outputs in both public and private sectors. Failure to record such information will result in underestimating the growth of non-governmental and private schools and religious centers. Also there will be no record of a large number of children studying in these private schools or religious centers.

EMIS envisions a value addition to the education system where key stakeholders including parents, learners and educators/teachers will have access to EMIS and contribute to the improvement of education services. Parents will have access to reliable information. Moreover, essential information about education, the standards for which will be set, will be available in all institutions and provincial and district level offices. Educators will be able to make much better choices in terms of in-services training opportunities available and the schools where empty posts against their qualification and grade are empty.

On the whole, the EMIS is envisioned to contribute to an improved education system where decision-making and seeking/proliferation of information takes less time and resources are saved due to efficient practices. An EMIS which is reliable and provides timely statistical reports can greatly support significant transparency, accountability, effectiveness and efficiency.

The EMIS along with “Complaint Management System – CMS” and “Real Time School Monitoring Initiative– RTSMI” will fall under the ambit of the “Performance Management System – PMS”; hosted at the “Performance Management Cell – PMC” at the Education Department Civil Secretariat Balochistan. This is in line with the concept and MoU signed for PMS.

#### - **Goals of this Policy Paper**

This policy document has been developed in line with the following goals for the development of a well-coordinated and sustainable Education Management Information System for Balochistan in line with the Balochistan Education Sector Plan and Balochistan Education Management Information System (BEMIS) Capacity Development Plan;

- i. An EMIS which enhances operational planning and management of schools and other support section of the education department;

- ii. An EMIS which promotes accountability by providing information to the general public and for research purposes;
- iii. An EMIS which provides valuable data for monitoring and evaluation purposes of the individual institutions (or clusters) and the District and Provincial Education Departments;

## Guiding Principles of this Policy Paper

- Improve coordination which facilitates planning, management and decision making at provincial, divisional, district and cluster levels and between support sections of the education department;
- Facilitate the general public in accessing relevant information related to inputs in education, practices and results or outcomes at all levels in a timely and precise manner;
- Facilitate robust flow of information from lowest to highest levels of the education department;
- Make the processes of the education department more efficient and introduce transparency and accountability for everyone involved in the use of public resources;
- Support planning and management of schools, staff and students and development of strategic plans for improving the quality of education;
- A need based EMIS with all decision makers contributing to information about the different types of data to be collected;
- Provision of simple, uniform/standardized and exact information for use at all sections and levels of the education department;
- The information provided by EMIS should flow both horizontally and vertically;
- In best case scenarios, the EMIS data to be collected, processed, analyzed and published at the cluster level;
- The EMIS should provide capacity development opportunities including designing of data collection forms/Change Forms, data collection planning and exercise, data entry, data validation and verification, taking pictures and GPS figures, analysis, printing, dissemination and use of the information at all levels in the education department;

- Have a mechanism which binds private and religious institutions to provide and/or update their information after stipulated periods of time;
- To foster a mechanism between national and provincial level EMIS, especially in the use of compatible technology for appropriate sharing of information;
- The EMIS should act as an online learning and sharing community for all staff of the education department and information and communication should flow smoothly via indirect/general messages to everyone and specific/direct messages to individuals via webmail services of DoE;

## **1. ACCESS TO INFORMATION FOR GENERAL PUBLIC**

All public and private educational institutions have a duty to provide correct information to the general public and a multitude of other interested groups or organizations. In order to fulfill this duty, the education department must ensure to make clear to public the most appropriate points of contact for specific types of information. The education department must be active in providing easy access for general public and other interested individuals or organizations by making available the types of information most commonly requested.

Types of information which the EMIS should make available for the parents and other interested parties may include:

### **a) Contact Points and Details of getting the required Information for the public:**

Education departments must make available to the public the following types of information:

- **Basic information and contact details of schools or other institutions**  
Well-maintained and regularly updated contact information of all government, semi-government and private institutions will be integral for catering to the information needs of general public. These details of information must be available in the provincial directorate of education and all district level offices. The information must also be available on the provincial EMIS website and also accessible through SMS for individual schools via schools codes as unique identification.
- **Operational data on schools or other institutions**  
Parents should also be given access to the operational information of schools. The changing nature of the operational information will make it difficult to

include such information in the basic school information. However, the education department may select other forms of communication provided that these are easily accessible by the general public.

- **A standardized database/ presentation of data**

Education Department must publish statistical yearbooks and include key statistical tables that maintain the accountability of the education department to the provincial government and to the general public. Nationally agreed indicators for performance of the public education sector must be considered and complied with.

