Education Management Information System Program (EMIS)
and Related Activities: Final Program Report
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AMERICAN INSTITUTES FOR RESEARCH

**Education Management Information System Program (EMIS)
and
Related Activities**

Final Program Report

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The American Institutes for Research

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EXECUTIVE SUMMARY

In 1999, Zambia's Ministry of Education (MOE) launched its sector reform program, the Basic Education Sub-Sector Investment Program (BESSIP) for the period 1999–2006. The main objectives for BESSIP are to increase enrolment rates and improve learning achievement at the primary school level by enhancing ongoing programs and developing new ones.

As a part of BESSIP, the EMIS and Related Activities program began its work in December 2001 to improve the capabilities of the MOE to collect, organize, process, store, share, and disseminate education information for informed planning and management of education at all levels. To do so, the project focused on five tasks:

Task 1:   Education Management Information System (EMIS)
Task 2:   Capacity Building
Task 3:   Assessment
Task 4:   Community Data Collection and Use
Task 5:   Monitoring Requirements

Through these tasks, and the collective efforts of project staff and staff of the Ministry of Education, specifically the members of the Directorate of Planning and Information, the project has built the capacity of the MOE to obtain, manage, report, use, and demand good information for good decision-making. The program has strengthened the existing EMIS platform that provides the MOE at all levels with access to information and enables the MOE to use real data to plan and to project its needs and resource requirements.

More specifically the program successfully achieved the objective of enhancing the MOE's information technology (IT) infrastructure by establishing a local area and wide area network (LAN and WAN). Among other measurable benefits, this allows staff the ability to harness the power of the Internet, communicate more efficiently and effectively through the use of e-mail, and provides the means for effective information access and sharing. A standard computing platform was established throughout two provinces (Eastern and Southern), consisting of nineteen 19 district and 2 provincial offices, each of which received two PCs along with related supplies. Additionally, the program introduced the Education Automated Statistical Information System Toolkit (ED*ASSIST). This system is the backbone of the ministry's ability to collect, manage, disseminate and utilize Zambia's educational data for effective decision-making and planning. The slogan of "This Year's Data, This Year" is a reality that eluded the ministry for many years. Now Zambia is far ahead of many other African states in this area.

Efforts made at improving the ministry's IT infrastructure were supported by an extensive training program. The project created a 20 seat computer-training center and produced training materials in the following subjects: PC Basics, File Management, Introduction and Intermediate MS Word, Introduction and Intermediate MS Excel, MS

Outlook, Internet Searching, PowerPoint, and ED*ASSIST. Staff from the two pilot provinces received five weeks of training. In total, 110 individuals received training, including those from offices within Lusaka. Recognizing the value of the computer-training center, the ministry procured additional machines for the center following the completion of the training. These new machines have allowed the ministry to continue utilizing the center. Indeed, the ministry provided training for staff from four additional provinces and has plans to offer training to the remainder of the provinces that have not yet received any computer literacy training.

Select staff from the Directorate of Planning and Information also received advanced training in MS Access programming and network administration. The project sent five staff to Johannesburg and Cape Town, South Africa to attend five to six weeks of advanced training. Although two of the individuals are no longer with the ministry, those that remain are being provided with ample opportunities to utilize their new skills.

Technical assistance was also extended to the Examinations Council of Zambia (ECZ) in the area of assessment. The program successfully carried out a workplan with ECZ to develop a testing instrument to be used at the Grade 4 level in both government schools and Interactive Radio Instruction (IRI) centers. This collaborative work produced an instrument that is still being used. Moreover, the skills learned during the development process are being applied in other areas of continuous assessment and competence-based test development and application.

Project efforts under the Community Data Collection and Use task clarified and made evident several important facts about community level data use in Zambia. Community level data are being collected by a number of programs throughout the country, and these data are being utilized to some extent. One important recommendation stemming from the research conducted under this task is that the Directorate of Planning and Information should utilize more the information found in reports such as the District Profiles, produced by the CHANGES program. These reports provide valuable information that ministry researchers and planners can use to gain a greater understanding of the impact of community activity on the education system.

The project consistently demonstrated its ability to monitor and report on its activities, both to the Ministry of Education and to USAID/Zambia. General quarterly and annual reports presented readers with accurate details of project activity. Special reports and briefing papers were made available as necessary, and the field team maintained an effective line of communication with the ministry and USAID mission. Having established a reliable line of communication with all relevant parties enabled the program to participate actively in the mobilization of ministry resources to implement project activities that were, for the most part, also ministry objectives.

The project laid the foundation for a successful EMIS environment. It provided capacity building opportunities for staff in several key areas and continues to present opportunities for individuals to utilize their new skills. Given the challenges the Ministry of Education faces to provide quality education to the population of Zambia, the EMIS and Related

Activities program has greatly enhanced the ministry's ability to prepare for its future by knowing exactly what the realities are in its education system.

PROGRAM ACHIEVEMENTS

This section describes the achievements of the EMIS and Related Activities program according to the task activities outlined in the Statement of Work and Inception Report. It also provides a history of program activities. Where appropriate, notable highlights and challenges are discussed.

TASK 1 – EDUCATION MANAGEMENT INFORMATION SYSTEM (EMIS)

The main objective of the Zambian EMIS is to improve the capabilities of the MOE to collect, organize, process, store, share, and disseminate education information for informed planning and management of education at all levels. To this end, the EMIS program was given the task of collaborating closely with the MOE to develop and implement an education management information system, using the Education Automated Statistical Information System Toolkit (ED*ASSIST approach), at the national level and selected districts in Southern and Eastern Provinces.

By the end of the program's second year, all provincial and district offices within Eastern and Southern Provinces received improved information technology equipment, as well as training for education and statistical officers in the use of both computers and the ED*ASSIST Data Dissemination Module for census data end-users. These district-level accomplishments were complimented at headquarters with improved timely collection, cleaning, and distribution of census data and an unprecedented range of data reports.

Achievements

Task 1 Activity	Indicator	Means of Verification	Target	Actual
1. Conduct EMIS needs assessment including resource requirements	Develop equipment specifications and determine resource requirements	Implementation workplan	March 2002	Needs assessments completed at HQ and pilot provinces by March 2002. Common Vision workshop held in April 2002.

During the first half of 2002, EMIS staff conducted needs assessments at Ministry of Education headquarters as well as in the pilot provinces and districts. Several of the offices visited had been included in a Situational Analysis Report conducted in 2000. Visits by EMIS staff to these offices served to validate the previous assessment and to evaluate new criteria. Factors that were evaluated included IT equipment quantity and condition, security of IT facilities, computer literacy of staff, and usage patterns of IT resources. EMIS staff visited the Eastern and Southern Provincial Education Offices and

the District Education Offices in Livingstone, Kalomo, Chadiza, and Katete districts. Summaries of these visits were included in quarterly program reports. In addition, a fact-finding visit was made to the Western and Northern Provincial Education Offices to learn more about the EMIS activities within the accelerated decentralization programs occurring in those offices.

