

Terms of Reference

Annual School Census 2011-12 Data management solutions/Service provider

Background:

1. The Reform Support Unit (RSU) of the Department of Education and Literacy of the Government of Sindh coordinates the implementation of the Sindh Education Reform Program (SERP) by providing policy inputs and implementation-capacity building support for the improvement of education in terms of access and quality of education.
2. Effective policy-making calls for scientific analysis of regular and reliable data. The education sector is especially sensitive, being vital human resource development. Reliable data is needed to evaluate and guide policy for optimal formulation and implementation, by providing and updating key education indicators, ranging from enrollment, number of schools, their proximity, their functional status, local population, number of local private schools, economic status, missing facilities, the number, qualifications, and presence of teachers, etc. Such data are required to be updated regularly, so as to effectively inform policymakers of the dynamics and progress of the education sector.
3. The Annual School Census (ASC) is the core source of data on the education sector of Sindh, and covers all public schools in the province. This data is centrally preserved at the Sindh Education Management Information System (SEMIS) division RSU.
4. In order to achieve the objective of provision of regular and reliable data, the RSU has the mandate of improving upon the scope, methodology, and implementation of the ASC by providing technical inputs, training of concerned personnel, and scientifically validating the collected data etc.
5. To increase the accuracy of Annual School Census 2011-12 data entry, RSU is interested in hiring the services of firms that have expertise in large volume of data entry operations.. For this particular purpose, the RSU is keen to invite proposals from reputable organizations having proven relevant experience in data entry systems.

Objective:

- To Develop comprehensive data entry solution that provide:
 - Compatible Database design with existing ASC databases.

- Well defined data entry protocols, documentation and data entry system to ensure accuracy in entered data.
- Coordinate and manage Annual School Census 2011-12 questionnaire retrieval from districts and reports recovery status.
- Built user interface to query data.
- Standard report generation modules.
- Management of ASC 2011-12 Forms.

Scope of services:

1. The primary aim of the this exercise is to enter the data of ASC with procedures which are in line with international standards and agreed by ED/RSU with 100% accuracy and develop SQL database and reporting module based on the important indicators based on the data collected through ASC 2011-12
2. The key task of the firm/agency/organization will be to:
 - a. The firm will develop core data entry software. Data entry system is proposed to be designed for supporting the double data entry to ensure the maximum accuracy in data entry.
 - b. develop the database in SQL server with all entry modules in .Net platform (C# / VB.Net)
 - c. Report module to produce about 100 dynamic reports, details of reports will be provided the based on the indicators of ASC.
 - d. At the beginning of the exercise, only following of information will be provided:
 - i. List of school in Sindh;
 - ii. The ASC questionnaires; and
 - iii. The ASC administration guidelines and activity plan.
3. Free Search
4. Collection and Data Entry Status Reports: Data collection is scheduled to complete in 5 weeks and it must be completed two week after the data collection scheduled time. To monitor the progress in this respect firm will generate daily status reports. These reports should be part of data entry system.
5. The data entry will cover approximately 52,000 schools (6 pages proforma) in all 23 districts. Firm will place a coordinator in every district to support DO SEMIS for:
 - a. Forms management
 - b. Scrutinizing the received forms
 - c. Track of forms received, returned for correction, form dispatched to firm for data entry, and remaining forms.

6. Consistency across the variables in census form must be ensured. The Firms will develop data consistency check Program (SEMIS wing will provide the inconsistency check plan). Consistency checks and reports will be part of the data entry system.
7. The firm will be responsible for data cleaning, generate reports of out layered values in the data and take corrective measures in consultation with RSU-SEMIS.
8. The firm will be responsible to develop reporting modules, create Criteria based reporting module for the consumption of users. Users are typically Sindh Education Department, Reform Support Unit, District Education officers including EDOs, DOEs and ADOEs. Firm will be responsible for development of reports formats and create the software to generate these reports.
9. School refers to the primary, middle, elementary and secondary schools in Sindh province. The data entry will cover all types, status, and levels of schools including functional and closed, schools.
10. All schools should be identified by their Sindh Education Management Information System (SEMIS) ID. All databases constructed should also be at the school level. The SEMIS ID is the main identifier for the school and protections need to be put in place during data entry to ensure that these data are error free to the extent possible.
11. The data entry software should be prepared, with automated controls for out-of-range values, and submitted to the RSU for review and approval before data entry is initiated.
12. Double entry will take place for 2 districts data, done by two separate teams with independent supervision. The two data sets will then be merged and compared for discrepancies. If discrepancies are found, the hard copy of the filled in questionnaire will be checked to determine the correct entry. No missing values should be found unless intentionally left missing.
13. As soon as the data is entered, cleaned, and finalized, it will be submitted to RSU SEMIS team. The data will be submitted in clearly defined batches. Data will not be submitted and revised on a streaming basis.
14. In addition to analyses undertaken by the firm, criteria for specific verification techniques will be provided by the SEMIS team at the RSU.
15. The firm should submit the data entry plan, a completion report, consistency report, data cleaning report, and all data (cleaned and formatted, along with a data dictionary).
16. In addition, the firm will hold discussions with SEMIS team and a subset of the DO-SEMIS officers (district EMIS representatives) to review the 2011/12 Census data entry operations.
17. As a result of consultations with head teachers as well as EMIS officers and central team, a brief note/report will be prepared reviewing the methodology and tools used and provide recommendations for future improvements to census administration.

