

PN RB 1-720

(14)

PRIMARY EDUCATION DEVELOPMENT
BALOCHISTAN

A REPORT
ON THE
BALOCHISTAN MANAGEMENT INFORMATION SYSTEM (BEMIS)

PREPARED BY
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DECEMBER
1993

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ACKNOWLEDGEMENTS

In presenting this report to The Academy for Educational Development, Inc. I would like to take the opportunity to formally record my sincere thanks and gratitude to the many people associated with the Primary Education Development Program in Pakistan for the warmth of their support during my visit to Quetta.

Dr. Bill Darnell, the Team Leader in Quetta, has been generous in his support for my work, and in his willingness to pursue, with an open mind and in a great spirit of collaboration, all the possibilities offered by various courses of action to improve the level and quality of data utilization in policy making and management at all levels. From the beginning of my stay, he gave me a sense of belonging as an important member of the TA team in Quetta. I am exceedingly grateful for the help and guidance he gave to me as I sought to understand the complexity of operations in PED and the Directorate.

All other members of the TA team have been unfailing in their advice and support and in their willingness to discuss and share ideas for overcoming problems and for defining new paths for growth.

I am also very grateful to the personnel of BEMIS for the help they have given to me, for their friendship, and for their ready acceptance of my involvement in their day-to-day activities. I am certain that together we can build a very high quality decision-making support system for the Directorate of Primary Education.

This report then, reflects not only the views of a consultant who has had the task of reviewing the operations of a functioning management information system, but of a consultant who recognises and accepts his longer term commitment to the success of PED in Balochistan and who has already set in train certain strategies for growth and improvement.

I look forward to continuing this work in 1994 and hope to be able to make a substantial contribution to a program which already deserves the highest commendation.

Brian J. Spicer

December 17th, 1993

TERMS OF REFERENCE FOR CONSULTANCY

The consultant will assist in the design of the necessary system modifications and training plans required in the utilization of collected data for the planning and management processes. In order to accomplish this, the following is needed:

1. Assessment of the current system through meetings with senior staff and other information users, visits to BEMIS satellites in the Secretariat, P & D, and at least one district with attention to enhanced utilization.

2. Visits to NEMIS facilities in NWFP and Islamabad to review training plans and their current utilization activities. (This item to be optional and at the discretion of the consultant after discussion with concerned and relevant persons.)

3. Prepare and conduct a one day workshop on utilization strategies with a follow-up some two to three weeks later.

4. Prepare a Final Report for presentation to AED and appropriate discussion memorandum for presentation to the Team Leader (Quetta) and other interested parties.

(Adapted from AED Contract - October 1993)

SUMMARY OF ACTIVITIES DURING CONSULTANCY

October 30 Arrived Quetta

October 30 to November 5 Review of BEMIS
Initial discussions with PED Quetta staff
Attendance at relevant parts of DEO Workshop
Team Meeting/BEMIS Steering Committee
Ministerial Conference
University of Balochistan
Assessment of current status of BEMIS re 93-94
Plan

November 6 to 9 Islamabad Retreat
Visit to NEMIS facility at Islamabad - review
of training plans and current data utilization
activities

November 10 to 20 Multi Donor Supervision Mission

Continuing review of data utilization and
general BEMIS activities

November 13 Meeting with all BEMIS staff - discussion of
future plans, job responsibilities, need for
commitment, quality of data output, and
presentation, and re-organisation possibilities
for BEMIS, etc.

November 21 Visit to Sibi Cell (with Mr Fahim, NEMIS)
Visits to four schools in Sibi area
Visit to Dadhar (with Mr Fahim)

November 28 Visit to Chaghi Cell (with Mr Fahim)
Visits to various schools in district with the
SDEO and the Computer Operator, Chaghi

Between November 10 and November 30 Met with users and potential users of BEMIS
data to review and evaluate current patterns of
usage and to explore possible and desired
future usage, difficulties in utilisation,
training possibilities, future plans, etc.

Interviews with a number of users including:

District Education Officers
Director of Primary Education
Deputy Secretary Development
Director of Bureau of Curriculum and Extension
Secretary of Finance and Section Officer P & D
Textbook Board - Chairman and Secretary
Director of Civil Works (Education)
Technical Adviser Engineering
Assistant Director Administration
Deputy Director BEMIS
Deputy Director Accounts and Administration
Technical Adviser Teacher Training and Supply
Managing Director Society for Community Support
Team Leader PED
Members of Community Support Program
et al.