At MOE headquarters, EMIS staff spent the first few months of the program assessing the ministry's ability to collect, organize, process, store, share, and disseminate education information. This involved an elaboration of both statistical and transactional requirements for EMIS in light of decentralization plans, extent of reengineering, staff capacity, procurement needs, stage of development of school mapping, and key political timing points. In particular, staff evaluated hardware and software resources, data processing facilities, computer utilization within the ministry, as well as the overall organization of the information systems. From these assessment efforts some of the most pressing weaknesses in the existing information systems were outlined in the Inception Report along with the project's strategy for addressing these needs.

Highlights

- A key element of both assessing the needs of the Ministry of Education and establishing an appropriate action plan was to build consensus among the relevant stakeholders. The ministry successfully held a Common Vision workshop April 24-25, 2002 at the Fairview Hotel in Lusaka. The participants to the workshop included the permanent secretary of the Ministry of Education and the director for the USAID Zambia mission. Also in attendance were other senior managers and core EMIS staff from the ministry, representatives from the Washington, D.C. offices of the primary and sub-contracting organizations, American Institutes for Research (AIR) and the Academy for Educational Development (AED), provincial education officers (PEOs) and their deputies from Eastern and Southern Provinces, and all district education officers from Eastern and Southern Provinces.

  The workshop provided the opportunity to bring together stakeholders at all levels for an EMIS briefing and overview to the ED*ASSIST approach. The outcome achieved through this activity was the unification of expectations for program stakeholders. Additionally, the EMIS program workplan was disseminated and discussed in order to formulate a common understanding of the program's goals and objectives. The ministry's vision for EMIS and the proposed way forward were presented.

Task 1 Activity	Indicator	Means of Verification	Target	Actual
2. Import historical data into ED*ASSIST	Available historical data in readily accessible form	Production of report from ED*ASSIST	December 2002	Not to be completed.

School census data for the years 1996-1999 are contained in a database program called the Integrated Microcomputer Processing System, or IMPS. This program was designed by the International Programs Center of the U.S. Bureau of the Census. Given the inconvenience of having census data in two separate data systems (IMPS for 1996-1999 and ED*ASSIST for 2000 and onward), an initial aim for the EMIS project was to export this earlier data into the ED*ASSIST system. Upon further review it became evident that this process would require significant staff time, and yet would not significantly improve the reporting capabilities for the data. As staff can easily access and report on these data from the IMPS system, a decision was made not to export these data into the ED*ASSIST system.

Task 1 Activity	Indicator	Means of Verification	Target	Actual
3. Create reports from backlog of data	Available historical data	Production of reports from ED*ASSIST	(a) 2000 and 2001 data readily available by December 2002; (b) 20 standardized reports; (c) multiple geographic levels; (d) filters for data	Data for 2000 and 2001 cleaned and available by mid-2002. By the end of the third quarter 2002, 49 standardized reports were available with options to disaggregate data by 6 geographic levels and 17 filters. Number of reports increased to 65 in third quarter 2003.

By the end of the second quarter 2002 the Data Dissemination Module (DDM) of the ED*ASSIST system included the capability to produce reports on 20 indicators of the status of the Zambia educational system using annual school census data from years 2000 and 2001. Data for these years had been inputted and cleaned by mid-2002. Development of the basic school DDM continued in the third quarter, during which time

49 standardized reports were completed, including the queries in support of those reports. Changes were also made to allow for reports to be produced at six geographic levels (national, provincial, district, constituency, ward, and school), and for reports to be restricted to certain schools according to 17 different criteria including year, province, district, constituency, ward, urban/rural, agency running, size, level, type, boarding type, and participation in the Programme for the Advancement of Girls' Education (PAGE) and School Health and Nutrition (SHN) program.

Further adjustments to the DDM were made in the first quarter of 2003 when the 2000 data on repeaters was added to the 2000-01 DDM program reports. This information had been omitted previously because the table structure differed between 2000 and 2001. Errors in report titles were also corrected. The total number of available reports was increased to 65 by the end of the third quarter 2003.

Highlights

- EMIS staff far exceeded the targets for this activity, producing a total of 65 reports. Moreover, the six geographic levels mark an improvement over the previous national and district level options, and the 17 filters are a unique feature of the Zambian ED*ASSIST program—unavailable in other countries using ED*ASSIST.

Task 1 Activity	Indicator	Means of Verification	Target	Actual
4. Modify or redesign Annual School Census questionnaire	Streamlined data entry process;	(a) Stakeholders' review and pilot testing; (b) new survey layout and questions	July 2002 for revision of 2003 form	Both the 2002 and 2003 questionnaires were reviewed and revised as targeted. In addition, a substantial redesign occurred with the new 2004 single-form questionnaire for all levels.

During the first quarter of 2002, the 2002 Annual School Census questionnaires and accompanying instruction manuals were reviewed, revised, and reformatted prior to distribution in April. In the following months a communication was sent to key organizations and individuals concerned with data utilization to solicit feedback relevant to the design and development of the 2003 questionnaire. Feedback received during the second quarter 2002 provided the basis for a first draft of the questionnaire and a subsequent meeting held to review and facilitate a final round of comments. EMIS staff solicited input from MOE officials during this process and provided technical assistance

in improving the Annual School Census by reducing existing problems, adding questions related to HIV/AIDS, and improving data entry.

Beginning in the second quarter 2003, EMIS staff began work on the design of the 2004 Annual School Census questionnaire. Major efforts were made in the development of a single questionnaire for all educational levels. Extensive discussions held with ministry staff and among the EMIS advisors on the pros and cons of going in such a direction eventually led to the ministry's decision to use a single questionnaire. Following a thorough pilot test in the third quarter 2003, it was agreed that the new questionnaire would pose little problem to schools, and thus it was submitted to the tender committee to identify a printer. Printing and distribution occurred in the fourth quarter 2003.

Highlights

- The shift to a single questionnaire for 2004 is a major step in facilitating the development of a more efficient data-collection process. Not only will it ease data entry, but it also eliminates many problems that occurred with multiple forms, such as incorrect forms being sent to schools or miscalculations in the number of each form type needed. Moreover it is hoped that the switch to a single questionnaire will pave the way for the development of a single database as well. If such a single questionnaire can be maintained, this will allow for collection of time-series data.
- The 2004 questionnaire represents the first time that data on both community schools and IRI centers will be collected in the normal school data collection process. The 2004 questionnaire also contains revised questions related to HIV/AIDS.
- In response to the revisions made to the 2002 questionnaire, and in an effort to raise the accuracy and efficiency of responses, the ministry successfully conducted the 2002 Annual School Census Questionnaire Training and Distribution exercise April 18-19, 2002. Provincial education officers for planning, education officers, and statistical officers were trained on the completion of the revised census so that they could train headmasters and senior teachers in their districts to complete the questionnaires accurately and efficiently. It should be noted that the ministry provided all funding for this activity totaling K671,162,701. Questionnaires began to be returned to Headquarters on schedule in May, leading to unprecedented response rates of 96 percent for secondary schools and 99 percent for basic schools. With the introduction of the new 2004 single questionnaire, the ministry is again holding a nationwide training exercise.
- In the first quarter of 2004, another national training was conducted to facilitate the distribution of the 2004 census form and to instruct representatives from basic, secondary, community and IRI centers on how to complete the questionnaire correctly.