Composition and Qualification of the Validation Team

1. The firm should be a registered agency/organization operating under regulations of Government of Pakistan.
2. The firm/agency should be financially sound having good reputation with sound track record of successful implementation of assignments with the government or private partners.
3. The data entry team should possess relevant expertise and skills to carry out validation exercise.
4. The criteria of selection of the of the firm shall include
 - i) Experience of the firm with details of the relevant projects.
 - ii) Strength of Financial Statement
 - iii) CVs with Qualification of the staff relevant.
 - iv) Relevant testimonials provided by the firm
 - v) Soundness and applicability of the proposal

Time Period and level of effort

1. The data entry exercise will be conducted immediately after two weeks of data collection activity started in districts. The activity will commence on January 2, 2011 or shortly thereafter. By February 15, 2011, all data will be collected for the full sample. By March 15, 2011, all the data will be entered and cleaned and submitted. The draft report will be submitted by April 15, 2011 and the report will be finalized by April 30, 2011. These dates are expected to be strictly adhered to.
2. Duration of assignment is one and half (45 days), up to and including final report submission, whereby the firm/agency should carry out validation exercise and submit findings with analysis within given time period.
3. The company should introduce its methodology, activities of the validation plan/line of action with relevant set of validating instruments. The company has to provide the details of the resources to be utilized. The RSU reserves the right to reject the instruments or re-negotiate with the firm about the modification on the set of instruments/methodology

4. The assignment will be consulted and coordinated under Reform Support Unit, Department of Education & Literacy, Government of Sindh and the Deputy Programme Manager (Sindh-EMIS) will be the key focal person for management coordination.
5. Payment schedule will be agreed to in advance of contract finalization, and will include a share upon contract signing, and lump sums after major deliverable milestones.

Deliverables

1. The selected firm shall provide the following deliverables during the course of the implementation of the assignment in a timely manner. All deliverables have to be authorized and approved by the RSU under the direct supervision of Deputy Programme Manager (SEMIS).
2. The list of deliverables includes but not limited to the following:
 - i) Complete Database Software with all coding and documents
 - (1) Database in SQL Server
 - (2) Data Management Reports (Taluka and District wise form distributed, received, data entry, return for correction etc)
 - (3) Entry module (Dual Data Entry Module OR Single Data Entry Module???)
[Output/Evidence: Data Entry Software and User manual]
 - ii) Developed Reporting module (100 dynamic reports)
[Output/Evidence: (1) List of repots, (2) User manual, (3) Reports i.e. Provincial Profile, District Profile, Taluka Profile, UC Profile and School Profiles and reports on agreed indicators]
 - iii) Complete data Entry of ASC-2011-12
[Output/Evidence: Raw Data]
 - iv) Forms / standards developed
[Output/Evidence: Report]
 - v) Data entry template and coding scheme
[Output/Evidence: (1) Entity Relationship Diagram, (2) Print Screen of data entry module, (3) code book etc]
 - vi) Field data collection report; field quality control report
[Output/Evidence: daily/weekly reporting as per agreed format]
 - vii) Complete data, cleaned and formatted, accompanied by a detailed codebook.
[Output/Evidence: (1) inconsistency check reports, (2) Data Cleaning Reports, (3) final code book etc]
 - viii) Reporting module in SQL Server for checking variance based on all variables highlighted in the ASC form.

- [Output/Evidence: Reporting module installed and generate required reports]
- ix) Scanned copies of all filled-in questionnaires
- [Output/Evidence: Soft copy of images (JPG format) with standard nomenclature]
- x) Brief note/report reviewing the methodology and tools used and provide recommendations for future improvements to ASC administration
- [Output/Evidence: Report on future improvements]
- xi) Report summarizing discussions with SEMIS team and a subset of the DO-SEMIS officers (district EMIS representatives) to review the 2011-12 ASC administration.
- [Output/Evidence: Meeting Minutes / Action points]
3. Brief report/note on census administration and recommendations for future administration.
- [Output/Evidence: Recommendations for future administration report]
4. Deployment of Software at RSU
5. Final User Manual
6. Trained RSU Personnel
7. Provide Service for Maintenance (for 6 Months)
8. Handed over all Annual School Census Proformas
- a. ASC Profomas archived properly in box folders (Taluka wise sorted order)
 - b. Each Box folder proper labeled
 - c. Index Sheet
 - d. etc
9. Any other included by Deputy Programme Manager SEMIS

More Information

1. Interested firms can seek more information for developing the proposal for the assignment from:
Mr. Ghulam Nabi
Deputy Programme Manager (Sindh-EMIS)
Reform Support Unit
Education & Literacy Department
Government of Sindh
N.J.V School Building M.A. Jinnah Road Karachi
Phone: 021-32775772
Fax: 021-32775740
Email: ghulamnabi@consultant.com
2. In case of any dispute and issues the interpretation of RSU will be followed for clarifying issues.

3. Separate proposals (Methodology and Finance) should be submitted in different sealed envelopes
4. The RSU reserves the right to cancel the validation exercise if proposals from firms don't meet its criteria.
5. All completed questionnaires, computer files, and TPV materials will be the property of RSU.