
PART 5 EDUCATION MANAGEMENT INFORMATION SYSTEM (EMIS)

23. EDUCATION MANAGEMENT INFORMATION SYSTEM IN TANZANIA

23.1 Objective of Component C: EMIS

The objective of Component C is to develop a routine data collection framework on primary education. In order to meet this objective, there are four stages as follows.⁵⁷

- 1) Review of the existing education data collection systems
- 2) Analysis of potential data users' needs
- 3) Formulation of routine data collection framework
- 4) Development and consolidation of the framework

23.2 Review of the Existing Information Management Systems

23.2.1 EMIS Unit (Department of Policy and Planning, MOEC)

Data Collection

Statistics Unit in DPP of MOEC was one of the functions dealing with educational statistics until recent and however it has already been merged into EMIS Unit and their activities has also been taken over by EMIS Unit.

Former Statistics Unit had annually collected data of pre-primary, primary, secondary schools and teachers colleges by using four kinds of forms called TSA (pre-primary), TSM (primary), TSS (secondary) and TVU (teacher college).⁵⁸ EMIS Unit is continuing such data collection using the same formats. The coverage area is Tanzania mainland, which consists of 119 Local Government Authorities (LGAs) in 21 regions. The LGAs in Zanzibar are not covered.

TSA and TSM filled in by head teachers are sent to a Ward Education Coordinator (WEC). WEC makes a summary and send it to a District Education Officer (DEO). DEO makes a council summary and send it to EMIS Unit in DPP, MOEC. LGAs also send copies of the council summary to Regional Education Officers. TSS and TVU forms filled in by school staff are sent to EMIS Unit of DPP. The copies are sent to other departments in MOEC and other government organizations as well.

The problem is that it takes more time than planned to collect all data due to inadequate transportation and communication infrastructure and unreliable postage service. As for data collection at the secondary school level, private schools are reluctant to submit TSS forms since the forms require details of teacher information. MOEC officers need to repeatedly remind private secondary schools to submit them.

In addition to the data of pre-primary, primary, secondary schools and teachers colleges, EMIS Unit collected data once in 2000 as a teacher audit (teacher head counts) and

⁵⁷ Six stages are mentioned in the Scope of Work, which were agreed by MOEC and JICA on October 9, 2002.

⁵⁸ Before 2003, data collection used to be carried out twice a year, in March and September for administrative and statistics use, respectively.

covered only primary schools in the mainland of Tanzania.⁵⁹ EMIS Unit developed nine forms to collect data. For this audit, they were designed to collect detailed information on the teaching and non-teaching staff, such as the qualification, teacher service commission number, check number, birth date, experience, graduations, etc, and some data on students. The forms were directly delivered to schools from the LGA. They were also directly returned to the LGA from schools after being filled in.

EMIS Unit has been functioning as a documentation center and archives to store school mapping reports, other education researches and documents in its database. School level data reports that the former Statistics Unit printed in 2000 were also partly input in the database.

Data Management

TSA (pre-primary), TSM (primary), TSS (secondary) and TVU (teacher college)

After receiving all forms, 6 staff in EMIS Unit manually input all data into the computer program written with COBOL language in 1994. The program is operated on Microsoft DOS. The unit currently possesses four desktop computers, two lap top computers, one printer, one scanner, one CD library for data saving and one server computer. All are connected to a network that only unit members can access to.

It is difficult to input and retrieve data with the program for data management. Although EMIS Unit (Statistics Unit) has been collecting education data for about 20 years, the database has not been accumulatively established. Some data have been separately saved in several computers and some others were lost. In addition, the programmer who made the program in 1994 is the only one who can fix the program when it breaks down.

In 1999 and 2000, the data input program was written with Microsoft Visual Basic to scan the filled-in forms and optically read the data. The scanned data were saved into the CD library. The World Bank funded this activity with technical local consultants. The system functioned so efficiently that the unit published the school level data for all LGAs and regions in 2000. However, technical transfer was not properly done. After the program broke down in 2001, this optical read system has not been used.

Teacher head counts

In 2000, data on more than 120,000 teaching staff and 11,000 schools were obtained and manually input into the database, which took a considerable amount of time and energy of the unit members.

Data Dissemination and Sharing

EMIS Unit annually publishes two education statistics books, namely *Basic Statistics in Education* (BSE) national version and regional version. National version was initiated in 1985 and regional version in 1991. In addition, the unit irregularly publishes the Analysis of BSE. Data in the computer program written with COBOL are the sources

⁵⁹ Statistics Unit is located in EMIS Unit.

for these publications.

Each year, 2500 copies of the latest BSE national version and 1500 copies of BSE regional version are printed. Out of the 2500 BSE national version copies, 1000 copies are distributed to all secondary schools and other 1500 are to ministries, regions, LGAs and other governmental organizations. The 1500 copies of BSE regional version are distributed only to ministries, LGAs, regions, and other organizations.

BSE includes the data on the result of national examinations and financial indicators which are from National Examination Council of Tanzania (NECTA) and the Ministry of Finance. The data are provided to the unit on a hard copy and there is no database linkage among the unit (MOEC), NECTA, and other governmental organizations.

About 40 computers in MOEC are networked with the server computer of EMIS unit. The database of EMIS Unit is accessible on the network. Users with the networked computer can operate Microsoft Access to look into the education data. The database was partly shared with Civil Service Department for administrative matters.

Building up computer skills of key officers in MOEC was conducted. However, those individuals have not often used the database of EMIS. This is because they have no access to computers or because the necessary software was not installed after the training.

Donor Supports for EMIS Unit

In 1999 and 2000, the World Bank supported the former Statistics Unit by supplying hardware, software and technical assistants (local consultants). This activity was financed by the Human Resource Development Project (HRDP) funded by the World Bank. HRDP started in 1998 and until end in 2005. HRDP has set up a fund for human-resource development activities and a project office within MOEC administers the fund.

The EC delegation supported MOEC to develop a document center and EMIS in 1999 and 2000. The project had several phases and the first phase was completed in 2000, which was to procure equipment for the documentation center and the EMIS system at the center. Most of the equipment that EMIS unit currently possesses was supplied in the first phase of the said project.

The implementation of the project was stopped after the first phase. This was because EC (EU) delegation decided to finance PEDP implementation through pool funding, the direction of the project became unclear and the further support for the project was not requested by MOEC.⁶¹

⁶⁰ Statistics Unit is located in EMIS Unit.

⁶¹ After EU stopped direct funding to EMIS, MOEC did take action of preparing *EMIS Development Plan* which has been approved and is ready for donor support.

23.2.2 School Reports and Children Census (Department of Primary Education, MOEC)

Monthly, quarterly and annual school reports are submitted by pre-primary and primary schools to WECs and LGAs. The monthly report includes basic statistical data. After receiving all school reports, WEC makes a statistical summary of the ward, compiles all reports and sends them to the LGA. Following is a sample of the contents of the school report.

- | | |
|--------------------------------------|--------------------------------|
| 1) Number of students | 6) Subject progress |
| 2) Teacher information | (Implementation of Syllabus) |
| 3) Situation of school buildings | 7) School health and feeding |
| 4) Implementation of adult education | 8) Children with disabilities |
| 5) Implementation of UPE | 9) School visitors |
| | 10) Events |
| | 11) Comments from head teacher |

All LGAs are supposed to make annual council education reports and send them to regional education officers, Department of Primary Education in MOEC and PO-RALG. The contents of the annual council education reports are mainly based on the school reports and other statistical data collected with TSA and TSM. Since there is no standardized format for the council report, the contents of the council reports differ from LGA to LGA. In addition, the reports are not systematically stored at the central level.

Although the school reporting system is found very effective and important to monitor the situations surrounding schools, making statistically detailed reports on a monthly and quarterly basis seems a heavy burden on head teachers.

At ward and council offices, there are a lot of those reports piled on desks and shelves without being utilized. It is important to see how information and data could be efficiently managed, analyzed, and be given back to school. It is also important to look into what kinds of capacity in terms of data collection, management and dissemination, officers already have and what they do not.

In addition to the school reports, each primary school is supposed to conduct Children Census every October and submit the result to the LGA. Schools are required to provide the numbers of out-of-school children which are disaggregated by gender and age (0-13 years old) and the number of out-of-school children with disabilities in the ward. Like school reports, filled-in forms for the census are gathered at the council level but there is no established process to keep the data in an organized way at the council level and even at the national level. Moreover, to duplicate the efforts, Unit of Adult Education under Chief Education Officer in MOEC occasionally collects data about out-of-school children.

23.2.3 Education Information Management of Other Governmental Organizations

Teacher Service Commission

The Teacher Service Commission (TSC) is the organization which issues certificates

and TSC numbers to teaching staff and non-teaching staff, and monitors the status of those staff. It is at present an independent organization which receives budget from the government for its operation. TSC will be placed under the Public Service Commission.

TSC has as many as 626 staff over the country. It has three TSC secretaries in each region and LGA. TSC quarterly collects information about teaching and non-teaching staff from the TSC secretaries in regions and LGAs. TSC at the central level publishes an annual report and submits it to MOEC and other ministries. Main information they have filed for the staff are listed below.

- | | |
|--|----------------------------------|
| 1) No. of teachers in primary school
(with qualification and experience) | 7) Working station |
| 2) No. of teachers in secondary school
(with qualification and experience) | 8) Check Numbers |
| 3) No. of teachers in teachers colleges
(with qualification and experience) | 9) ED/PF Numbers |
| 4) No. of non-teaching staff (with
qualification and experience) | 10) TSC Numbers |
| 5) No. of teachers on leave with reasons | 11) Professional quality |
| 6) Name of teachers/ non-teaching staff | 12) Date of birth |
| | 13) Last promotion |
| | 14) Date of the first employment |
| | 15) Place of domicile |

TSC files all detailed information about teaching staff and non-teaching staff. However, a database system for the information has not yet been established.