November 30

Presentation of Highlights Memorandum - inc.
proposed strategies for improving utilization
of BEMIS in Balochistan

December 9

Training Workshop/Seminar on the role of an
enhanced EMIS and on utilization strategies for
senior staff

Meeting with all BEMIS staff - initial
schedules for 1994 - individual
responsibilities

December 10
to 16

Working with BEMIS staff to develop schedules
and strategies for data collection, analyses
and dissemination in 1994

Planning for new Community Support Database

Planning for new School Construction and
Maintenance Database

Review of Census April 1993

Preparation of Census for April 1994 and
presentation of Draft Census Form to key
members of PED and the Directorate

December 16

Presentation of discussion paper -
recommendations for Balochistan, further
actions desired or required

December 17

Oral report to Dr. Darnell (Team Leader)

(Note: During my visit I had many opportunities, both formal and informal to discuss BEMIS and a host of related issues with Dr. Darnell. These discussions not only dealt with immediate issues and questions but, more importantly, with long term plans for change and growth.)

Depart Quetta for Australia via Karachi and Singapore

December 19

Arrive Melbourne, Australia

**Prior to
December 25**

Presentation of Final Report to AED, Washington

REVIEW OF CURRENT STATUS OF BEMIS

General Status

BEMIS is a vital information gathering and dissemination unit within the Primary Education system in Balochistan. The high quality of the initial planning which went into its establishment and the generally good quality of the data provided through its major Census activity have been attested to by many people during my stay in Quetta and is evidenced by the extensive use to which the data is put by the Directorate of Primary Education, by various levels of the Provincial and National Governments, by Donor Agencies and by a variety of consultants on an ad hoc basis.

The various BEMIS reports, especially the Annual Statistical Profile, are widely referred to by educational and political leaders as well as by PED staff. BEMIS school data is currently being used to determine sites for new school buildings and additional classrooms, and to ensure appropriate posting of new teachers. Information obtained through the BEMIS Human Resource Survey has provided the baseline data for the Community Support program in its work of establishing Girls' schools in villages not previously offering educational access to females. Continuous use is made of BEMIS to monitor the performance of the education system although much work needs to be done to produce appropriate and more refined indicator data. However, due both to certain deficiencies in the data and to the lack of skill among key users, there has not yet been the wider use of BEMIS to inform policy and longer term proactive decision making.

On the personnel side, BEMIS is relatively well staffed in numerical terms, although the quality of some members is not yet at the standard necessary to sustain the MIS under conditions in which the support of contract and foreign TA staff is not available. The training of these staff to play an enhanced role in an expanding BEMIS operation must be an essential element of future plans. The weakness in staff quality is especially apparent on the Government side and as well as greater stress on training there must, of necessity, be a clarification and re-organisation of duties and responsibilities for all staff.

Much work has gone into the establishment of a network of BEMIS cells throughout the Province and it is planned that 36 such cells should be operational by June 30, 1994. However, much more work and training remains to ensure that these cells fulfill a meaningful role in educational planning and management at the District level and are able to provide the desired level of support to DEOs and SDEOs as well as to schools and school communities. Hopefully, the

appointment of Computer Operators to those cells currently awaiting such appointments will take place early in 1994.

I was fortunate to have the opportunity to visit the District office at Chaghi where I saw the real potential of a District BEMIS cell. There, the BEMIS operator in collaboration with the DEO and SDEO has created a first class database covering student enrolments and teaching personnel for all the schools in the district. Notwithstanding such specific successes, there is a general need to ensure that the relationship of tasks and responsibilities between the central office of BEMIS and the District cells is clear and provides for effective and efficient operations. A recommendation on a possible demarkation of duties and responsibilities is included later in this report.

However, while there is much of praise that can be written about BEMIS at both the provincial and district levels, it is also apparent that much remains to be done and achieved before it can be regarded as a sustainable decision-making support system providing high quality information and advice to educational and government leaders, policy makers, planners and administrators. Importantly, and this is a very positive observation, the initial attempts to develop a systematic and cohesive approach among the staff of BEMIS, with a much clearer understanding and recognition of the importance of the work of each individual staff member, have proven to be most encouraging. All staff were formally involved in the data collection validation process during November and December with a definite positive impact on the effectiveness and efficiency of data collection. Setting specific goals for the completion of various processes and the preparation and presentation of reports is another way in which this sense of collective responsibility can be encouraged and enhanced.