**b) Information for use by researchers and other parties:**

The educational data for the use of researchers must be prepared using standard reports based on the national and provincial indicators. Some researchers may also request for the provision of data which is not based on the national and provincial indicators. In such cases, the education department must evaluate the importance of the research against the department resources required for its production and respond accordingly.

**c) Protection of Privacy and User Rights Management**

Education Department must ensure that appropriate procedures are in place to protect the personal information of students, parents and employees. Being the custodian of all the information contained in EMIS, the education department must clearly communicate in writing to the students, parents and employees that their personal information will be protected and will not be provided to any entity working outside the umbrella of the government. Information which may be considered private or protected must not be disclosed on the following grounds:

1. Interpretation
2. Protection of privacy/confidentiality/safety of students and employees
3. Protection of records which may be used in legal proceedings
4. Protection of research information

All institutions/individuals requiring information from EMIS must clearly state the following in writing for approval from competent authority as designated by the Secretary Secondary Education for provision of data.

1. Nature of information required
2. Objective of the study/research

3. Types of information required (except private or protected information)
4. Audience of the study/research, means and range of dissemination
5. Expected Benefits of the study/research
6. Provision of official letter supporting the request for required data or a legal undertaking that the data will be used only as described in the given statement

The Education Department must also technically empower the EMIS in protecting the private/protected information from its users in the system within the ambit of the department itself. Access to private/protected information must only rest with the provincial EMIS. At the district level, the Education Department must ensure that relevant district authorities have access to information related only to their respective districts. Any access to information about other districts will only be provided when the need and use are expressed in writing and a written approval is granted by a competent authority as designated by the Secretary Secondary Education.

## 2. AVAILABILITY OF RESOURCES TO THE EMIS STAFF

The Department of Education must ensure to recruit a sufficient number of EMIS **technical staff**<sup>1</sup> and provide them adequate resources for performing their duties. Along with providing the provincial department of education with data and statistics, the provincial EMIS office must also fulfill a range of other information needs of the department of education.

### a. Resources Required by the EMIS Staff:

The Department of Education must ensure that there are sufficient funds, human resource and equipment available to the EMIS staff to perform the following duties:

1. Design and plan school census (**every 3-4 years in addition to regular up-dation at cluster level through change forms once each cluster EMIS unit is established**) and surveys in line with the recommended standards;
2. Storage of data – both manual and **digitized storage mechanisms**;
3. Data Verification and Validation;
4. Data analysis
5. Compilation of statistical reports;
6. Data dissemination;
7. **Internet connections for all EMIS cells and Cluster level high schools**;

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<sup>1</sup> At the district level: IT officers at the DEO offices and cluster designated staff  
At the Provincial level: technical staff to be placed with the Performance Management Cell established



**b) Warehousing of Data:**

It is the responsibility of education department to store the data in a safe and accessible manner reflecting the current and past profiles of the education system. This must be managed according to defined standards. The stored data will include the following information about various aspects of all public and private institutions:

1. School Profiles Including Building and Infrastructural Detail
2. Personnel/HR Detail including **service records**
3. Student Profiles including change of school (**tracking**)
4. Financial and Procurement Records
5. Student Performance Details
6. Support Sections of the Education Department
7. Real Time School Monitoring data
8. **Biometric Attendance System**
9. **Complaint Management System**

### **3. DATA COLLECTION, VERIFICATION, ANALYSIS, UPDATING AND SHARING**

**a. The Process of Provision of Data on the Prescribed School Census Forms**

It is the combined duty of the heads of institutions (cluster supervisors in case of the public sector schools) and District Education Officers to supervise and verify the routine census and surveys and to complete the process. The Education Department must clearly communicate to the persons responsible for the provision and verification of the data that any manipulation or alteration in the required data will be considered **FRAUD and followed by appropriate disciplinary actions**. **The census shall be undertaken every 3-4 years; meanwhile the data will be updated through change forms on regular basis on a prescribed schedule by the department of education once all clusters are equipped with EMIS units. Each cluster must designate the following for the purpose of EMIS data provision/collection. Education department will ensure to provide task based incentives to members of data collection teams as per the service rules of department.**

**The data collection teams will comprise of the following members:**

<b>Role</b>	<b>Number</b>	<b>Government Designations</b>
<b>Cluster Supervisor</b>	<b>1</b>	<b>Principal of Cluster High School</b>
<b>Data Validators</b>	<b>2</b>	<b>Selected by Cluster Supervisor</b>
<b>Data Collectors</b>	<b>3</b>	<b>Selected by Cluster Supervisor</b>

**b. The Process of Provision of Data on the Prescribed Human Resource Forms**

It is the duty of the individual staff of the Education Department to provide information on the prescribed human resource form/ **change forms** to the best of their knowledge. The Education Department must clearly communicate to the persons responsible for the provision and verification of the HR data that any manipulation or alteration in the required data will be considered FRAUD **and followed by appropriate disciplinary actions**.