Civil Service Department, President's Office

Civil Service Department (CSD)⁶² is positioned under the President's Office and concerned with all civil servants that are counted as many as 270,000 in Tanzania. Civil servants who deal with education form the largest group, counting more than half of the total number. CSD has a database system which is closely linked with the Ministry of Finance. Optical fibers are used for the linkage and the Ministry of Finance uses the database for the disbursement of salaries for all civil servants.

In 1998, CSD collected all civil servant data by using the Personnel Data Form and saved them into the database which is made with Oracle 8 and Lawson on Windows NT. Currently, the software has been updated and the data have been revalidated regularly. Information CSD has is related to that of TSC and Department of Administration and Personnel (DAP) in MOEC. However, there are neither linkages nor data sharing between CSD and TSC. CSD and DAP have cooperated to partly share the data but there is no networked linkage between them. The data taken with the form are listed below.

- | | |
|----------------|---------------------------------|
| 1) Vote | 13) Date confirmed into service |
| 2) Sub-vote | 14) Date of last promotion |
| 3) LGA of work | 15) Salary scale |
| 4) Pay station | 16) Basic monthly salary |

⁶² Civil Service Department changed its name in 2003 and is now Public Service Management.

- | | |
|------------------------------------|---------------------------------------|
| 5) Name of teacher | 17) Central govt. funding level |
| 6) Check No. | 18) Citizenship |
| 7) Open Registry Personal File No. | 19) Married |
| 8) TSC No. | 20) No. of children |
| 9) Designation and grade | 21) LGA of domicile |
| 10) Duty post | 22) Highest academic level |
| 11) Date of birth | 23) Professional certification |
| 12) Date of first appointment | 24) Revision for submitting this form |

A problem mentioned by staff in CSD is the difficulty in updating a large amount of personnel data with limited human resources and equipment. In addition, maintenance of the software and hardware has been costly.

National School Health Program (NSHP, Ministry of Health: MOH)

The National School Health Program (NSHP) is aimed at improving situations of health and education among pre-primary and primary school pupils and secondary school students. The objectives are to ensure that all the schools benefit from proper health education, have healthy and safe school environment, and have established health and caring services.

Reproductive and child health section in MOH and Department of Primary Education have formed the NSHP central unit and set the NSHP steering committee which comprises of Prime Minister's Office; the Ministry of Community Development, Gender Affairs and Children; PO-RALG; the Ministry of Labor and Youth; donors; NGOs and others. At regional and council levels, regional and council school health coordinators are the main actors to implement NSHP. Moreover, a teacher is appointed as a school health coordinator at each school.

Monitoring school health is one of the components of the program. There are two kinds of monitoring forms developed for school and LGA use. The school health form for school is filled in by school and sent to the LGA once a year (between November and December). The council school health coordinator makes a summary of the school health status by using the school health form for LGA. There are a number of questions on the forms and the main contents are shown below.

- | | |
|---|---|
| 1) Health activities at school | 7) Treatment center's contribution to school health |
| 2) Enrollment | 8) Community participation in school health |
| 3) Number of teachers and health activities | 9) Plans and coordination of school health |
| 4) Diseases and health among pupils | |
| 5) School environment and basic services | |
| 6) Important school health services | |

This monitoring activity was started in 2002, but the system to process data and information obtained through this activity has not been established yet.

PEDP Quarterly Report (PO-RALG)

PO-RALG requires all primary schools to quarterly report the progress of PEDP

implementation. LGAs summarize the quarterly reports from primary schools and submit them to the regional governments and the education unit in PO-RALG. PO-RALG produces a PEDP annual report in May. Followings are the main data PO-RALG requires primary schools to

- | | |
|-----------------------------------|---|
| 1) Teachers by sex and grade | 5) Teacher houses |
| 2) Pupils by sex and class grades | 6) Toilets |
| 3) Classrooms | 7) Water tanks |
| 4) Desks | 8) Performance in the implementation of the program |

Tanzania Socio-Economic Database (TSED, National Bureau of Statistics: NBS)

TSED is a national database and a national tool for disseminating social economic data. The advantage of TSED is that it is a tool not only to manage database but also to visually present the data with digital maps of LGAs and wards. The database, which is in Microsoft Access, can be easily operated with the original TSED software that was developed in India.

TSED covers many sectors such as health, education, agriculture, population, nutrition, financial sector and so on. The indicators and data TSED has are more than 400. Those indicators and data are basically provided by 39 governmental and private organizations at the central level. Those organizations include the Ministries in Zanzibar. EMIS Unit of MOEC is one of the data providers and regularly provides educational data to NBS for TSED.

TSED is linked to the national web site (<http://www.tanzania.go.tz/>), which was developed by President's Office, Planning and Privatization. The national web site has some statistics and one can proceed into the TSED web site when more detailed socio-economic data are necessary.

One problem TSED has faced is a slow data collection. The focal point at each data providing organization is so busy that it takes longer than planned to receive data and update the database.

Socio Economic Database and Local Government Monitoring and Evaluation (PO-RALG)

Socio Economic Database (SED) is designed for the local government authority⁶³ to collect, process, and report data and information.

In line with the Local Government Reform Program, PO-RALG initially developed Local Government Monitoring and Evaluation (LGM&E) system with which a local government could monitor and evaluate its improvement in social service delivery and socio economic status. A total of 36 socio economic indicators were selected out of 500 indicators. Six questionnaires were made to collect the 36 indicators. The software for LGM&E was developed. It can generate questionnaires and produce the reports for information dissemination at the village, ward and council levels.

⁶³ Local government authority means a district in most cases.

LGM&E was piloted in three LGAs in 2000. The original plan was to expand the system over the country by 2002. However, due to a lack of funds, the expansion has yet to be realized. It is also reported that the roll over in the three LGAs was not successfully done due to inadequate LGA ownership and technical difficulties.

SED has taken on board the whole of LGM&E and thus has become a more comprehensive and LGA-oriented system. About 200 practical and realistic indicators determined by heads of departments and planning officers from six LGAs were added during the construction of SED. Moreover, electronic linkages among LGAs, regions, and the nation much characterize the SED system. The system of SED will be piloted in several LGAs to try out its two-way flow of data. Actual data collection and management is supposed to be tested in 2005.

Poverty Monitoring in Poverty Reduction Strategy (Vice President's Office)

Poverty monitoring has been taking place in the framework of PRSP. The poverty monitoring secretariat has selected 60 indicators to monitor the poverty status in Tanzania. The 60 indicators are grouped into 12 sections. Human capability (education) is one of the 12 sections and has 10 indicators. These 10 indicators are basically provided to the poverty monitoring unit in Vice President's Office by MOEC at regular intervals.

23.3 User Analysis

Education is a national concern. Many organizations and staff are involved in education in order to provide services throughout the country. For example, there are 270, 000 civil servants in Tanzania. More than 140,000 out of them are working for education. There are as many as 13,600 education institutions, including primary schools, secondary schools, colleges and universities in Tanzania. Four millions of pupils, students and others are enrolled at those institutions.

Education data are essential for all organizations, institutions and individuals concerned with education. At the national level, MOEC is the most frequent data users. PO-RALG is also an education data user for PEDP implementation. Vice President's Office has a division for poverty eradication. The division has a technical working group which regularly monitors education data and indicators. National Bureau of Statistics, which is the agency under President's Office Planning and Privatization (PO-PP), receives education data from MOEC and collects education data when necessary. Moreover, the number of users greatly increases as decentralization proceeds in education.

Some organizations and institutions are data providers as well as data users, since they generate, compile and process the data as well as they use the data for themselves. For instance, MOEC provides the data to other users and use the data on its own as well. Likewise, regional government, LGA, schools and others could be the data providers and users.

23.3.1 Purpose of Users

All data users use the data for various purposes. Those purposes could be grouped into three: policy making, planning, monitoring and evaluation; administration and management; and accountability.

Policy Making, Planning and Monitoring and Evaluation

A number of data users use education data for making policies and plans in Tanzania. Departments in MOEC, NBS, PO-RALG and other ministries are main users with this purpose.

Many kinds of data are required for making policies and plans. Basic statistics, such as numbers of students, teachers, teaching and learning materials, constructions, and facilities are commonly used, and data are also processed to generate education indicators/information. Projections are often made based on the basic statistics as well.

Administration and Management

Education data are needed to ensure effective operation of education systems at the national, regional, council and school levels. Data needs for administration and management vary according to the levels. For example, at the national level the detailed data about teachers, such as their names, registration numbers, qualifications, experiences and marital status are important to budget salaries and entitlements. At the school level on the other hand, the number of registered pupils, attendance of pupils and teachers, contributions from communities, school activities and so on need to be recorded for administration and management purposes.

Accountability

Ministries and other governmental organizations are responsible for the operation of education in Tanzania. They need to explain how education benefits Tanzanian citizens and how the budget for the whole education system has been spent.

For this purpose, ministries and other governmental organizations could use data and information showing coverage of education services, policies in curriculum, performances of students, the number of educated/trained work force and so on. In order to be financially accountable, financial indicators, such as budget allocation, utilizations of the budget, unit cost per student and others, could be shown.

In Tanzania, MOEC, PO-RALG, PO-PP and NBS are the main users with this purpose. Those organizations regularly produce statistical publications and status reports. Although it is not done well currently, the regional government, LGA and schools need to be accountable for how their systems have been working. Accountability is imperative in order to get community involved in the improvement in education at the village level.