RECOMMENDATIONS FOR THE FUTURE

1. Organisational Change

The organisational structures and responsibilities within BEMIS must be clarified and resultant decisions adhered to fully. At present, BEMIS demonstrates a low level of organisational efficiency and, quite frequently, a distinct lack of mission and purpose. In part, these organisational deficiencies are indicative of a lack of clarity of roles, not only for individual members of the BEMIS staff, but also for BEMIS itself within the overall structure of the Directorate.

I have already begun to tackle this problem through discussions with the Deputy Director - Mr Qambaree and through meetings with all BEMIS staff, including both government and non-government employees. As mentioned previously, the non-government people are far more hard-working than the government people and this is a serious barrier to the creation of an effective team. I have commenced the process of establishing appropriate job descriptions for all staff by inviting their personal submissions to me. This first step was completed in December and shall be an important foundation for follow-up development during 1994. As part of my TA role, I shall be implementing a staff training program in 1994 which will focus on showing BEMIS staff just how their work can improve not only the quality of data which comes from BEMIS but the level of effectiveness of data utilization by key users.

In addition, I shall be working to clarify the role and purpose of BEMIS within the Directorate. This is especially important if BEMIS is to fulfill an enhanced role in the policy making, planning and management cycle within the Directorate and to meet the evaluation and monitoring role anticipated by the World Bank mission in its Aide-Memoire (November 1993). This will require discussion and cohesive action by the TA, the Team Leader and the Director.

As a part of this process, I have asked the Deputy Director BEMIS, Mr Qambaree to obtain an office for me on the Ground Floor which I can use for planning BEMIS inputs in a variety of areas, for coordinating BEMIS activities, as well as for staff discussions and training. The operational part of BEMIS is too crowded and inappropriately organised for such planning, coordination and training functions. This section must be physically modified to create effective work stations for all BEMIS staff and, at the same time, allow for the integration of tasks and the collaboration of staff on specific matters.

Some activities such as photocopying and the production of visual resources for staff presentations may well be better coordinated

and controlled through a separate unit, rather than through BEMIS. A recommendation on this and the other matters pertaining to the acquisition and re-organisation of the office shall be prepared by the Deputy Director in collaboration with the TA and other staff over the December period and a Plan of Action agreed for 1994

2. Improving Data Quality

While much praise has been given to BEMIS for the quality of its statistical profile of the Balochistan education system, there are considerable improvements which should be made over the next few months especially in relation to the Census. These improvements must focus on the data collection process (the timing of census) and on matters of definition and clarity in the survey document itself. Such improvements are vital if BEMIS is to produce quality time-line data and if there is to be an enhanced level of utilisation of BEMIS data. While I have already discussed some of these matters with Mr Qambrani and Mr Fahim (BEMIS), these discussions will need to continue for some time and will also require involvement from key users of BEMIS data. The development of a clear, concise, consistent and purposeful format is also fundamental for any real development of a role for the District Cells in processing and output.

3. The District Cells

Only a limited number of the District Cells are fully functional. The operational relationship between the central BEMIS office and the District Cells must be clarified and the District operators given clear responsibilities vis a vis the Directorate office. The appointment and training of operators to service already approved Cells are matters of urgency and have been the subject of discussion and a recommendation for action that will involve the Team Leader (Dr Darnell) and the Deputy and Assistant Directors BEMIS in a direct approach to the Public Service Commission.

Training DEOs, SDEOs and others at the Divisional and District levels to make greater and better use of BEMIS data in their own work is a major need and must be tackled through well designed training programs in 1994 and 1995. One strategy which should be adopted is to hold workshops in Districts such as Chaghi where a high level of operational effectiveness has already been attained.

However, I would recommend against any major devolution of the Census processing and analysis to the District levels for several years. In my view, it will be far more effective and efficient if these cells are made primarily responsible for the collection and analysis, and communication to proper authorities, of highly specific school information which is not easily or even appropriately collected, aggregated and disseminated from the central level. Such data may include information about teacher and student resources, building maintenance requirements, and the like.