Task 1 Activity	Indicator	Means of Verification	Target	Actual
5. Move data gathering for school year to early in school cycle	Generate next year's Annual Census documents at end of prior year	(a) 2002 survey printed and distributed; (b) 2003 survey printed and distributed; and (c) 2004 survey printed and distributed	(a) April 2002; (b) December 2002; and (c) December 2003	The 2002 survey was printed and distributed in April 2002, followed by the printing and distribution of the 2003 survey in December 2002. The 2004 survey was printed in December 2003 and distributed in January 2004.

The 2002 questionnaire was revised, printed, and distributed in the first quarter of 2002. The data gathering was accordingly moved to the spring and the data entry was completed by July 2002. This allowed the MOE to access "this year's data this year." The process went smoothly and efficiently. Moreover, during this time, data from the 2000 and 2001 censuses was also being inputted. It is a notable achievement of the data entry staff that data for three years were inputted within this first year. Six highly skilled keyers worked to achieve this result.

The 2003 questionnaire was revised printed, and distributed in the fourth quarter of 2002. Unfortunately, the 2003 data collection process did not match the standards set in the previous year. Both the speed of data collection and the response rate were poor in comparison to the previous year (reaching only 89 percent for secondary schools and 93 percent for basic schools). Data collection began in March, and stakeholders were requesting information by June. However, data input was not yet complete even by November. The 2003 data collection and input effort was hindered by the fact that there was not the same degree of staff support as there had been in 2002. There was not enough data-entry staff, compensation for work was handled differently (salary versus payment per questionnaire, thereby decreasing the work incentive), those staff that were charged with data-entry were not as skilled as the previous year (of the six women from the previous year, three were terminated and three men were hired), and there was less effort to track down missing data. In an effort to facilitate the completion of data-entry, the EMIS project rehired the three women from the previous year who had been released.

Printing of the 2004 questionnaire occurred in December 2003, and distribution took place in January 2004, in conjunction with national census training program.

Challenge

The process of designing, testing, approving, printing and distributing needs to adhere better to a defined timeline.

Task 1 Activity	Indicator	Means of Verification	Target	Actual
6. Produce EMIS output reports	Information readily available through ED*ASSIST reports	Routine requests for information disseminated through readily available reports	Twenty ED*ASSIST base reports and five custom reports in first year.	Sixty-five reports of various data types are now available.

EMIS staff completed design of the 25 target reports by the end of the third quarter 2002. These standardized reports included all ten BESSIP core indicators. Development of the Data Dissemination Module of ED*ASSIST continued throughout the second year of the project, bringing the total number of available reports to 65 by the third quarter 2003. This process was driven by data requests received from both inside and outside the MOE.

As mentioned earlier, the ED*ASSIST reports allow data to be reported by 6 different geographic levels, and according to 17 different school characteristics. In addition, by the end of the third quarter 2003, graphic-display output formats had been developed for all relevant reports in the DDM. To handle and track requests for data, EMIS staff designed a "Request for Information Form" for use by the ministry's Planning Unit. This form enables stakeholders to request information as needed and allows the MOE Planning Unite to streamline the production of requested data. The new process also allows the MOE to track the receipt of requests and the dissemination of data to improve accountability among administrators.

In an effort to raise awareness of the data available, EMIS staff took several steps in an ED*ASSIST promotional campaign. This included distribution of the "Just ASC" brochure to key data users both within and outside of the ministry. It also involved the distribution of school profile reports to all schools, providing a summary of information on a single sheet of paper.

Highlights

- A key report designed by the EMIS staff is the "Education Profile." This one-page summary of basic data from the Annual School Census Questionnaire may be generated at any administrative level (national, province, district, constituency, ward, or school). For the school level, a modified version of this report was developed, which includes additional school characteristics (e.g., school name, address, running agency, level). Distribution of this "School Profile" to all schools helped in the validation of data within the ED*ASSIST system. At the same time, schools were provided with copies of the Education Profile for their district, province, and the nation to enable a comparison of their own characteristics and performance to that of other districts, provinces, and the nation as a whole.
- Feedback received from several district and provincial officers indicates that schools were pleased to receive the schools profiles and that the information provided was of great use in decision-making.

Task 1 Activity	Indicator	Means of Verification	Target	Actual
7. Develop and adjust ED*ASSIST inputs/process/ outputs, based on Policy/Managerial training and other Ministerial inputs	Procedure for maintaining systems relevance to the Zambian environment	(a) Stakeholder meetings (b) Evolving ED*ASSIST processes (C) Collaborative meetings	(a) Changes made in the Annual School Census; (b) Managerial EMIS Training; (c) Ministerial inputs toward improving EMIS platform	Changes made in Annual School Census and ongoing improvements were constantly made as the result of close collaboration with MOE staff

This ongoing activity involved close collaboration with colleagues at the MOE to improve the applicability of software to MOE needs. Changes were made to the 2004 Annual School Census, as described above. Specific managerial training related to this activity was never conducted because the staff was not available. However, senior staff did receive computer literacy training over a one-week period. This training included topics such as ED*ASSIST, Outlook, Word, Excel and the use of the Internet.

Task 1 Activity	Indicator	Means of Verification	Target	Actual
8. Prepare for implementing decentralization of EMIS functions	Completion of skills training for EMIS activities	(a) Development of confirmed schedule; (b) Registration of participants	(a) Thirteen class manuals produced; (b) Training schedule developed; (c) Submission of registration documents after training (May 2003)	Eleven class manuals were produced and the training activity was completed in June 2003.

Drake Warrick sent a memo to all relevant officials in November 2002 outlining the final plan for training, describing the registration process, and advertising the syllabus. In December, the 11 manuals prepared for the training were printed. Training occurred between January and June 2003. Seventy-seven staff were targeted for training from Eastern, Southern, Northern, and Western provinces. However, only 69 completed the training program.

More details on the training program are described below under Task 2 – Capacity Building.

Task 1 Activity	Indicator	Means of Verification	Target	Actual
9. Procure hardware/ software required for the EMIS	Procurement completed during first year	(a) Receipt of equipment in Washington; (b) Receipt of equipment in Lusaka; (c) Equipment and related supplies installed at district level; (d) Inventory of nonexpendable equipment	(a) Equipment in Washington by June 2002; (b) Equipment in Lusaka by August 2002; (c) Equipment installed by August 2002; (d) Inventory submitted to MOE by September 2002	Shipment arrived in Washington by September 15, 2002 and arrived in Lusaka in December 2002. Installation occurred in December 2002, while an inventory was completed in January 2003.

Procurement of hardware, software, and related supplies was completed within the first year according to procurement regulations and contractual agreements. This process involved soliciting multiple quotes from Schedule 70 vendors in the United States, arranging shipping on a US flag carrier, and clearing customs in South Africa and Zambia. The shipment arrived in Lusaka in December and was immediately off-loaded and stored in the USAID warehouse while it was sorted and inventoried. The equipment was distributed and installed at the MOE headquarters, provincial, and district levels in December 2002. An inventory of all equipment was completed in January 2003.