23.3.2 How Do They Get Data?

Education data are basically generated at the school level. MOEC has been functioning as a main hub to collect data and distribute raw and processed data to others. PO-RALG is, likewise, functioning to collect data from LGA and disseminate them in PEDP reports. Main ways for users to get the data are as follows.

From *Basic Statistics in Education* (BSE)

EMIS Unit of MOEC once a year publishes *Basic Statistics in Education* (BSE) national version and regional version. BSE covers basic education data and indicators. BSE national version has been published since 1985 and its regional version has been published since 1991. BSE has been used widely at the national and regional levels. In total, 2,500 copies of BSE national version and 1,500 copies of BSE regional version are printed and distributed to ministries, other governmental organizations, regional government, secondary schools, donors, and others.

From EMIS Unit, Department of Policy and Planning, MOEC

Some ministries and other governmental organizations communicate with EMIS Unit of MOEC to get data. National Bureau of Statistics, President's Office, Planning and Privatization and Vice President's Office, Poverty Eradication Division contact EMIS Unit of MOEC directly since they need specific and the latest education data for their reporting and publications. Other departments of MOEC also get data directly from EMIS Unit as well.

From LGAs and Regions

As MOEC collects raw data from LGAs or regions, other organizations, including PO-RALG, Teacher Service Commission (TSC) and President's Office Civil Service Department (PO-CSD) collect specific data and information from LGAs and regions. When regional governments need data for their planning and administration purposes, they request LGAs to submit data in certain forms. Research institutions also occasionally visit LGAs to collect data.

From Other Government Publications/Reports

NBS and PO-PP regularly publish statistics reports. PO-PP annually publishes the *Economic Survey*, which comprehensively covers a number of sectors in Tanzania. In particular, for education, the latest data of nursery school education, primary education, secondary education, teacher education, inspection and technical and higher education are shown. NBS has also several statistical publications that show education data as well. NBS collects education data regarding literacy and educational background of adults for Population Census and Household Budget Survey; however, it does not have a routine data collection system for education. Therefore, NBS largely depends on the education data provided by MOEC for its publications.

PO-RALG annually prepares a PEDP implementation report which explains the status of education and PEDP implementation in LGAs. Data in the report are collected from

schools through LGAs using its own channels. TSC produces a teacher statistics report annually to submit it to ministries and other government organizations.

23.3.3 Problems Commonly Mentioned by Current Users

In general, availability of education data is still low though there are several data collection and management systems in Tanzania. Following points are commonly mentioned by many users.

Availability Is Still Low

A number of users still have difficulties in obtaining processed education data. BSE is not fully known to many users and not available even when they know it.

It is also found that data and information flow one way from school but never flow the other way around. Schools are providing data so many times in so many ways but very rarely provided education data and information back. There are some cases found where LGAs do not have BSE or other education statistics.

Quality of Data Is Low

Data are not disaggregated. Some data are available but not disaggregated by gender, age, grade or LGA. In the case of numbers of teachers, data could be disaggregated by gender, age, grade, experience, qualification, LGA and others, but there are no statistical booklets covering this detailed information.

Data are not the latest. In the case of BSE, data are collected in March and April each year but those data come out on BSE in September of the following year.⁶⁴ Although the staff of EMIS Unit have been trying to process the data for BSE, some data are submitted very late from schools, forms are wrongly filled in by some schools and it is a lengthy process to retrieve input data from the database program and to present the data in the BSE format. In addition, delay in receiving funds to print BSE attributes to the delayed delivery of BSE as well.

Validity of data is low. Some data users point out that data do not realistically fluctuate from year to year even with the same source. Some point out that there occasionally appear considerable gaps between data from one source and those from another although the data are meant for the same type, area and year.

Data to Indicate Equality of Education Are Not Adequate

Data to show quantity of education, such as numbers of students, teachers, constructions and facilities, are shown, but data and indicators to indicate the quality of education are missed out on BSE and other publications. Although it is a positive trend that results of Primary School Leaving Examination now appear in BSE, other qualitative data and indicators in the context of Tanzania's education need to be identified and taken on statistical publications.

⁶⁴ Publication of BSE has been greatly improved since 2003. Data collected in March 2003 were tabulated and published in October of the same year.

In addition to data and indicators on quality of education, data depicting the environment of students and teachers are not available. For improvement on education planning, it is important to take students' and teachers' views into consideration. Although some school mapping reports partly cover those issues, views and ideas of the very important actors have been neglected in the routine data collection system.

Financial Indicators Are Not Adequate

Except for the *Public Expenditure Review* (PER) for the education sector and some parts of BSE, financial indicators on education are not available. PER is not a routine review and financial indicators in BSE are not adequate.

23.3.4 Causality Analysis

Too Much Collected to Be Processed

As for EMIS Unit of MOEC, the volume of collected data with data forms like TSM, TSA, TSS and TVU is too large to process into its computer system. EMIS Unit manually inputs the primary education data (TSM) submitted by LGAs. The unit also manually inputs the data of 1,745 secondary schools (in 2005) and those of teachers colleges.

Limited Capacity of Data Providers and Collectors

Some data forms are wrongly filled in by schools. This is because the data forms are not user-friendly. The forms are slightly revised from time to time but proper orientations or explanations on how to fill in the forms are not adequately given to the end data providers such as head teachers and school staff. In addition, capacity of those who summarize and compile data is not sufficient and they do not have proper facilities and equipment to process and keep those data.

Political or Other Pressure

In some cases data that are not reflecting real situations are intentionally provided for some reasons. For example, a larger number of pupils is reported to the LGA and PO-RALG in order to receive more capitation grants. In order to avoid being blamed for slow implementation of school development, school situation about facilities and constructions could be reported wrongly. Transparency, openness and sharing of information at the school and council levels will help the situation to be improved.

Different Organizations Independently Collect Data without Linkages

There are four governmental organizations, namely MOEC, PO-RALG, TSC and MOH, which routinely collect education data from schools. Two more organizations, PO-CSD and NBS, collect education data at irregular intervals. Moreover, four departments in MOEC routinely or irregularly collect education data.

Lack of Finance and Inadequate Logistical Plan for Publication

The number of printed materials and publications has been limited by MOEC due to a shortage of funds. The printed copies of BSE are not properly delivered in the country. All regions, LGAs and secondary schools are supposed to receive a copy of BSE national version, but the delivery of BSE was not properly done by MOEC.

Not Much Utilized

Through the research, it has been observed that education data are not utilized much except for some organizations. It seems that schools are required to mechanically fill in a number of data forms that are brought to the MOEC through wards, LGAs and regions. Although schools, wards, LGAs and regions send the data up to MOEC, they do not properly process the data and utilize them at their levels. The top-down structure could be one reason why the data are not utilized by the real actors (users) in the field.

23.4 Formulation of Routine Data Collection Framework

23.4.1 Process of formulating data collection framework

The review of the existing education data collection systems and analysis of potential data users' needs was conducted at the beginning of this study. It was then clarified that there would be a necessity of establishing a clear vision and policy for Education Management Information System (EMIS). In order to implement a comprehensive and effective education data collection framework, the EMIS Unit of MOEC, with assistance of the JICA Consultant Team, drafted the *EMIS Development Plan 2004-2007* in 2003. The *EMIS Development Plan* was designed as an action plan towards a nation-wide computerized data collection system (refer to Appendix 18).

The drafted *EMIS Development Plan* paper has been scrutinized by MOEC staff including the member of IA-TWG, and has been circulated to the stakeholders for their comments. The latest version of the *EMIS Development Plan* was updated in November 2004 specifying the linkage with other development plan such as Secondary Education Development Plan (SEDP) and Adult and Non-formal Education Development Plan.

The BEDC (Basic Education Development Committee) approved the *EMIS Development Plan* at its meeting on 21 April 2005.

23.4.2 Framework of EMIS Development Plan

The *EMIS Development Plan* consists of the following components:-

Capacity Building and Institutionalization

This component will provide staff at the ministerial, regional, council and school levels with training on how to utilize EMIS and strengthen the institutional capability to operate the system in their routine business. The stakeholders will be provided with orientation about EMIS and its development. Regional and council officers will be trained on how to operate the systems and analyze the data and information. Heads of schools/colleges will be trained on how to properly fill in data forms and analyze data on their own schools, to know the status and produce council education reports.

Development of Systems Software

This component will design and develop the education statistics software which will facilitate MOEC, all relevant organizations in primary education and stakeholders to access the education data. The software will be developed to greatly facilitate operators in each LGA and region to process, report and disseminate the data and information.

Hardware Procurement and Installation

This component will provide MOEC, region and council offices with computer hardware and networking facilities to enable them to process and share the education data. A minimum package of two computers and a printer are planned to be installed in each LGA and region.

Program Management and Monitoring

This component will facilitate MOEC to monitor and implement the *EMIS Development Plan* timely and effectively. EMIS Unit in MOEC will support all activities at all levels and carefully monitor the progress of the implementation and quality of data at short intervals.

According to the *EMIS Development Plan*, EMIS will be implemented in three phases with 30 LGAs in the first and second phases respectively and the remaining LGAs in the third phase. The total project cost is estimated at about US\$4.7 million.

23.4.3 Comments on EMIS Development Plan

The data collection framework proposed in the *EMIS Development Plan* has strengths in comparison with the existing framework.

The existing computerized data collection system is centralized at MOEC. The datasheets are initiated by schools and sent directly to MOEC for processing. Schools need to put massive effort to fill in the datasheet while they can rarely receive feedback available for their micro-planning at school level. LGA and regional offices have difficulty to utilize the educational data for their effective monitoring and planning. The *EMIS Development Plan* is expected to overcome this problem. The proposed EMIS system will be largely decentralized and the database will be shared by different level of educational entities for their use. It will enable not only MOEC but also regional and council offices as well as schools to analyze and monitor the educational statistics more accurately for their school-mapping and micro-planning.

