Policy Brief #49

Pakistan’s Government Data Portals in the age of Open Data

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1. Introduction

Education plays a significant role in producing skilled and educated manpower that leads the economy towards the path of sustainable economic development (Memon 2007). Like many other developing countries, the situation of education sector in Pakistan is not very encouraging – primarily due to ineffective and ill-planning and limited availability of consistent and reliable data in the sector.

This policy brief aims to conduct a comparative analysis of the National and Provincial Education Management Information Systems (EMIS) mainly through the lens of open data concepts – availability of data, quality of the data available, no copyright restrictions and no license fees for data is vital for monitoring and evaluation of government decisions in education and other social sectors (Maude 2012). It also ranks the five EMIS - one national and four provincial – upon the basis of their scores in the evaluation criteria for web portals.

2. Acknowledgment of Salience of Data in Pakistan

Notwithstanding the current situation of government managed education data portals, the Education Policy 2009 did acknowledge that “good planning also requires data and indicators of performance”. According to National Educational Policy 2009, along with collection and propagation of education statistics of public sector institutions, the scope/coverage of data collection would be extended to private educational institutions as well as non-formal schools all over Pakistan (Govt of Pakistan 2009). However, the basic ingredient for data collection pursuits, i.e. optimal, effective and sufficient budget allocation has had not been given the due concern and attention by the federal as well as provincial governments.

Access to more accurate and timely information may lead to better decision-making by all the stakeholders. Data extracted through the annual census of schools conducted by the provinces is at present available online. These data are generally known as EMIS (Education Management Information Systems).

3. Data Portals

In the context of education, data is a synonym for information. Data can be words, numbers, or observations that are collected systematically usually for a specific purpose (Literacy and Numeracy Secretariat 2008). Educational data include (but are not limited to):

- Student achievement data like teachers’ evaluation of students’ in class, and their large-scale assessment results.
- Other student data like student mobility, attendance data, and homework.
- Contextual data which is not under the direct control of teacher (such as students’ linguistic background, gender or community socio-economic factors) but are important to consider when planning for enhance students’ learning outcomes.

The federal and provincial governments have education departments, which have sub-departments or separate agencies for collecting and collating data from all schools within their jurisdictions. Most of these departments have been collecting data for a number of years for
compiling annual census of school reports. The census included only the government schools with a national census of private schools conducted only twice (in 2000 and 2005), therefore, the latest data on private schools is a dire need in the context of formulation of a new education policy.

The organizations and their relevant data pages (or portals) are as follows:

1. Academy for Education Planning and Management (AEPAM), Government of Pakistan
2. Balochistan Education Management Information System (BEMIS)
3. Khyber Pakhtunkhwa Elementary and Secondary Education (KPESE) department
4. Punjab Education Support Programme (PERSP)
5. Sindh Education Management Information System (SEMIS)

4. Analysis of Existing Data Portals

4.1. Methodology

In order to rate/rank the five aforementioned government run data portals, diverse range of parameters (Management Centre International Limited) – that are internationally recognized have been used. Those parameters have been classified into four broad clusters, i.e. website, data, open data (data freely available to use) and open data level. Website cluster includes first impression, content, search, knowledge of users licence conditions, browser compatibility (if it works on all type of browsers), user satisfaction; data includes geographical coverage, latest data, non-discrimination (neutrality in terms of a dichotomy), availability of past data sets; open data includes accessibility, complete, non-proprietary and last is the open data level.

Scoring is based on the definitions (Open Government Data) of indicators. Indicators which are most nearer to the actual definition are scored relatively high and vice versa. Scoring of the five education data portals, according to the parameters/indicators, has been used in the following graph.
4.2. Results/Rankings
The data portals have been ranked according to their respective scores in the parameters of four clusters. Based on their scores, the rankings of five data portals in the four clusters can be seen in the figure below:
Balochistan's online data portal is the lowest performer, having almost zero score in open data and open data level. It also scored zero in case of indicators of data cluster except in case of geographical coverage and segregation of data. This anomaly owes to the fact that BEMIS has district profiles but the data availability in those files is just minimal. Even the Portal is not defined as there are two BEMIS data portals are currently live, creating a huge misunderstanding.

On the other hand, the Punjab and Sindh education department's data portals performed relatively better than the other three data portals – specifically on account of website cluster. PERSP performs slightly better than SEMIS in the website and open data level clusters and SEMIS performs slightly better than PERSP in the data cluster.

KPESE comes at the third rank after PERSP and SEMIS. AEPAM’s portal performed low in website clusters. It is lacking in visual, graphic and designing aids that catch the attention of users and enhance the users’ satisfaction. AEPAM comes at the fourth rank for it performs lesser than PERSP, SEMIS and KPESE on account of all the four clusters.
5. Policy Recommendations

Following recommendations can be made in pursuance of the preceding score-based analysis and rankings:

1. All the data portals except PERSP performed the lowest with regard to open data level. The data is mostly available in haphazard form. Data should be available in structured and open/non-proprietary form.
2. Web addresses should be annexed to the data indicators (where needed) according to internationally accepted standards and recommendations so that the data users can access them by just clicking on them.
3. The data should be hyperlinked to other data sources to add corroborative and comparative features to the data.
4. The AEPAM’s portal should be made more user-friendly with added features to utilize the data. Search Bar should be available.
5. Data for all the districts of Balochistan should be made available in the district profiles on BEMIS portal.
6. All the data should be freely available even the micro level data, e.g. union council and village level.
7. Proper definitions and descriptions should be given about all the Indicators available online on the portal.
6. References

2. Literacy and Numeracy Secretariat, Ontario Ministry of Education, Using Data to Improve Student Achievement (2008), viewed 29 Jan 2016