Challenges

- The procurement process was plagued by a number of unforeseen delays, over which the project had little or no control. For example, securing three quotes from a Schedule 70 vendor for each item proved difficult, as vendors did not carry all of the items needed. Finding appropriate equipment at reasonable prices took several weeks. Locating a freight forwarder who could guarantee a U.S. flag carrier across the ocean and who had done business in Zambia also took more time than anticipated. Shipping schedules, slow customs processes, and transport embargoes all played a role in delaying the shipment.

Task 1 Activity	Indicator	Means of Verification	Target	Actual
10. Create stronger links between ED*ASSIST and support agencies	Various sources of data being captured within ED*ASSIST	(a) Departments other than the Planning Unit utilizing ED*ASSIST; (b) Definition of common numbering scheme for all schools linked to school mapping data	(a) Personnel and accounting units "plugged in" to ED*ASSIST to the extent necessary and possible; (b) School mapping data linked by June 2003	Preparatory meetings held with HR representatives.

Several planning meetings were held throughout the project period with staff of the ministry's Human Resources Department to identify ways in which ED*ASSIST could be expanded to better address its data needs (e.g., by providing reports on training and retirement). In the third quarter 2003, EMIS advisors presented to the director of Human Resources a plan for introducing a personnel database within the Human Resources Department that utilizes the ED*ASSIST system. This included an explanation of various tasks involved and the level of commitment required by the ministry and EMIS staff. Progress on this plan was delayed because EMIS advisors waited for MOE staff to take the initiative in developing this database, as suggested in the plan. Absent this effort, no action occurred for several months. In the first quarter of 2004 the EMIS staff initiated an effort to develop a basic database based on the ED*ASSIST structure.

Task 1 Activity	Indicator	Means of Verification	Target	Actual
11. Complete information organization/ cleaning	Data readily available for dissemination	Routine requests for information disseminated through readily available reports	Cleaning completed by December 2002. 2003 data cleaned by July and 2004 data cleaned by July.	Cleaning of 2000, 2001, and 2002 data was completed by December, according to target. Data cleaning of 2003 data completed by December 2003.

These exercises remove inaccuracies from the databases and make information more reliable for reporting. Although the initial phase was completed in the fourth quarter of 2002, the effort was a continuing activity throughout the life of the program.

TASK 2 – CAPACITY BUILDING

A good EMIS can be regarded as a necessary tool to be used toward building capacity to use education information for improved decision-making but insufficient to achieve that end by itself. Orientation and skills and attitude training among the current and potential users of good educational data must be developed in order to build the capacity of MOE and partner personnel to expect and demand good, timely data and use it to make good decisions. Toward this goal, the EMIS program worked closely with the MOE and its BESSIP partners to improve the capacities to collect, share, analyze, disseminate, and use information for decision-making at all levels. This capacity building included training, the procurement of information technology, and technical assistance that built on the activities in Task 1.

Had the EMIS tool been fully developed across Zambia but the dissemination and use of its information among ministry personnel and partners not occurred, the program would have failed to achieve a critical component. Fortunately this was not the case, as the program succeeded in conducting an extensive training program for district and provincial staff as well as providing more advanced technical training for several headquarters staff.

Achievements

Task 2 Activity	Indicator	Means of Verification	Target	Actual
1. Inclusion of staff outside of pilot provinces in EMIS training	Staff identified in other provinces to participate in pilot program	Participation in EMIS training by staff from Northern and Western provinces.	(a) Identify and invite five staff each from Northern and Western provinces; (b) five staff from each participates in EMIS platform training	Provinces notified in May 2002 and staff invited in September 2002. Official plans made in December 2002 to begin in January 2003. Six staff from Northern and Western provinces combined, completed training.

Staff from Northern and Western provinces were included in EMIS training to build capacity and to help staff implement decentralization activities in those provinces. Drake Warrick visited Northern and Western provinces in May 2002 and notified staff of their inclusion in the EMIS training program. Invitations were sent to appropriate individuals in September 2002.

Highlights

▪ The ministry will fund a second phase of training for Northern, Western, Northwestern and Luapula provinces. The target number of staff to be trained is 80.

Task 2 Activity	Indicator	Means of Verification	Target	Actual
2. Participation in educational workshops	Staff sent to educational workshops	Trip reports	3	3

Educational workshops and conferences facilitate the sharing of ideas and research across national lines. EMIS sponsored Beatrice Mugwagwa, MOE Systems Analyst, to attend the Education Exchange Conference in Addis Ababa, Ethiopia in September 2002, where she gave a presentation on EMIS activity in Zambia.

At the request of the minister of education, Mr. Warrick participated in the Microsoft Government Leader's Forum held 22-23 September 2003 in Johannesburg, South Africa. Mr. Warrick prepared a speech and PowerPoint presentation for the minister to deliver at the conference. The presentation was well received and the minister was quoted in the closing session. Also in the third quarter 2003, Mr. Warrick attended the USAID/Africa Bureau's education conference in Mbabane, Swaziland.

Task 2 Activity	Indicator	Means of Verification	Target	Actual
3. Provide improved information technology in MOE Headquarters	Procurement and installation of network, computer, and related equipment	(a) New IT equipment in MOE headquarters (b) Functioning network	August 2002	IT equipment installed at MOE HQ in mid-December 2002. Network is configured and stable.

Following the needs assessment conducted in the first and second quarters, 2002, EMIS staff began preparatory activities for the expansion of the MOE network, including setting up the wiring within the headquarters buildings. A key point in these early months of project operation was the decision by the ministry to provide the top floor of the Documentation Center building for the Planning Unit's (PU) use. The use of the floor allowed for the relocation of PU personnel, relocation and expansion of existing network equipment, development of the training lab, and provided secure storage space for computer-related equipment.

Through cooperative work with DANIDA (Danish Internatinonal Development Agency) and the MOE, plans were developed for a wireless network that would link the MOE Headquarters with the Examinations Council of Zambia (ECZ), the Teacher Education Department (TED), and the Curriculum Development Center (CDC). This collaborative technical and financial effort yielded a functioning wireless network between the buildings. The exercise spent about $5,000 of EMIS project funds, while DANIDA contributed about $26,000. The tower was built atop the MOE Headquarters and was completed in early October, 2002. Later, during the fourth quarter 2003, radio towers

were established at the Lusaka Provincial Education Office and at the Education Broadcasting Services, thereby allowing these additional sites to connect to the MOE network infrastructure.

The receipt of procured IT equipment in December 2002 allowed for the upgrade of the network servers. It also provided the necessary equipment for installation of the MOE training lab. One of the two assigned computers for each district was temporarily retained at headquarters for use in the training lab. John Kaumba and Stanley Muyunda established the lab and networked the new computers during December. Following the completion of training in June 2003, the computers were distributed to the districts, and the ministry purchased new computers for the training lab. The training lab is a state-of-the-art facility.