The *EMIS Development Plan* also envisages that EMIS involves not only installation of a hardware and application software to process education data but also change of job process to collect and share such education data, and thus capacity building of staff at different level of educational entities is emphasized. In this regard, the proposed tasks described in the *EMIS Development Plan* would sufficiently cover the necessary elements for successful implementation.

On the other hand, there were some issues which need to be improved and they were

commented upon by the JICA Consultant Team. First, there is a need to detail further how the action plan will be implemented and by whom. The *EMIS Development Plan* is a comprehensive managerial strategy covering all sub-sectors from pre-primary to adult education as well as hierarchical structures from MOEC to schools. The impact on implementation of the *EMIS Development Plan* is expected to be huge. It specifies 11 activities for capacity building, 9 activities for software development, 5 activities for hardware installation, and 7 activities for monitoring and management. However, it is not clearly specified in the *EMIS Development Plan* how much manpower will be required to accomplish each activity and who will actually undertake them. It may be difficult for each staff who is involved in implementing EMIS to understand their roles. It may also be difficult to estimate the appropriate manpower and there is a fear that some activities may not be accomplished due to underestimated work volume in the planning stages.

The first version of the *EMIS Development Plan* was drafted in late 2003, and it was the plan for 2004-2007. However, it took long time to scrutinize and revise the plan and it has not yet approved by BEDC. Due to rapid innovation of information and communication technology, specification of computer and networking equipment as well as cost may be fluctuated largely. There is a need to review the specification and cost elements specified in the *EMIS Development Plan Annex* and revise them if necessary before it is finally approved.

23.5 Development and Consolidation of EMIS

23.5.1 Relationship between school mapping and micro-planning and EMIS

As described above, the proposed EMIS is a comprehensive data collection framework involving all levels of educational entities. The existing computerized data collection system is largely centralized at MOEC, and thus LGA and regional offices as well as schools are in need to familiarize themselves with the data collection and analysis process as well as the use of computer systems. It should be noted that successful implementation of EMIS will be achieved through not only installation of computer hardware and software, but also capacity building of staff who will be involved in the data collection process. School mapping and micro-planning provided staff at many LGA and regional offices as well as schools with an opportunity to participate in the data collection and analysis process for the first time, and there are many similarities between the proposed EMIS data collection framework and the school mapping and micro-planning in terms of process of collecting, sharing and utilizing education data. Thus, it is expected that their experience through school mapping and micro-planning will facilitate them to transit to the proposed EMIS data collection framework.

23.5.2 Dissemination of education data

The *EMIS Development Plan* stipulates that EMIS will be a “user/dissemination oriented” system, and “comprehensive to cover various needs, corresponding with the government framework”. The existing application software used by MOEC is only to process and store the education data within MOEC, and there is a great need to share such data with other education entities such as regional and council offices, other ministries and stakeholders. In the existing data collection framework, data dissemination from MOEC is mostly limited to paper based media such as annually

published Basic Statistics on Education (BSE).

The most effective way to share the educational information beyond MOEC is now to establish a website which contains such information. The *EMIS Development Plan* also indicates that establishing website will enable MOEC to disseminate the education data processed by the proposed EMIS.

The existing web-based information disseminated by MOEC is only available at Tanzanian Government website at <http://www.tanzania.go.tz/>, and the information has not been updated for a long time. It is thus desirable that MOEC should establish its own website and update the information timely to share with stakeholders.

In response to the needs of MOEC, the JICA Consultant Team assisted MOEC to develop a proposed website contents plan in the course of EMIS assistance. A one-week workshop was organized by EMIS Unit and attended by most departments under MOEC. The JICA Consultant Team, in collaboration with EMIS Unit and a specialist from President Office, facilitated the workshop and shared some know-how to develop and maintain the website suitable for education ministry. It was emphasized that in many sub-Saharan African countries education ministries established website in the last few years but some of them are not updated, so the envisaged website should be not only comprehensive enough to provide users with wide range of information related to education and culture, but also sustainable for MOEC to update the contents timely.

At the end of the workshop, participants agreed to develop the website whose contents would be divided into six categories as follows:-

About MOEC

This category will describe about the establishment of educational entities including MOEC, regional and council offices as well as schools and other educational institutions.

Education and Culture in Tanzania

This category will provide information regarding history and the current situation of education and culture in Tanzania mainland. It is envisaged that the statistics to be processed by the proposed EMIS will be found in this category.

Policy and Activities

This category will provide information regarding the action plans and activities implemented by MOEC, including the PEDP.

Contacts

This category will be used as a directory and list contact address and numbers of all educational entities, including MOEC, regional and council offices, schools and educational institutions.

Resources

This category will enable regional and council offices as well as schools to download useful resources from MOEC website such as datasheet forms which will be used by the proposed EMIS. Though the Internet coverage is not yet country-wide, it will be more convenient to organizations which have access to Internet because they do not have to rely on postal services which sometimes take a lot of time.

News

This category will disseminate the information for the people who seek opportunities in MOEC, for example, tender notice, vacancy notice and scholarship announcement.

It was agreed in the workshop that the prototype website will be developed by EMIS Unit of MOEC in early 2005. After review within MOEC and approval by Government, the contents will be disclosed to the public as the officer MOEC website.

24. RECOMMENDATIONS ON EMIS DEVELOPMENT

24.1 Recommendation for Establishing EMIS in Tanzania

It is important to **have clear visions and policies for EMIS**. Without clear policies for EMIS in Tanzania, it is not possible to develop any system with an implementation plan. It needs to be discussed among people who are in charge of EMIS in MOEC, technical staff and stakeholders. In particular, a good feed-back and dissemination system needs to be carefully considered as one of the main policies for the development of EMIS.

To **form a task team for EMIS development** is recommended. To establish and manage EMIS requires a lengthy process and time. Without a solid task team consisting of MOEC staff, PO-RALG staff, local and international technical assistants, it would be very difficult to set up a comprehensive EMIS in Tanzania.

Some Technical Issues

It is important to **choose a computer database program (relational database program, such as SQL, Oracle, Microsoft Access, etc.) and customize it for MOEC EMIS use**. It is not efficient to have various and mutually incompatible database programs in MOEC. The size of the database will be increased when data collection is continuously conducted and various stakeholders require updated and detailed information. Considering the expansion of the database in the future and various linkages for data sharing, it is essential for MOEC to have one comprehensive database program.

It is recommended that **MOEC design and develop the network system and clarify possible linkages with other organizations and institutions**. A database becomes more valuable when it is accessed and utilized by more stakeholders. The database could be accessed on the web pages to retrieve data. When the database is linked with civil service, PO-RALG and other governmental organizations, administration and finance would become more efficient and transparent. Much possibility of data linking and sharing should be reasonably explored. It should be recognized, however, that a security system for the network also be strengthened for more linkage and openness.

It is recommended to **revise existing data collection forms according to the needs of all stakeholders**. Although EMIS Unit already has the solid data collection forms, the forms should be revised when usages of the database are clarified.

It is important to **examine the feasibility for LGAs to input and manage their own database related to the new database program in the center**. It has been an overwhelming task to manually input all data on all schools and teachers at the central level. Moreover, in line with the Local Government Reform Program PO-RALG has promoted, capacity and initiative of local governments will be strengthened. It makes sense that LGA collect, manage, and disseminate data using the computer program for themselves and send required data to the regional or central government.

24.2 Recommendation for Easy Access to Education Data for Any User

Following are main ideas suggested by users at the various levels.

More Frequent and Reliable Publications

Education data users need to get more solid, frequent and detailed statistics booklets. As indicated in the previous section, users need more specific, updated and detailed education data and information.

Newsletter/Information Booklets

Printing education newsletters disseminating education data and information is much easier and cheaper than publishing statistical booklets. MOEC has been quarterly issuing a newsletter on ESDP (Education Sector Development Programme). It would not be difficult to put education data on the newsletters or to issue a special edition for basic education data with indication that detailed data and information can be obtained from BSE or other publications.

Newspapers

Using newspapers to disseminate education data over the country is less costly compared to other ways. Anyone who is interested in education data can purchase a newspaper at a reasonable price. The size of a newspaper is large enough to cover as many contents as BSE national version currently has. One recent example is the periodic advertisement appearing in a national newspaper on the PEDP budget allocation for all the LGAs in mainland Tanzania.

Resource Centers

It is important to establish an education resource center where any education data, information and reports are available to anyone. The education resource center is to succeed the aims of the documentation center, which was supported by EC delegation in 2000. The national resource center could be located in MOEC or even other places where access is easy. It is meaningful to have a physical resource point for education so that it becomes much clearer for anybody where to go and get education data. The regional government office and the council office could be resource centers for their areas as well.

Schools

It is suggested that schools be the place to disseminate the school education data for transparency and awareness raising for people in the community. Any information and data forms indicating schools status could be posted on the wall at school corridors or classrooms for sharing.

Popular Versions of Statistics Books

Statistics books in general look too complex and technical for ordinary people to understand. For example, it is pointed out that while BSE comprehensively covers the

education data, its tables with a lot of numbers look difficult. In order for ordinary people to be aware of situations of education, it is a good idea to develop a popular version of statistic booklets. In the popular version, tables and descriptions of educational situations should be written in *Kiswahili* to be reader-friendly. A popular version of PRSP was in fact published in Tanzania and it has been considered successful.