**c. Duties of Cluster Supervisors or Heads of Institutions and DEOs to Verify the Data**

All the data collection on the school census forms and for the purpose of any other routine surveys will be verified by the cluster supervisors/heads of institutions and the District Education Officers once the data collection process has been completed and before the submission of the data for entry purposes. The Education Department must clearly communicate to the persons responsible for the verification of the data that any manipulation or alteration in the required data will be considered FRAUD **and followed by appropriate disciplinary actions**. It is the duty of the persons responsible for verification of data to strictly adhere to the deadline dates for the submission of data for entry purpose.

**d. Feedback to Institutions on Analyzed Information**

Provision of relevant analysis to participating institutions after the data collection, entry and analysis processes for school census or other educational surveys have been completed will encourage ownership and foster support from these organizations for any such activities in the future.

**e. Sharing of Data and Analysis**

Only the Secretary of Education Department or a relevant authority designated as competent for the task by the Secretary of Education may approve the sharing or release of data. Only data approved for release by the mentioned authorities may be considered as official. However, the department may not hold back from sharing uncertified data informally. Such data may be shared as estimates.

**f. Updating the Information in EMIS**

The information in EMIS will be updated through the Change Forms. The frequency of updating the data will be determined by the Education Department and the relevant authorities responsible for updating information will be communicated the frequency for updating data through notification. The filled change forms after verification from authorities mentioned in section **3 b and c** above will be submitted for data entry.

**The EMIS systems human resource will be empowered to conduct student Admissions and Withdrawals through the EMIS. Moreover, teachers, upon transfer and retirement will be relieved for the District level EMIS.**

**g. Special Request for Inclusion of Indicators in School Census Forms**

The Education Department may accept requests from other departments under the umbrella of the government for inclusion of additional indicators/questions in the census or

survey forms if such data is not covered in the routine census. The Secretary Education will approve such requests, after clear specifications, justification and timeframe for the provision of data have been mutually agreed between departments. The final release of such data will be made after the approval of Secretary of Education Department or a relevant authority designated as competent for the task by the Secretary of Education in consultation with the Provincial EMIS team.

#### **4. RESPONSIBILITY OF PARENTS/GUARDIANS AND STUDENTS TO PROVIDE INFORMATION**

Parents/Guardians and students have a **responsibility** to provide information during the school census or any other educational survey exercise. The required information may include names of students and parents, CNIC numbers of parents, language spoken at home, religion, number of in school and out of school siblings of students and information regarding the health of children/disability

#### **5. SETTING STANDARDS – Formation of the Information Standards Committee**

The **Secretary Education** will have the power to determine standards for the EMIS policy. The Education Minister will form an information standards committee comprising at least 8 members from relevant departments. Detailed ToRs of the Information Standard Committee will be developed by the authority designated by the Minister Education including some or all of the following functions:

- i. Conduct consultation on EMIS standards between all stakeholders
- ii. Evaluate the standards suggested by stakeholders
- iii. Provide recommendation to Minister about official adoption of EMIS standards
- iv. Devise the EMIS communication strategy
- v. Facilitate and guide research in EMIS
- vi. Devise strategies to make the EMIS standards known

##### **a. Types of standards**

Following are some standards for the information standards committee to work on and develop further. More standards may also be determined during the deliberations:

1. **Unique Codes** for schools are required for generating customized data about enrolment, teachers and school facilities.
2. **Use of Uniform Terms for Terminologies** used in Educational Planning and Management

3. **Standardization of Published Information** for presenting the data as more friendly to the end user.
4. **Standardization of Data Coding, Data file layout, Network Protocols and Platforms of Systems** for making data integration and data transfer possible.
5. **Data Archiving** requires ensuring that the history of the system is available for future use.
6. **Standardization of statistical tables** used by the education department for planning, management, monitoring and evaluation.
7. **Minimum Quality Standards** need to be ensured for achieving an acceptable level for data quality.
8. **Standard Governing**
  - a. Timeliness of Data
  - b. Quality of Data
  - c. **School Census and HR and Student Profile Indicators**
  - d. Efficiency
  - e. Backing up of data
  - f. Storage of Data
  - g. System Updation
  - h. Privacy Protection

Note: The SoPs for this policy may be prepared and notified as an immediate follow up action once the EMIS Policy is notified by the Secretary of Education, Government of Balochistan. The organogram, job descriptions and qualifications for the staff required for EMIS at provincial level may become part of the SoPs.