In January 2003, the intranet at the MOE was established. This process included setting up email boxes for MOE staff as well as for training participants. To date, approximately 250 PCs reside on the MOE wide area network (WAN) with the capacity for future expansion. The ministry has a contract with CopperNet for provision of Internet access.

Highlights

- The leveraging of funds from DANIDA was a major achievement and a superb example of collaboration between development partners. Without this financial partnership, expansion of the MOE network to its current coverage would have been impossible. Remarkably, the MOE network is presently the largest network of computers in the country.
- On December 19, 2002 U.S. Ambassador Martin Brennan and the minister of education addressed the opening ceremony for the computer lab and expanded network at MOE Headquarters. The permanent secretary opened the event followed by Ambassador Brennan who talked about USAID's current education projects in Zambia and contextualizing the need for an improved EMIS system. The minister followed with a discussion of the MOE's five year plan. He emphasized the relevance of the EMIS project to the decentralization of the MOE, outlined project accomplishments, and suggested immediate plans for the utilization of the growing EMIS system

Task 2 Activity	Indicator	Means of Verification	Target	Actual
4. Provide improved information technology in Eastern and Southern Provinces	Procurement and installation of computer and related equipment	New IT equipment in Eastern and Southern districts and provinces	August 2002	Completed January 2003

The initial distribution of IT equipment to the districts and provinces occurred on December 17, 2002. The task went smoothly and was completed in one day. Similarly, installation of equipment was completed without difficulty in January 2003.

With this initial distribution, each district in the two pilot provinces received one computer, one printer, and a fax machine. The two provincial offices each received two computers, one printer, one fax machine, and one photocopier.

Highlights

- EMIS has received positive feedback from district and provincial offices with regard to the new computers, printers, and fax machines. For many offices the provision of equipment has improved the efficiency of general office operation,and has allowed staff to create their own databases and produce higher quality reports.
- The EMIS project signed a contract with InstantSystems to provide maintenance service in Eastern Province for IT equipment procured by the EMIS project. InstantSystems has successfully conducted quarterly maintenance visits to each district office, in addition to providing assistance over the telephone and servicing equipment. Positive feedback has been received on Mr. Chiza's services from district and provincial staff.

Challenge

- No suitable maintenance service providers were identified in Southern Province. Without local contracts, providing appropriate maintenance support is a challenge, and yet critical to ensure the continued effective operation of the EMIS system. Maintenance will continue to be a challenge for the project and more critically for the ministry, especially given its plans to extend the use of ED*ASSIST to other provinces. Maintenance is a key factor in system sustainability.

Task 2 Activity	Indicator	Means of Verification	Target	Actual
5. Provide policy/ managerial level training	Managers in the MOE have been trained	Adoption of EMIS related policy	Managerial EMIS Training	No such training has occurred

EMIS related policy documents were submitted by Mr. Warrick to the MOE for review and adoption. These included recommendations for an ICT policy for the ministry. To date, no action has been taken with regard to the documents submitted. It should be noted, however, that the ministry has instituted an ICT steering committee that is tasked with reviewing and proposing ICT policy for implementation.

Task 2 Activity	Indicator	Means of Verification	Target	Actual
6. Conduct training needs analysis	Produce training program	Trip reports from Southern and Eastern province	April 2002	Completed April 2002

Assessment of the training needs of MOE staff occurred in conjunction with the infrastructure needs assessments conducted at headquarters and in the pilot provinces. In general it was found that stakeholders at many levels lack the technical expertise and experience necessary to utilize any EMIS. The first round of provincial and district assessments revealed a lower level of computer literacy and readiness than had been anticipated. As a result, the training program was designed to include significant training efforts at the most basic level.

Within the Planning Unit, restructuring efforts that were underway at the start of the EMIS activities meant that many key positions related to the EMIS effort were not filled. Advanced training of staff was therefore delayed until persons were identified for several important positions. Indeed, the restructuring of the MOE put human resources at a premium. The general shuffling of human resources increased the need for training and retraining—activities that require significant resources. These circumstances highlighted the need for implementation of the capacity-building components of the EMIS program.

Furthermore, analysis by EMIS advisors revealed the training needs of MOE staff extended beyond just skill instruction to actual changes in staff conceptions of, and use of, information resources. EMIS products can become effective only when those in authority continuously want the information that an EMIS provides. With the recognition that those in authority and their clients in institutionalized settings desire information when they see how it can affect their well being and aid their difficult decisions, EMIS advisers additionally noted the need for managerial training and policy level assistance.

Task 2 Activity	Indicator	Means of Verification	Target	Actual
7. Provide EMIS and technical training to headquarters staff	Evidence of major training having been completed	Staff registration records from training	Provide five weeks of training to ten staff	Forty secretarial staff provided three days of training. Five HQ staff trained in South Africa. Six data entry staff trained.

Senior headquarters staff were included in the plans for the training program from January to June 2003. Like the other selected participants, they were to have received five weeks of training. Scheduling difficulties prevented them from doing so.

In an addition to the original training schedule, 20 secretaries to the senior staff of the ministry were offered a three-day intensive training in Outlook 2000, File Management and Internet Explorer from June 25 to June 27, 2003. Only 20 were chosen due to seating

capacity in the training lab. A second group of 20 secretaries were provided the same three-day intensive training from September 3 to September 5, 2003.

Task 2 Activity	Indicator	Means of Verification	Target	Actual
8. Provide EMIS and technical training to provincial and district staff	Evidence of major training having been completed	Staff registration records from training	Provide five weeks of training to 77 staff	Sixty-nine individuals were trained in a rotating schedule between January and June 2003.

Design of the training program for provincial and district staff began in the second quarter 2002, with the original expectation that formal training would start in August. This schedule was disrupted by the unexpected difficulties encountered in the procurement process, and thus the start date for training was delayed until January 2003. Planning efforts continued, however, and by the third quarter 2003 plans for the training program were finalized with participating officials and staff. On October 9, EMIS staff met with provincial officials for an EMIS Pilot Program Briefing. These meetings introduced staff to the proposed training program and solicited input. Implementing this input, Drake Warrick sent a memo to all relevant officials in November outlining the final plan for training, describing the registration progress, and advertising the syllabus.

Individuals were assigned to groups, according to their position. Individuals selected for the training included:
- Provincial education officers (PEO), senior education officers (SEO) planning, and statistical officers (SO) for Eastern, Southern, Northern and Western provinces;
- All education officers (EO), all district education officers (DEO), and all district statistical officers (SO) for both Eastern and Southern provinces; and
- Two education officers (EO) from both Northern and Western provinces, along with the PIP from Northern Province and the Technical Advisor from Western province.

Between January and June 2003, each group received five weeks of training on a rotating schedule. Course topics over the five weeks included PC basics, MS Word, MS Excel, MS Outlook, Internet searching, file management, PowerPoint, and ED*ASSIST, according to each group's professional responsibilities and role in the EMIS platform. A completion ceremony was held in June to acknowledge all those who had completed the training.