Internet

Many education data users agree that the Internet will largely promote easy access to education data. With the Internet, education data will become available any time to anybody with less user costs. It is in fact not difficult or costly to put education data on web pages but it could be costly and difficult to manage those pages and the system with high security.

Intranet or Direct Linkages of Computers

Intranet and direct linkages of computers will be useful to connect a limited number of computers in some governmental organizations. MOEC, PO-RALG, PO-PP, PO-CSD, TSC, NBS and other ministries can share an education database with high data transmission. Moreover, in the case of intranet and direct linkages, security for the database system could be managed more easily.

24.3 Recommendation for Human Resource Mobilization

The *EMIS Development Plan* focuses not only hardware and software installation, but also capacity building of staff of MOEC and other educational entities. A preparation of more elaborated and effective plan on human resource allocation will facilitate human resource mobilization so as to materialize EMIS.

The EMIS Unit of MOEC has only about ten staff at the moment. It is anticipated that in the course of capacity building, there will be a need to input more manpower as trainers for all regional and council offices. Otherwise, it is proposed to facilitate private companies to undertake such training courses so that the MOEC staff will not be overloaded.

It is proposed that "Help Desk" be created upon EMIS installation to respond to the queries from EMIS users (mainly regional and council offices). The Help Desk staff will be responsible for providing feedback to the EMIS users and at the same time for proposing within the ministry further system development and training courses based on the problems they would hear from end-users.

PART 6 WAY FOWARD

25. WHAT TANZANIAN GOVERNMENT SHOULD DO

The school mapping and micro-planning exercise in Tanzania, which has evolved since 1997, completes its first-stage mission (to school map all Local Government Authorities on mainland) when SM/MP2 ends in May 2005. The exercise will enter the second stage where three new goals should guide it:

- Goal 1** Sustain the exercise as part of *routine duty*;
- Goal 2** Give training on *school planning* to the remaining 27 Local Government Authorities (LGAs); and
- Goal 3** Promote *school-based management* combined with *community participation*.

The ways to achieve the three goals will be explained below in some detail.

25.1 Reorganize the System to Be Sustainable (Including EMIS)

The whole system should be rearranged so that the school mapping and micro-planning exercise could be sustained as a routine activity at the school, ward and council levels. The two-point essence of the reorganization is:

- 1) Separate school mapping from micro-planning; and
- 2) Revise TSM1 and 2 to replace the school mapping part.

The school mapping part can be separated from the micro-planning part and foregone altogether if the current school statistics system is renovated. Specifically, the TSM1 and 2 forms should be revised to accommodate the school mapping purposes at least partially and the LGAs should do data entry and processing on their own.⁶⁵ This will substantially reduce the time and financial cost on the part of schools and LGAs, thus making the exercise more easily internalized.

During the school mapping exercise, much of the effort devoted into the exercise is to collect some additional data mainly qualitative data which were not found in TSM 1 and 2, and to avoid a duplication of the routine process that TSM1 and 2 go through at each school as already explained on page 13.⁶⁶ However, this effort will be over, if TSM 1 and 2 forms are revised to replace the school mapping part. Revised TSM 1 and 2 will additionally provide necessary data for micro-planning. Moreover, reforming TSM 1 and 2 also enables school mapping sustainable.

Revising TSM1 and 2

⁶⁵ As a matter of fact, TSA1 and TSA2 forms (TSM-equivalent for pre-primary education) also need revision for school planning purposes. SM/MP2 has focused only on primary education and did not touch upon TSA1 and 2. However, as far as a primary school houses primary and pre-primary education under the same roof, its school planning should do with pre-primary education, too. Revising TSA1 and 2 forms is a task to be done in parallel to the TSM revision

⁶⁶ School mapping questionnaire Part 1 used in Term 2 explicitly asks schools to transcribe TSM1 and 2 for about half of the questions.

The current TSM1 and 2 forms (Tables 6.2 and 6.3), together with the proposed revisions (Tables 6.4 and 6.5), are shown at the end of this chapter. Three principles are applied to reorganize them:

- 1) Designate TSM1 for those basic data to be mainly used by the Ministry of Education and Culture and PO-RALG. The data, however, should be shared with LGAs.
- 2) Designate TSM2 for those data useful mainly for the LGAs.
- 3) To ensure consistency with the past data, retain as many indicators as appropriate in the new forms. However, those data which are too detailed or redundant are omitted while new useful indicators are added from the questionnaire Part 1 used in SM/MP2.

The current forms have following shortcomings: not well organized; some important questions missing; some questions too detailed; some questions outdated or no longer relevant; and lacking qualitative indicators. As they are, they cannot be used as suitable and meaningful inputs to school planning.

In contrast, the new, proposed forms are streamlined to meet both national statistical purposes and school planning requirements as much as possible. By differentiating and designating the main users of the two new forms, we can rationalize the flow of educational data. Needless to say, the schools will use both forms for school planning purposes. In the new proposed forms, those indicators which are newly added or modified are shaded. As is turned out, questions in Parts 2 and 3 of the questionnaires (about teachers and about pupils) are basically excluded from the new forms so as to cover very basic data for statistical purposes only.⁶⁷

Upgrading the data collection-dissemination system

This reorganization calls for an upgraded school data collection-dissemination system (or EMIS) and a more decentralized way of its management.⁶⁸ With this improved data collection system combined with the school planning and council education planning parts, the entire system of “*school data collection, school planning and council education planning*” should look as illustrated in Figure 6.1.

The proposed modified system has following attributes:

- 1) The modified system starts from the new “School Data Form” in the lower left corner. It provides data both to school planning and to the new school data collection-dissemination system (or EMIS). No separate school mapping will be necessary.
- 2) LGA aggregate data will be given to schools as an input to school planning.
- 3) LGA aggregate data and school plans will be input to council education planning.
- 4) Council Education Plans and the *Basic Statistics in Education* (BSE) will form the basis for PEDP.

⁶⁷ There is a strong argument among participants, particularly DEOs, that those questions about teachers and pupils are indeed very useful for school planning and therefore should be included in the new TSM forms. The JICA Consultant Team thinks that such questions may be retained in new TSM2 if space allows.

⁶⁸ See Part 5 above of this report.

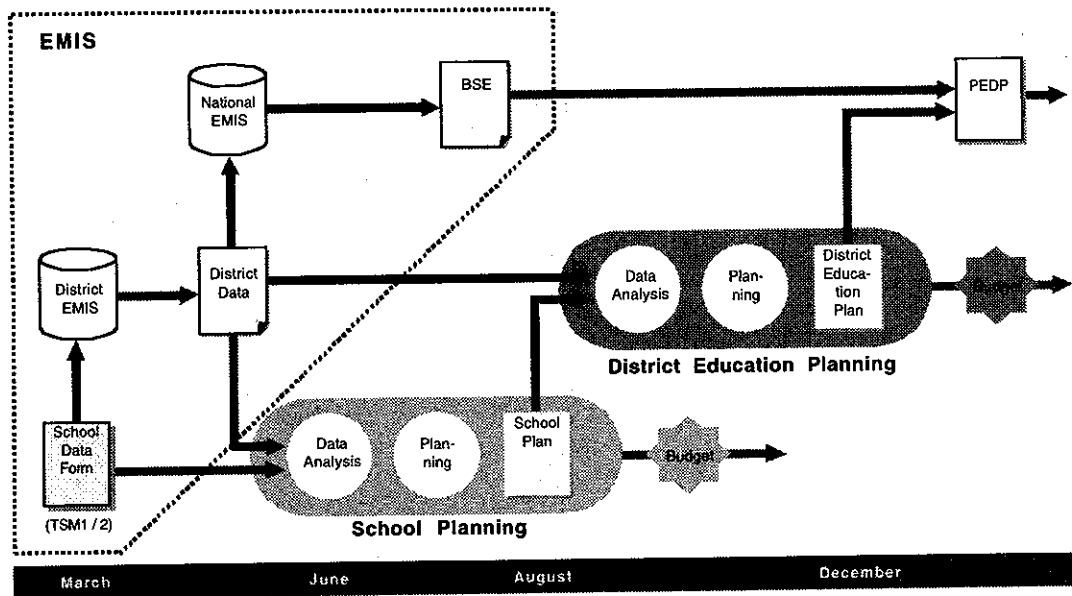


Figure 6.1 Modified System of School Data Collection, School Planning and Council Education Planning

25.2 Train the Remaining LGAs on School Planning

As the PEDP goes into its fourth year and experiences accumulate, it has increasingly become clear that *school planning* is the crucial element of the whole process, whether to better implement the PEDP or to improve school conditions. This is so because any good school management starts there and because school and community will interface there most effectively if guided properly. In view of this, it is highly regrettable that 27 LGAs have yet to receive formal training on the subject. The second stage should address this issue very seriously.

Training on school planning

One proposal is as follows:

- 1) Make the *School Planning Handbook* created by SM/MP2 a supplement to the ADEM Manual (revise as appropriate) for school committee training;
- 2) Extend the PO-RALG-sponsored school committee training of school committee by three to five days;
- 3) Spend the extended period specifically on school planning using the supplement; and
- 4) Mobilize and assign DEOs, DPLOs, WECs or school head teachers who participated in SM/MP2, to nearby LGAs as experienced trainers.

Training on council education planning

With regard to council education planning, a separate effort will be necessary because the PO-RALG training does not deal with council level activities. A possible arrangement will be:

- 1) MOEC should collaborate with PO-RALG to organize a training for council officers

- on council education planning in the LGAs which did not receive formal training yet;
- 2) Carefully coordinate the training with the school planning training not to coincide or not to separate too far;
 - 3) Use the *Council Education Planning Handbook* created by SM/MP2 as the textbook (revise as appropriate); and
 - 4) Mobilize and assign DEOs or DPLOs who participated in SM/MP2, to nearby LGAs as experienced trainers.