The District cells may also play an important role in the monitoring of the system through sample surveys of schools on a variety of criteria.

4. Improving the level and quality of Data Utilization

The effective utilization of BEMIS data by senior administrators for policy formulation and planning is not yet a reality. In all areas - from school construction to teacher training and supply to textbook and other resource distribution to system and program monitoring and evaluation - there is overlap between functional units and a lack of knowledge and understanding as to the ways in which BEMIS data can be utilised in proactive as well as reactive planning. My strategy in this domain has been to commence detailed discussions with key users (actual and potential), to gain better understanding of their needs, and at the same time to help them to clarify their own use of data and to gain greater understanding of the ways in which better information delivered in appropriate time-frames can assist their planning and operational activities. Ultimately, this must lead to a clearer understanding of the role and functions of BEMIS within the system, especially in relation to other units.

However, there is clearly a great need for all key users of BEMIS data to be trained in better data utilisation techniques and strategies. To this end, I held an initial seminar/workshop on December 9th and plan to institute **specialised support training programs for senior staff throughout 1994**. Topics to be covered will include - data utilisation for policy making, strategic planning, operational planning, resource decision making, manpower planning, and monitoring and evaluation - having regard throughout for improving the level of equity and access in educational provision throughout Balochistan.

This strategy of inducting senior staff into data-based decision making should be a long term responsibility of the TA BEMIS. It is a strategy which underpins the move by BEMIS "into the next phase of data interpretation, data utilization and data based policy making, management and evaluation" (Draft Aide-Memoire, Cl 51). In undertaking this task the TA will need to work in close co-operation with the senior personnel in the Directorate of Primary Education, especially those involved in staffing, construction, teacher training and supply, curriculum development, textbook and resource supply, and finance, as well as the Community Support Program. An Action Plan should be in place by March 31, 1994.

This process should also be seen as an important BEMIS contribution to empowering "primary education managers in staffing, academic and financial decision-making" (Draft Aide-Memoire, Cl 5).

To some extent a lack of appreciation of the enormous potential benefit of a well functioning MIS has led to some duplication of

effort by key users. BEMIS must accept some of the responsibility for this because it has not made a disciplined and concerted effort to understand and to meet the direct needs of its clients in a proactive rather than reactive sense. Not only can this lead to conflicting and perhaps erroneous decisions, it is also wasteful of resources and works against the long term sustainability of BEMIS.

I propose early in 1994 to outline the structure for a Decision Making Support System and to suggest a hierarchy of users and the nature of the data which should be readily accessible by them. Within the Directorate this should be related to the development of a Local Area Network (LAN) which would give key data users controlled access to BEMIS files. My understanding is that we are currently in a position to set up such a LAN, although its full development as a means by which key users may access appropriate information would probably take well into 1995 and even 1996. I have discussed this proposal with Mr Fahim and others and an appropriate Action Plan for 1994 and 1995 will be prepared for discussion and approval early in the New Year.

5. The National EMIS (NEMIS).

I believe that it will be very unfortunate if the concept of NEMIS is lost through lack of Government and UNDP support. In the short term, if such were to eventuate, then I would suggest that PED (Balochistan) take a proactive role in discussions and negotiations with the national authorities to support the further development of NEMIS. Being able to demonstrate the value of an effective EMIS to the Government of Balochistan and to the national education debate will be essential to this process, and although it will take time and effort on the part of the TA and other BEMIS staff it will be of significant ultimate advantage to Balochistan and to the children of the Province. To this end, the more that BEMIS data is used by the governments at the Provincial and national levels the better. However, this will only happen if the data we are able to provide is accurate, relevant and timely, and if leaders, policy makers, administrators and others, are able to make full use of it. For this to happen the BEMIS product must be **consumer friendly**. The attainment of this goal should be at the heart of the BEMIS mission over the next few years.