Course instruction was provided by Dr. George Caldwell and Drake Warrick for the first month of training. Thereafter, the University of Zambia (UNZA) Computer Centre team assumed responsibility for Drake Warrick's portion of the training program and Beatrice Mugwagwa was trained to take over George Caldwell's portion of the program (on using the ED*ASSIST software).

Highlights

▪ The ministry, in an effort to ensure that the EMIS training program was successful, provided accommodation and subsistence allowances to staff traveling from outside Lusaka to attend training. This gesture demonstrated the ministry's commitment to the training effort. Without this key support from the ministry, the training program would not have succeeded.

▪ Participants gave the training program positive reviews. During subsequent follow-up visits to offices following the completion of training, staff expressed that the training was beneficial in improving their ability to conduct their work-related activities. Observations suggested that trained individuals were utilizing ED*ASSIST. In addition, in some locations trained individuals have taken the initiative to train others within their offices in the use of ED*ASSIST.

Challenges

▪ As anticipated, the restructuring within the MOE complicated the effects of the training effort. Many individuals who went through the EMIS training were subsequently relocated, retired, and some passed away. The result is that offices have fewer numbers of trained staff than originally planned. The effect of restructuring, however, must be viewed in two ways. In part it has diffused EMIS skills, as trained individuals have been shifted around the country. Still, the smaller number of trained staff within each office is a disadvantage.

▪ As part of the effort to increase awareness and knowledge of EMIS, and ED*ASSIST in particular, trainees were encouraged to share the knowledge they had received during the training program. This has not occurred to the extent anticipated. Some individuals cite a need for more training before they can train others. In most offices, then, there is a desire for more training, especially from staff who have not yet participated in the training program. In some cases, those individuals who received training are not the staff who use the computers most often or who handle most requests for information.

Task 2 Activity	Indicator	Means of Verification	Target	Actual
9. Provide advanced technical training to headquarters staff	Evidence of major training having been completed	(a) Identification of relevant courses; (b) Course registration records	Three staff from HQ and one from ECZ	Four staff sent to South Africa between the first and second quarters 2003. One additional staff member was later sent in September.

This activity could not be effectively acted upon until the MOE hired three key IT staff for the Planning Unit, as part of the restructuring effort. This occurred in January 2003, at which point planning and registration began. At the end of the first quarter the Systems Development Manager, Mr. K. Kalala, and the Senior Network Engineer, Mr. S. Muyunda were sent to South Africa for advanced network management training. Ms.

Beatrice Mugwagwa and Mr. Charles Ndakala were also sent to South Africa for Advanced IT training in 2003. In sum, four staff were sent to South Africa for technical training, which focused on Networking, VBA, SQL, and Access. Because two of those sent to South Africa are no longer working for the ministry, Mr. Bupe Musonda, the Senior Statistician, was sent for advanced training in Access in September 2003.

Challenge

▪ Subsequent to training Mr. Muyunda left his post at ECZ to take a position in the private sector. Mr. Kalala was suspended from his post. These two key individuals were to play a key role in the management of the network infrastructure for the ministry. It is important that the post of systems development manager be filled.

Task 2 Activity	Indicator	Means of Verification	Target	Actual
10. Develop and/or provide for on-the-job training, job aids, self-instructional modules, workshops, study tours, and specialized in-country and third-country training.	Number of training materials and training opportunities made available to Planning Unit, Eastern and Southern Provincial staff	(a) Training materials; (b) Course registration records; (c) Trip reports (d) Workshop records	(a) 13 manuals (b) 5 weeks of attendance	Eleven manuals created. Training for Eastern and Southern Provincial staff completed by June 2003. Planning Unit staff attended specialized training in South Africa.

Mr. Warrick prepared training materials to address Zambia's EMIS needs, based upon the needs assessment. The training materials are continually adjusted to ensure that they are appropriate for the audience. Key among these materials are the 11 training manuals used in the EMIS training sessions. These manuals cover topics ranging from PC basics to introductory and advanced functions of Microsoft applications, including Word, Excel, Power Point, and Outlook. There are also manuals for popular computer uses such as file management and Internet searching. Manuals were designed to support and to enhance the instructor's lecture during EMIS training classes as well as to serve as personal references for trainees when they return to their offices.

Highlights

▪ Many positive responses were received about the high quality and ease of use of the training manuals. Indeed, in many cases these manuals have been used in provincial and district offices to train individuals who did not participate in formal EMIS training sessions.

Task 2 Activity	Indicator	Means of Verification	Target	Actual
11. Provide technical assistance to improve the ministry's capacity to obtain, manage, report and use data regarding the impact of HIV/AIDS on basic education.	Inclusion of questions related to HIV/AIDS in annual school census	Analysis of results from census exercise	(a) Revised survey questions for 2004 (b) Have HIV/AIDS data on record in case it is needed	Survey questions revised for 2004.

EMIS staff provided continuing support for this activity throughout the project period. The issue of HIV/AIDS was a key element in the revision of both the 2003 and 2004 school census questionnaires. During the redesign of the 2004 school census questionnaire, questions related to HIV/AIDS were revised and some added in an effort to enhance the ministry's ability to report on this relevant factor impacting education in Zambia. The annual school census now captures data related to HIV/AIDS. These questions include cause of death for teachers, teacher absenteeism, number of student deaths, and student orphans.

TASK 3 – ASSESSMENT

The MOE recognizes that assessment is a critical component for effective instruction, that it should be closely linked to teaching and learning, and used in a manner that provides useful feedback to teachers, students, parents, and others interested in student achievement. In an effort to expand their capabilities in assessment, personnel in the Examinations Council of Zambia (ECZ) expressed a need for technical support to build their skills and knowledge in sampling design, test construction to better evaluate higher order skills, item analysis, determination and assignment of performance levels to test scores, data analysis and report writing, statistical software for educational and social science research, and aspects of project management.

As such, the program was tasked with the development and implementation of a training plan to support the professional development of ECZ staff in the area of assessment. The program team worked with the ministry to assess and appraise the ECZ's assessment systems with the assistance of short-term consultants. Assistance was then planned for the delivery of workshops to examine best practices in assessment, with training, seminar, and workshop activities focusing on the theory and practice (development, administration, analysis and reporting of competency tests and their results) of competency-based and performance assessments.

Achievements

Task 3 Activity	Indicator	Means of Verification	Target	Actual
1. Enhance the capacity of Examinations Council personnel in competency test development, implementation, and use.	Develop a grade 4 test development workplan and present workshop training	(a) Final test available in January 2003 for use in IRI centers and workshop conducted (b) Workshop for ECZ staff	(a) Mid-January (b) March 2003	Grade 4 test completed and administered as planned. Workshop was conducted for ECZ staff, in addition to a subregional conference.

Under Task 3, the EMIS project provided technical assistance to ECZ for its Basic Competence Testing (BCT) program at grades 4, 7, 9, and 12. There were two areas of activity under this task. First, AIR co-sponsored the first Subregional Conference on Assessment in Livingstone, Zambia. ECZ hosted and organized the conference after an initial proposal was prepared and presented to ECZ by AIR. Delegates presented papers on the three conference subthemes: continuous assessment at primary and secondary school levels, competence testing in primary schools, and learner assessment in non-formal education environments. Discussions at the conference were recorded and summarized as "Issues and Observations" that were distributed to attendees.