Benefit of standardized formats of school plans and council education plans

SM/MP2 developed a standard format for school plans and council education plans, respectively, as explained in the *Handbooks*. Of course, these formats were not created from scratch for SM/MP2 but rather an integration of various works done in the past. Benefits of such standardized formats cannot be exaggerated. First, they enable the inexperienced, first-time planner to make a plan without much complication. Second, they make it far easier to compare or summarize different plans. And third, they save an enormous amount of effort when to retrieve some specific information consistently from the plans. Considering these benefits, it is highly recommended for the Tanzanian Government to standardize the formats even nationally. The training proposed above should take this possibility into full consideration.

Who should be trained?

It is not so obvious who should receive the above training. Under SM/MP2, trainees at the ward and school levels were changed in Term 2 based on their general performances in Term 1: WEOs and VEOs were removed while village chairpersons and assistant head teachers were added.⁶⁹ Although performances generally improved as a result, some people remained critical about this rearrangement, particularly removal of WEOs and VEOs from trainees. The argument boils down to which to respect more, performance or official position. In retrospect, it is true that as far as school planning is concerned, it has a great deal to do with the local administrative setup at community. Therefore it is definitely necessary that some *ex officio* participants should be trained irrespective of their capability or performance. The decision made in Term 2 may have been a little short-sighted.

This episode illuminates the need to carefully select trainees. Since most trainees are attending *ex officio*, it would be recommended to study related institutions first regarding their functions and general level of personnel capacity.

Need to monitor and evaluate the school planning exercise

SM/MP2 experiences show the importance of monitoring and evaluation when the cascade system is used for training. The same applies to the school planning exercise to be conducted by school committees after the training. Council officers should visit and monitor wards and schools. Ward officials in turn should keep close eyes on

⁶⁹ WEO (Ward Executive Officer) and VEO (Village Executive Officer) are civil servants stationed in respective localities. Village chairperson, by contrast, is a politician or an indigenous community leader without any official status.

individual schools. Monitoring generally has two objectives: to supervise the progress of activities and to encourage people to go on.

SM/MP2 has developed its own forms to be filled in when visiting individual schools to monitor their performance and progress. Such monitoring sheets may be useful for those who monitor the school planning exercise to standardize the check points. However, such standard forms with general questions or viewpoints are only for the purpose of ensuring consistent monitoring. They are not suited to obtain a deep insight into the working of school planning. Free dialogue with participants, for instance, will lead us more effectively to useful findings. The monitoring sheets are just a door to such fruitful dialogue. Mechanical monitoring simply filling in the sheets would hardly reveal core issues to be addressed for improvement.

25.3 Strengthen School Management with Community Participation

One of the PEDP objectives is quickly to mend the infrastructure of primary education in response to the recent surge of new enrollments. In the first four years, the PEDP has been accomplishing this objective with steady strides. It should also be noted that the PEDP has effectively promoted community participation in educational development through the requirement of community contribution to receive a development grant.

On this solid basis of PEDP accomplishment, however, Tanzania should look into the future beyond the PEDP. What seems a very important issue in the coming decade or so is how to establish a system of school management workable in and appropriate for Tanzania. There would be no question that community participation, as understood correctly, should be a central notion to be promoted in that system. The experiences show that Tanzanian-style school-based management may be modeled after the PEDP procedure and the school mapping and micro-planning exercise.

Admittedly, most of Tanzania's primary schools are faced with a myriad of difficulties that tend to negate the very notion of school-based management. Many are located in peripheries, denied adequate means of transportation or communications. They are commonly understaffed, poorly built, ill-equipped, and short of funds. At the same time, every school is held on the strong command line from the council. In reality they have little to "manage" at their own discretion. Nonetheless, the experiences show that schools could perform better with their own initiative and strong community support. Schools should be given authority to manage school affairs more independently with whatever resources they have. Some core proposals will follow.

School-based management by the school committee. The school committee should take the lead to manage school. School head teacher should facilitate the committee's work.

School planning as a core function of the school committee. At the core of the school committee's work is school planning. The school plan should be revised or updated annually by the committee.

Community participation sought by the school committee. The school committee

should keep close linkage with village or mtaa leadership. A wider participation by community members should be sought through village or mtaa authority.

Allocate more budget for development grant and capitation grant using a formula. The current levels of the school grants initiated by the PEDP are inadequate. It should be such that every school could receive some amount of development grant each year. Set more budget aside for them even by reducing other items. How to allocate the budget among the schools is another important issue. The current practice with the development grant is that the limited amount of funds is allocated according to the “magnitude and urgency of needs.” An alternative and more reasonable way is applying a kind of formula-based allocation. It is strongly recommended to apply this method to school grant allocation similarly to the budget allocation among the LGAs.

Empowering WECs. WECs are the personnel who should play a key role in this new school management system, interconnecting schools in the ward and linking the schools to the LGA. Every WEC should be provided a bicycle and some operational funds.

Council officers assigned by area, not by specialty. For LGA to pay consistent attention to schools and work jointly with WECs, reassign council officers according to geographical areas.⁷⁰ For example, instead of District Academic Officer, create council officer in charge of Wards A, B and C (“Alternative Organization at Council (1)”, Figure 6.2). This is a proposal from the JICA Consultant Team. Some DEOs⁷¹, on the other hand, support a different organizational structure where WECs collectively report to four council officers in charge of respective specific fields (“Alternative Organization at Council (2)”, Figure 6.2). Table 6.1 summarizes strengths and weaknesses of the alternative organizational structures at council.

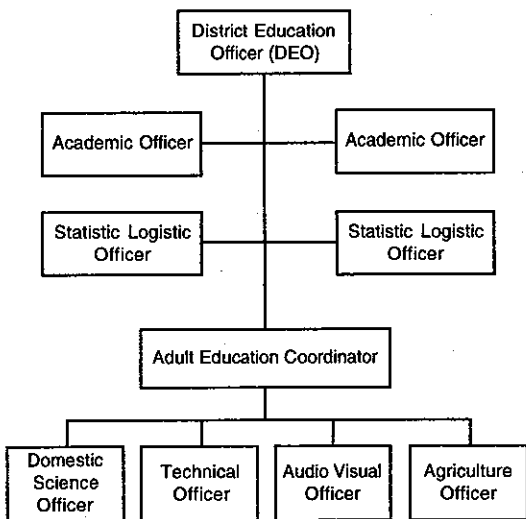
Table 6.1 Strengths and Weaknesses of Alternative Organization at Council

Organization	Strengths	Weaknesses
Area-wise Assignment	<ul style="list-style-type: none"> • Close and steady communications and collaboration among the council officer, WECs and school head teachers can motivate the schools and enabled them to perform better. 	<ul style="list-style-type: none"> • The proposed organizational structure may be radical for LGAs. • The position of Ward Coordinator can be conflict with DEO’s role.
New Specialty Assignment	<ul style="list-style-type: none"> • The structure can be more realistic than that of the are-wise assignment in practice. • It can keep specialty assignment as the current structure, at the same time it introduces area-wise assignment at the ward level. 	<ul style="list-style-type: none"> • It may be difficult to arrange specialty base assignment at the council level for area-wise assignment at the ward and school levels in practice.

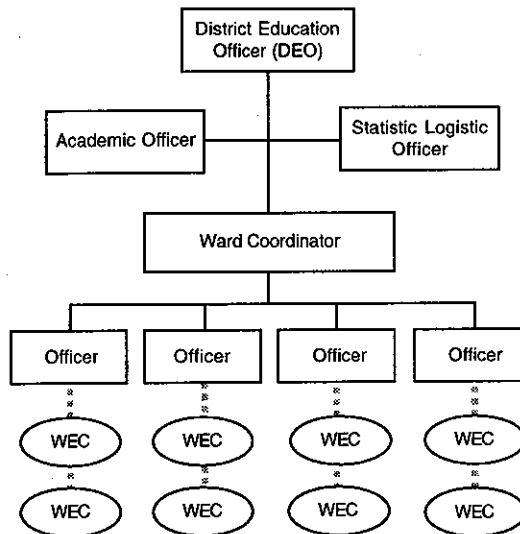
⁷⁰ This recommendation is based on one LGA’s actual experience. A District Council (covered by SM/MP2) has succeeded in considerably improving school performances in a few years. One reason for this remarkable achievement, as observed by the JICA Consultant Team, is that each of the council officers is assigned with two or three wards to supervise.

⁷¹ Eight DEOs and two DPLOs participated in a *Workshop of Draft Final Report of School Mapping and Micro-planning (Phase 2)* held on 31 May, 2005 and some DEOs commented on the area-wise assignment structure.