6. Other Issues

a. The recent Multi Donor Mission to PED drew attention to the need for a greatly enhanced role for BEMIS in system and program development, monitoring and evaluation. In 1994 and 1995 this will require very specific BEMIS involvement in the design of monitoring and evaluation strategies for the Community Support Program, the new Girls' Scholarship Program, the Mobile Teacher Training Unit, the Curriculum Unit, and the Construction Program. While all of the changes and developments mentioned previously will assist in enabling BEMIS to meet these additional responsibilities, they will

clearly put added pressure on the Unit's organisational capacity and efficiency. This must add weight to any decision to concentrate much attention, at least initially, on planning and coordinating all BEMIS activities in a way which establishes the duties and responsibilities of each individual staff member as well as the responsibilities of the Unit as a whole. It also means that, directly and indirectly, the foreign TA shall be engaged in a continuous process of management training for BEMIS staff and for other senior staff in the Directorate.

b. Employing high quality staff, especially in the area of data analysis, is vitally important, and to this end approval must be obtained, as a matter of urgency, for the continuing appointment of Mr Fahim and all contract staff whose contracts expire between now and mid-February. Being able to maintain continuity of personnel will be vital if BEMIS is to grow in its role and if the system is to achieve long term sustainability.

SPECIFIC PLANS 1994 -1995

A SUMMARY

1. The development of a Personnel Information System to cover all teaching personnel throughout the Province
 2. Development of a secondary database for school buildings - to facilitate policy and decision making in regards to new school building, maintenance and repairs
 3. Development, in collaboration with the District Cells, of a District database for school specific matters - especially those relating to student and teacher resources
 4. Development of a specific database to enable tracking and monitoring of developments in the Community Support School Program
 5. Development of a new database to track, monitor and evaluate progress on the Girls' Private School and Scholarship Program
 6. The undertaking of a mapping project so that we have full knowledge and appreciation of the geographical distribution of educational provision throughout the Province
 7. Further development of the District Cells and the Central BEMIS/District network
 8. Continual improvement of the quality of Census information through improvements to the Questionnaire and to the data collection process.
 9. Working with key users of BEMIS data to ensure that the data they require is available when needed, and in a form which facilitates effective and efficient use.
 10. Training programs for BEMIS and other key personnel, including senior Directorate staff and educational leaders.
- SPECIFIC PLANS
1994 - 1995

CONCLUSION

I have been continually impressed by the reputation which BEMIS has achieved in educational circles throughout Pakistan, but this should not obscure us from the reality that much remains to be done before the system achieves long term sustainability and before it reaches its full potential as a decision making support system. The foundations have been laid, it is now vitally important that BEMIS moves to the next stage of development. This phase will require a great deal of education and training, not only for BEMIS personnel, but for those responsible for policy making and for the administration and development of the education system in Balochistan.

While Aid and Loan programs can put modern technology into educational systems virtually anywhere, the ultimate goal of sustainability and self-leadership in education can only be achieved if we can develop and enhance the management and leadership capacities of the people. This is a most difficult task and highlights the tension which inevitably exists between developing the technological base and, at the same time, ensuring appropriate human resource development. Helping to reduce this tension through education and training must be a major role for the BEMIS TA during the next two years.

Overall, while BEMIS is sustainable in a technical sense, longer term effectiveness in data collection, processing and utilization, will depend on a number of factors:

- * the ability to attract and keep well qualified personnel capable of designing appropriate survey instruments, of collecting the required data, of inputting, processing, analysing and outputting that data in forms accessible to a variety of users.

- * the ability of the TA to define and encourage an appropriate organisational structure for BEMIS which creates an ongoing efficient MTS unit

- * the ability of the TA to ensure that all relevant staff at both the central and other levels of the Directorate have the knowledge and skills to maximise their use of the BEMIS data in policy making, planning and operational decision making

- * the ability of the TA, in association with other members of the PED staff and senior members of the Directorate, to create an ongoing integration of the BEMIS operations with the other functions of the Directorate - their policies, planning and

decision making. In reality, this means a shift of focus from BEMIS as being a centre for basic statistical information to one of BEMIS as a decision making support system. While in many ways this will mean no change to the activities of BEMIS, it will be critical to the ultimate definition of tasks and the prioritising of those tasks, and to the way(s) in which data is processed and presented.

* a much better understanding by BEMIS of the needs of potential users of the MIS data, and a very much better understanding by users and potential users of the ways in which BEMIS can support and assist their policy, planning and decision making processes - especially in regard to the allocation of resources, equity and access issues, manpower planning, etc

Brian J. Spicer
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17.12.93