Second, AIR provided technical assistance to enhance the quality of competency tests. This assistance, for the most part, was conducted remotely, as presented in the work plan. Despite reservations, ECZ agreed to the work plan prepared by AIR. Because Education Broadcasting Services (EBS) asked ECZ to produce a test that would allow EBS to evaluate student performance in the Interactive Radio Instructional (IRI) centers, the TA was an opportunity to address ECZ's desire to develop procedures for delivering assessments in alternative environments, such as IRI centers. Therefore, the work plan was prepared to assist both ECZ and EBS in completing the activities needed for ECZ to build a test for EBS that could be used to evaluate the IRI program.

The major activities AIR conducted for the work plan included a review of existing items provided to AIR by ECZ; development of a few new items, which were reviewed and approved by ECZ; a review of administration guidelines prepared by ECZ; advisement about a research plan to collect information from IRI and government schools; and a review of a draft research report prepared for EBS and ECZ to report the preliminary findings of the IRI evaluation. All activities were conducted in coordination with ECZ and with the understanding between AIR and ECZ that ECZ was the ultimate decision maker.

In culmination of these activities, AIR conducted a Technical Assistance Workshop (July 10-11, 2003) with ECZ, CDC, and EBS to discuss, describe, and show these parties the technical work that AIR conducted. The workshop was a combination of hands-on activities to get the participants actively involved in test development processes and share experiences with the workshop members. Other parts of the workshop consisted of in-depth discussions about key topics of the Task 3 technical assistance. Handouts provided workshop participants models and samples of materials that are used in test development, e.g., item review checklists, which could then be adapted to fit ECZ's specific needs, in addition to EBS's needs.

Highlights

- Conference attendees had many positive comments about the Subregional Conference on Assessment and everyone agreed that the conference should continue in subsequent years. ECZ staff praised the conference as a major highlight of Task 3 activities, noting that it provided a valuable and rare opportunity for ECZ staff to interact with colleagues from neighboring countries. In addition, the ECZ is currently working to integrate many of the practices from neighboring countries highlighted in the conference.
- ECZ successfully developed and piloted a Grade 4 competency test that was administered to IRI and GRZ schools, within an ambitious schedule. Good test development practices were implemented. ECZ met its goal of having tests in the field by early 2003 to administer to students in IRI centers to gauge performance on competencies measured on the tests.

Challenges

- The senior level staff at ECZ (specifically those working closely with the EMIS technical assistance provider, had a much different expectation for the type of TA they would receive than what was actually provided under the work plan. This lack of a common understanding on the terms of reference for the TA was a prime source of frustration and disappointment among ECZ staff. Still, it must be noted that ECZ agreed to the original work plan, indicating a need in the future for all parties to pay closer attention to consensus building when drafting terms of reference.
- Disagreements over responsibilities have hindered completion of the final assessment evaluation report, as required in the work plan. While clearly identified as an ECZ responsibility, staff there disagree that completion of the report should be conducted as part of their normal duties. This impasse has left the final report, to date, unfinished.

TASK 4 – COMMUNITY DATA COLLECTION AND USE

In addition to the nationally focused data-collection activities outlined under Tasks 1 and 2, the EMIS program was also asked to collaborate closely with field-based partners to improve the quality of and access to community-based information. More specifically, it was envisioned that the focus of such efforts would be information related to participation in education, school health and nutrition, gender equity, HIV/AIDS, and interactive radio instruction. Community-level data play an important role in helping the MOE and communities make informed decisions about education, with the ultimate goal of improving the quality and relevance of education for communities.

Achievements

Task 4 Activity	Indicator	Means of Verification	Target	Actual
1. Help communities identify information needs, collect such information, and use it to improve the quality of education overall.	Development of community data resources under EMIS platform	Task force meetings and minutes	December 2003	No meetings were held.
Task 4 Activity	Indicator	Means of Verification	Target	Actual
2. Harmonize data points so that efforts of data collection are included in the EMIS reporting framework.	Collaborate with implementing partners to harmonize community data collection efforts	Report of aggregate community data from all implementing partners, including the MOE Planning Unit	December 2003	Consultant completed study and report during the second quarter 2003.

During the first quarter of 2003, EMIS project staff created a workplan for carrying out activities one and two under Task 4. The project hired a consultant to address these activities by conducting a study of the type of data being collected by USAID-supported programs at the community level and to identify the opportunities for collaboration between EMIS and other programs in data collection and dissemination. The objectives of the consultancy were:

- To identify any qualitative or quantitative data that other USAID-supported programs are collecting at the community level.
- To identify which of these data can be obtained from the EMIS.
- To identify which community data from these other programs can be included in the EMIS reports.
- To identify areas of collaboration with other stakeholders to expand the scope of EMIS.

With assistance from the EMIS project, the consultant interviewed representatives from other USAID-supported programs and reviewed reports and data-collection instruments from these programs. The consultant's findings are summarized in a consultancy report that was completed at the end of the second quarter 2003 and distributed to Directorate of Information and Planning staff, USAID, and any other interested parties. The review revealed that little quantitative data are collected from communities by other programs. Like the EMIS, information is most frequently gathered from schools and learning institutions. Moreover, much of the quantitative data that these programs require is available from EMIS. Programs such as CHANGES, however, can provide important qualitative community data to the Ministry of Education.

Beyond this consultancy study, the EMIS program helped to improve the quality of information made available to both communities and the ministry by assisting other USAID-supported programs to improve their data collection, storage, and dissemination processes. Notably, EMIS staff created a database for the Interactive Radio Instruction (IRI) project in September 2002. This marked a substantial improvement over IRI's previous practice of storing data in Excel files. Moreover, the database allows IRI staff to quickly and easily compile and report important data figures on attendance, retention, and achievement of IRI students.

During the first quarter of 2003, EMIS staff again worked with IRI to introduce Access queries. This enables the IRI staff to use EMIS software to address their database needs. Such queries will also eventually facilitate the integration of IRI data with data from the Annual School Census. The process of integration was also enhanced through changes made to the 2004 Annual School Census, which is the first to capture IRI center information in the normal school data-collection process.

The EMIS project also supported the efforts of the CHANGES program, by responding to data request needs, and by distributing to ministry research officers the district profile data collected by the Community Sensitization Mobilization Campaign of the CHANGES program. These profiles highlight factors affecting the enrolment and performance of children, especially girls.

Highlights

- The sustained effort of EMIS staff to the integration of USAID project resources through IT support and data dissemination is a notable achievement of the project. Indeed, representatives from both IRI and CHANGES have lauded EMIS efforts to assemble and distribute quality data, which provide a valuable input into their respective programs.
- The contribution of EMIS technical support to IRI data storage and processing cannot be underestimated. High quality data are key to IRI's ability to demonstrate demand for its services, to substantiate the productivity of its efforts, and to validate continuing ministry funding for the program.