Current Organization at Council



**Alternative Organization at Council (1)
(Area-wise assignment)**



**Alternative Organization at Council (2)
(New specialty assignment)**

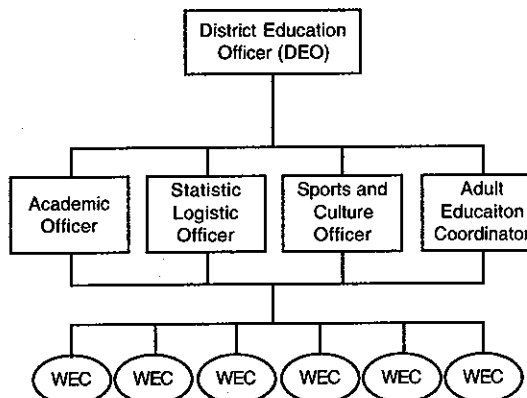


Figure 6.2 Organization of Council Officers

Table 6.2 TSM1 (Current Form)

TSM1

These data were collected as of the day/month/year:

School Name:

Address P.O.Box:

Region:

Council:

Division:

Ward:

Registration Number:

Date of Registration:

Type of School: a) Public b) Private

Owned by: a) Central Government b) Council c) T.E.C d) CCT

e) BAKWATA f) AGAKHAN g) Other (specify)

1. Number of pupils by standard, age and sex

Age	Sex	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5	Std. 6	Std. 7	Total
5	Boy								
	Girl								
	Total								
6	Boy								
	Girl								
	Total								
7	Boy								
	Girl								
	Total								
8	Boy								
	Girl								
	Total								
9	Boy								
	Girl								
	Total								
10	Boy								
	Girl								
	Total								
11	Boy								
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14	Boy								
	Girl								
	Total								
15	Boy								
	Girl								
	Total								
16	Boy								
	Girl								
	Total								
17+	Boy								
	Girl								
	Total								
Total	Boy								
	Girl								

	Total								
--	-------	--	--	--	--	--	--	--	--

2. Number of pupils who entered Standard 1 this year

Boy	Girl	Total

Number of pupils who went through nursery education

Boy	Girl	Total

3. Number of pupils with disability by type of disability

Type of Disability	Boy	Girl	Total
Blind			
Deaf			
Mute			
Albino			
Walking Disabled			
Mentally Disabled			

4. Number of pupils without Tanzanian citizenship

Sex	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5	Std. 6	Std. 7	Total
Boy								
Girl								
Total								

5. Number of pupils who withdrew or were withdrawn from school last year

Reason	Sex	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5	Std. 6	Std. 7	Total
Truancy	Boy								
	Girl								
	Total								
Pregnancy	Boy								
	Girl								
	Total								
Death	Boy								
	Girl								
	Total								
Other	Boy								
	Girl								
	Total								
Total	Boy								
	Girl								
	Total								

6. Number of pupils who repeat

Sex	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5	Std. 6	Std. 7	Total
Boy								
Girl								
Total								

7. Number of children who registered but failed to enter Standard 1

Boy	Girl	Total

8. School revenue of last year

Item	Amount (Tsh)
UPE contribution	
Parents' contribution	
District/Town Council	

Sponsors	
School activities	
Others	
Total	

9. School inspection
Was your school inspected last year? Yes No

Table 6.3 TSM2 (Current Form)

TSM2

These data were collected as of the day/month/year:

School Name:

Address P.O.Box:

Region:

Council:

Division:

Ward:

Registration Number:

Date of Registration:

Type of School: a) Public b) Private

Owned by: a) Central Government b) Council c) T.E.C d) CCT

e) BAKWATA f) AGAKHAN g) Other (specify)

1. Number of streams and pupils

Number of Streams		Number of Pupils	
Standard	Total	Standard	Total
I		I	
II		I-II	
III		I-III	
IV		I-IV	
V		I-V	
VI		I-VI	
VII		I-VII	
Total		Total	

2. Number of teachers (including teachers who took course for less than one year or maternity leave)

2.1.1 Teachers who started with Grade B/C and have been promoted

		Male	Female	Total
1	Grade V (TGTS 1)			
2	Grade IV (TGTS 2)			
3	Grade III (TGTS 3)			
4	Grade II (TGTS 4)			
5	Grade I (TGTS 6)			
6	Senior Grade III (TGTS 7)			
Total number of Grade B/C teachers				

2.1.2 Teachers who started with Grade A and have been promoted

		Male	Female	Total
1	Grade IV (TGTS 2)			
2	Grade III (TGTS 3)			
3	Grade II (TGTS 4)			
4	Grade I (TGTS 6)			
5	Senior Grade III (TGTS 7)			
6	Senior Grade II (TGTS 8)			
Total number of Grade A teachers				

2.1.3 Teachers who started with diploma and have been promoted

		Male	Female	Total
1	Grade IV (TGTS 2)			
2	Grade III (TGTS 3)			
3	Grade II (TGTS 4)			
4	Grade I (TGTS 6)			
5	Senior Grade III (TGTS 7)			
6	Senior Grade II (TGTS 8)			
7	Senior Grade I (TGTS 9)			
Total number of diploma teachers				
Total number of teachers (1-3)				

2.2 Number of teachers recruited last year

	Male	Female	Total
Diploma			
Grade A			
Grade B/C			
Total			

2.3 Number of teachers who are qualified to teach disabled pupils

	Male	Female	Total
Diploma			
Grade A			
Grade B/C			
Total			

2.4 Teachers' leave

(i) Number of teachers who retired last year

Diploma			
Grade A			
Grade B/C			

(ii) Number of teachers who passed away last year

Diploma			
Grade A			
Grade B/C			

(iii) Number of teachers who resigned last year for other reasons

Diploma			
Grade A			
Grade B/C			
Total number of teachers who left last year			

2.5 Deficiency and excess of teachers

	Excess (check)	Deficiency (check)	Number
Diploma			
Grade A			
Grade B/C			

3. Development of Education

New buildings built in the last fiscal year	
Stream opened in the last fiscal year	
Teacher's house built in the last fiscal year	
Classrooms built in the last fiscal year	
Toilets (pits) dug in the last fiscal year	

4. Does your school have a library? Yes No

5. Facility (buildings made of bricks and with iron roof)

	Requirement	Actual	Deficiency
Classroom			
Teacher's house			
Toilet			
Office			
Store			

6. Furniture

Desks			
-------	--	--	--

Pupils' desks			
Chairs			
Shelves			

7. Teaching materials received last year

(i) Textbook	
Mathematics	
English	
Swahili	
Science	
Job Study	
General Study	
(ii) Science Kits	
(iii) First Aid Box	

8. Income generation of last year

Number of Pupils (I-VII)	Estimated Revenue (Tsh)	Actual Revenue (Tsh)	Expenditure (Tsh)	Revenue per Pupil	
				Profit (Tsh)	Loss (Tsh)

Table 6.4 TSM1 (Revised Form)

New TSM1 (For the Ministry of Education and Culture, PO-RALG and Local Government Authorities)

These data were collected as of the day/month/year:

School Name:

Address P.O.Box:

Region:

Council:

Division:

Ward:

Village/Mtaa:

Registration Number:

Date of Registration:

Type of School

a) Public

b) Private

Owned by

a) Central Government

b) Council

c) T.E.C.

d) CCT

e) BAKWATA f) AGAKHAN g) Other (specify)

1. Number of pupils by standard, age and sex

[No change]

Age	Sex	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5	Std. 6	Std. 7	Total
5	Boy								
	Girl								
	Total								
6	Boy								
	Girl								
	Total								
7	Boy								
	Girl								
	Total								
8	Boy								
	Girl								
	Total								
9	Boy								
	Girl								
	Total								
10	Boy								
	Girl								
	Total								
11	Boy								
	Girl								
	Total								
12	Boy								
	Girl								
	Total								
13	Boy								
	Girl								
	Total								
14	Boy								
	Girl								
	Total								
15	Boy								
	Girl								
	Total								
16	Boy								
	Girl								
	Total								
17+	Boy								
	Girl								
	Total								
Total	Boy								

	Girl								
	Total								

2. Number of streams and use of double shift [Taken from TSM2. Item Added]

		Std. 1	Std. 2	Std. 3	Std. 4	Std. 5	Std. 6	Std. 7	Total
Number of Streams									
Double shift (check)	Yes								
	No								

3. Number of pupils who entered Standard 1 this year [No change]

Boy	Girl	Total

Number of pupils who went through nursery education [No change]

Boy	Girl	Total

4. Number of children who registered but failed to enter Standard 1 [No change]

Boy	Girl	Total

5. Number of pupils with disability by type of disability [No change]

Type of Disability	Boy	Girl	Total
Blind			
Deaf			
Mute			
Albino			
Walking Disabled			
Mentally Disabled			

6. Number of pupils without Tanzanian citizenship [No change]

Sex	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5	Std. 6	Std. 7	Total
Boy								
Girl								
Total								

Specify the countries: | | | | | | | | | | [Added]

7. Number of pupils who withdrew or were withdrawn from school last year [No change]

Reason	Sex	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5	Std. 6	Std. 7	Total
Truancy	Boy								
	Girl								
	Total								
Pregnancy	Boy								
	Girl								
	Total								
Death	Boy								
	Girl								
	Total								
Other	Boy								
	Girl								
	Total								
Total	Boy								
	Girl								
	Total								

8. Number of pupils who repeat [No change]

Sex	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5	Std. 6	Std. 7	Total
Boy								

Girl								
Total								

9. Number of pupils who completed Std.7, took PSLE, passed PSLE and went to public secondary school last year [New]

	Male	Female	Total
Number of pupils who completed Std.7			
Number of pupils who took PSLE			
Number of pupils who passed PSLE (Division 1, 2, 3)			
Number of pupils who went to public secondary school			

10. Number of teachers (including teachers who took course for less than one year or maternity leave) [Taken from TSM2. Simplified]

	Male	Female	Total
Diploma			
Grade A			
Grade B/C			
Total			

11. Number of teachers who are qualified to teach disabled pupils [Taken from TSM2]

	Male	Female	Total
Diploma			
Grade A			
Grade B/C			
Total			

12. Number of teachers who left last year [Taken from TSM2. Simplified]

	Male	Female	Total
Retired			
Passed away			
Resigned			
Total			

13. Deficiency and excess of teachers [Taken from TSM2. Simplified]

	Requirement	Actual	Excess or Deficiency
Teachers			

14. Facility (buildings made of bricks and with iron/tile roof) [Taken from TSM2. Items added]

	Requirement	Actual	Deficiency
Classroom			
Teacher's house			
Toilet			
Office			
Library			
Store			
Water tank			

15. Furniture [Taken from TSM2]

	Requirement	Actual	Deficiency
Pupil's desks			
Teacher's tables			
Teacher's chairs			
Shelves			

16. Textbooks [Taken from TSM2. Modified]

Subject	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5	Std. 6	Std. 7	Total
Mathematics								
English								
Kiswahili								
Science								
Life Skills								
Social Studies								
Total								

17. School revenue of last year

[Combined and modified]

Item	Amount (Tsh)
Capitation Grant	
Development Grant	
Local Authority	
Community's and Parents' contribution	
Sponsors (NGOs, church, etc.)	
School activities	
Others	
Total	

18. School committee

[New]

Yet to be established	Established but not functioning	Established and functioning	Established and actively functioning

19. School inspection

[Modified]

How many times was your school inspected last year?	
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Table 6.5 TSM2 (Revised Form)

New TSM2 (For Local Government Authorities)

These data were collected as of the day/month/year:

School Name: _____ Address P.O.Box: _____
 Region: _____ Council: _____
 Division: _____ Ward: _____ Village/Mtaa: _____
 Registration Number: _____ Date of Registration: _____
 Type of School a) Public b) Private
 Owned by a) Central Government b) Council c) T.E.C. d) CCT
 e) BAKWATA f) AGAKHAN g) Other (specify) _____

1. Population composition of children in school's catchment area [New]

	Male	Female	Total
0-6 years old			
7 years old			
8-13 years old			
14-17 years old			
Total			

Note: For rural areas, school catchment area is defined as village(s) from which pupils can attend the school within reasonable time. For urban areas, school catchment area is defined as mtaa where the school is located plus mitaa adjacent to it whose children mostly (more than half) attend the school.

2. Number of children in the catchment area who are attending primary school [New]

	Male	Female	Total
0-6 years old			
7 years old			
8-13 years old			
14-17 years old			
Total			

3. Number of children in the catchment area who are NOT attending primary school [New]

	Male	Female	Total
0-6 years old			
7 years old			
8-13 years old			
14-17 years old			
Total			

4. Number of people in the catchment area who are attending non-formal education such as COBET school [New]

	Male	Female	Total
11-13 years old			
14 years old and over			
Total			

5. Average daily attendance rate of pupils [New]

	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5	Std. 6	Std. 7	Total
Attendance rate (%)								

6. Average daily attendance rate of teachers [New]

Attendance rate (%)	
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7. Travel time for pupils and teachers to come to school [New]

Travel Time	No. of pupils	No. of teachers
Less than 30 minutes		
30 to 60 minutes		
1 to 2 hours		
More than 2 hours		
Total		

8. Means of transportation pupils and teachers use to come to school [New]

Means of Transportation	No. of pupils	No. of teachers
On foot		
By bicycle		
By bus		
By boat		
Other		
Total		

9. Number of pupils who are orphans or under vulnerable circumstances [New]

	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5	Std. 6	Std. 7	Total
Orphans								
Vulnerable								
Total								

10. School feeding program [New]

	Yes	No
Is your school doing school feeding program?		

26. WHAT OTHER COUNTRIES CAN LEARN FROM THE TANZANIAN EXPERIENCE

26.1 Planning as a Tool for Societal Change

Originally, the school mapping and micro-planning exercise as started in Tanzania in 1997. Since the beginning, it has been identified that the exercise affects the participants' perception in many communities across the country. As recorded in this Report, there have emerged a number of ordinary people who are highly motivated and deeply committed to their duties. Many schools now enjoy a strong support from the community as well as parents.

What was the trick? It seems that *school planning participated by many stakeholders* was the secret. For many ordinary Tanzanians living in villages, planning is itself a new knowledge and experience useful not only for school planning but for everyday life. The set of basic skills of planning they learn will broaden their horizon and help them with every aspect of life for long time to come. When they are invited to take part in school planning whose process is democratic, stakeholders commonly feel esteemed and renew their sense of communal duty and commitment. Their concerted leadership effectively urges community people to follow them.

Societal changes which took place throughout Tanzania as a by-product of this exercise are not insignificant. On the contrary, they are extremely valuable in the light of education development of the country. This experience teaches others that they could and should pursue behavior change (or social marketing) purposely when promoting a school planning exercise. A school planning program carefully designed to facilitate social marketing will do a superb job.

26.2 Plans Are There to Be Funded

It has been highly beneficial for Tanzania to have SM/MP2 go hand in hand with the PEDP, which for the first time started the development grant scheme in Tanzania. As pointed out in Part 4, significant social marketing effects (e.g., higher awareness and motivation) were possible because the school plans they prepared could be funded with development grants. Although the funding was partial and only a few selected schools received a grant, this "possibility" and "expectation" greatly inspired the people who participated in the school planning. There is no doubt about this.

As many similar exercises throughout the world showed, planning for the sake of planning is useless and waste of time and money. *Planning is only meaningful when the plan is funded to implement.* Only when their plan has a possibility to come true, people commit themselves to the exercise and, ultimately, to change. The Tanzanian experience univocally testifies for this simple dictum.

26.3 Educational Development through Community Participation

If a country wants to give basic education to all its people, the system should be community-based. When communities are underdeveloped and poor, community participation may seem inappropriate or irrelevant. It is not true. As many schools

and communities proved in SM/MP2, poverty is not the reason for a community to lag behind in educational development. Lack of awareness and commitment is. People need to be invited to participate in education, both as students and guardians, from the very beginning of the development.

What the Tanzanian experience tells us is that many people think it an honor to participate in school affairs or help school with donation. This notion may have something to do with their social tradition and, in the time of accelerated national development, is extremely valuable. A nation can develop only when it is based on healthy and productive popular notions at the grassroots. If such a notion is common among ordinary people, rely on it. *Nurture the sense of participation among them and let it do its own job.* Many Tanzanian communities proved that it is the right strategy for educational development.

One caution. You should not disguise extra taxation as community participation. It often happens, not only in Tanzania, to call "financial contribution" a way of "participation." People should not be forced to "participate" in this sense.

26.4 Difficulty of Bottom-Up Planning and How to Overcome It

The Tanzanian school mapping and micro-planning exercise is an exemplary case where a full-fledged bottom-up planning process moving up from school to council is implemented. The justification behind this system is twofold: first, it ensures consistency between the school plans and the council education plan; and second, it can rationalize budget allocation from district to school. Another beauty, as repeatedly emphasized earlier in this Report, is that the system greatly encourages people's participation in educational development.

However, bottom-up planning is not without its own difficulties which are inherent to the system. Tanzanian experience has highlighted four particular difficulties underlying bottom-up planning:

First difficulty is with consistency. It takes a tremendous amount of effort on the part of council officers to make the council education plan strictly consistent with individual school plans which usually count over 100 in an LGA. All school plans need be reviewed and the council education plan should incorporate them some way or other under the council's vision of educational development. In theory, consistency is possible under this system but in practice, particularly when time is limited (and it always is), it is a very elusive objective.

Second difficulty is with priority. To set priority among alternative objectives or actions under resource constraint is not so easy as it appears. This problem arises twice during the bottom-up planning exercise. First time is at school. For school committee members who are not professional planners or experienced school administrators, setting priority is perhaps the most difficult part to do. They often cannot make a balanced judgment about which should come first and which next. If this is a matter of inexperience, the second time is not. Priority setting again becomes a riddle at council. Once all school plans are submitted to the council for review and consolidation, how can they judge which schools or which actions deserve priority from

among hundreds of them. If done rigorously, it would take a long time or a number of personnel or both from resource-hungry LGAs.

Third difficulty is quality aspect of school planning. *The School Planning Handbook* and facilitators emphasize quality of education in training. The words of “*Quality Improvement*” are often stated as school objectives, however, in reality an action plan usually describes physical betterment of classrooms and/or teachers’ houses as is already pointed out at ‘10.4. Quality Aspect’. Is this wrong? Indeed many schools urgently need physical rehabilitation, and the PEDP Development Grant has made a great contribution to this area. However it is also true that the Development Grant is applicable only to construction, which makes a school with very small external support difficult to include quality issues into an action plan even if they consider. In order to solve this problem, therefore, it is very vital that not only the amount but also the purpose of the Development Grant be further discussed.

Fourth difficulty, which was very common in the Tanzanian exercise, is with “wish list plans.” Many plans, particularly school plans, have turned out little more than a list of dream-like wishes they cherish. This phenomenon is strongly associated with bottom-up planning because the process tends to encourage people’s free imagination without specifying the budget available to them at the beginning. Are they to blame for their wishful thinking or inexperience? No. The school “wish lists” are in fact claiming that the government arrears be paid immediately. In any case, “wish list plans” severely undermine the very notion of rational, consistent planning from the bottom up.

What the Tanzanian exercise suggests is how wrong or inappropriate the notion of “plan first, budget next” is when bottom-up planning is concerned. At the bottom or school level, it should be *vice versa*: “budget first, plan next.” Available budget should be known to respective schools *before* they start planning process. They prepare a plan within the limitation of the budget they will receive. In this way, the council-level government can at least avoid a strenuous task to reconcile school plans with the available budget.

One way to allocate school budget in advance without relying on school plans is formula-based allocation. Tanzania recently adopted this method in 2004 to allocate educational recurrent budget from the central government to the local governments in an effort to rationalize education financing. This same method can be applied to educational development budget and one step downward from the local (council) government to schools. School planning after budget allocation will be a practice recommended to other countries to adopt. The Tanzanian experience, though a little short of it, clearly indicates the practical value of a bottom-up planning system modified that way.