- The good relationships fostered between EMIS staff and other USAID-supported programs provide the necessary foundation for the sharing of ideas and information that can, in turn, increase the impact and efficacy of USAID efforts.

Challenges

- Task 4 was drafted with the understanding that communities need many different types of data in order to be equipped to make important decisions about children's education. So too is it important for the Ministry of Education to receive and review data on important factors that influence education, such as participation in education, school health and nutrition, gender equity, HIV/AIDS, and interactive radio instruction. While USAID, the EMIS project, and field-based partners such as CHANGES and IRI all recognized these needs, there was not sufficient clarity among these groups as to the specific goals and activities to be accomplished under this task. One initial problem lay in the term "community data."

Task 4 Activity	Indicator	Means of Verification	Target	Actual
3. Focus on data regarding HIV/AIDS	Ensure inclusion of HIV/AIDS data in community data collection and organization effort	Development of indicators on HIV/AIDS	December 2003	Relevant questions included in both 2003 and 2004 school census questionnaires, and reports made available.

EMIS staff provided continuing support for this activity throughout the project period. During the first quarter of 2003, Dr. George Caldwell produced a series of reports in support of an HIV/AIDS evaluation being conducted by the Ministry of Education (funded by USAID). In addition, the issue of HIV/AIDS was a key element in the revision of both the 2003 and 2004 school census.

TASK 5 – MOE AND USAID MONITORING REQUIREMENTS

The major goal of the technical assistance provided under this program was to assist the MOE to collect, collate, analyze, and present data that is required for it to understand progress made toward its access and achievement goals, and for reports such as those prepared for Annual and Semi-Annual Reviews. Similarly, the program was expected to provide information to allow USAID/Zambia to monitor the achievements of activity results and performance targets and progress toward Strategic Objective 2 and Intermediate Results.

Achievements

Task 5 Activity	Indicator	Means of Verification	Target	Actual
1. Assist USAID in collecting, collating, analyzing, and presenting data required for SO2 management and reporting for USAID/Zambia's Results Review and Resource Request annually	Provision of reports to USAID/Zambia on request	(a) Report on five Strategic Objective indicators (b) Meet USAID ad hoc data requirements	(a) September 2002, September 2003; and (b) As needed.	(a) September 2002: (b) As needed. Have already provided data to USAID.

Task 5 Activity	Indicator	Means of Verification	Target	Actual
2. Provide information on project progress to USAID/Zambia	Open and timely communication with USAID/Zambia	Quarterly reports and annual summaries	(a) Quarterly reports every third calendar month (b) Annual summary every December as part of fourth quarter report	(a) Completed as scheduled; and (b) January 2003.

Task 5 Activity	Indicator	Means of Verification	Target	Actual
3. Provide financial information on project to USAID/Zambia	Accounting for expenses to USAID/Zambia in a timely fashion	Quarterly reports and annual summaries	(a) Quarterly reports every third calendar month (b) Annual summary every December as part of fourth quarter report	(a) April 2002, July 2002, October 2002; December 2002; (b) December 2002.

For each of the above tasks the EMIS team, through the life of the project, assisted USAID by providing relevant data and reports. As part of the quarterly reporting process, quarterly financial reporting was included.

QUARTERLY HIGHLIGHTS FOR JANUARY 2004 TO MARCH 2004

TASK 1 – EMIS

The following activities were undertaken:

1. An updated CD release of the 2003 DDM was produced. This release included correction of minor errors that were noticed in the initial release, dated November 25.
2. A query and two additional reports were added to the 2003 DDM. These were: (1) completion rate (report S104); (2) teacher cause of death (report M213); and (3) the "school profile for GIS" query.
3. Some technical modifications were made to the 2003 DDM, to make it easier to access by the ArcView 3.2 geographic information system. These modifications included addition of latitude and longitude fields to the gdb:school table, and addition of an integer-data-type school identifier (called MOEcode) to each data table. Upon completion of these modifications, a third (and final) release of the DDM CD was produced.
4. A preliminary version of a human resources database was developed. Development of this database will be continued by MOE staff.
5. Drake Warrick participated in discussions with the Educational Council of Zambia (ECZ) to identify assessment data (examination results) that could be included in ED*ASSIST. (ECZ is currently in the process of assembling the identified data.)
6. Drake Warrick participated in meetings related to ED*ASSIST, including briefings with headquarters representatives of AED and AIR and members of the project evaluation team.
7. Field staff assisted in the reformatting of the 2002 statistical bulletin. The support was provided to move the document closer to finalization.

TASK 2 – CAPACITY BUILDING

The following activities were undertaken:

The project continued its support of the second phase of EMIS training being funded through the support of the African Development Bank. The program provided technical assistance in the development of the budget, training schedule and production of training materials. Preparations are being made to develop the third phase of training that will have a national focus.

TASK 3 – ASSESSMENT

The following activities were undertaken:

Zambia is exploring alternative, creative ways to measure and improve pupil progress throughout the primary and secondary school cycles. Such explorations include: connections between large-scale assessment and EMIS systems; ongoing assessment of pupil progress within cycles rather than at the end of the cycle; and assessments in nonformal settings.

In this vein the Examinations Council of Zambia (ECZ) requested technical assistance to explore alternative and innovative assessment methodologies in the Zambian educational environment. To facilitate this opportunity, the American Institutes for Research worked with ECZ to prepare a strategic vision for assessment-related activities in Zambia and to identify specific tasks and desired outcomes that can be pursued given USAID's continued support for the Council's important work. This collaboration represented a continuance of the technical support that AIR provided ECZ over the past two years.

In the first quarter, Dr. Jane Schubert and Dr. Paul Williams from AIR came to Zambia and:

- Reviewed documents provided by the Ministry of Education, the Examinations Council, USAID, and other relevant participants to gain familiarity with extant practices in assessment -- i.e., the exam cycle and the use of alternative methodologies such as continuous assessment.

- Met with MOE officials to clarify the type of assessment information useful at both national and local levels and the source of that information.

- Discussed the types of skills and professional capacity that exists within the Zambian education sector with respect to testing, measurement, and assessment -- both quantitative and qualitative.

- Learned about Zambian perspectives on the current and potential role of assessment -- e.g., as a selection mechanism for promotion to next level; as a diagnostic tool for measuring pupil progress; and as a teacher development methodology for improving learning.

- Assessed and identified opportunities to link results from assessments with data collected for the ministry's Education Management Information System. Doing so will increase the opportunities to place the results of student assessments in perspective, to explain the results by providing context and independent variables, and to increase the value of extant data bases (such as the one that includes data from the annual school census).

- In collaboration with the Examinations Council, produced a document that summarizes the findings and suggests a way forward in enhancing assessment,

both continuous and large scale, within Zambia's education sector. This product was given greater relevance because of the completion of a two-day strategy meeting during which staff of the relevant MOE directorates were able to articulate what their roles and expectation are for the ministry in this area.

TASK 4 – COMMUNITY DATA COLLECTION AND USE

This activity was completed in 2003.

TASK 5 – MOE AND USAID MONITORING REQUIREMENTS

The following activities were undertaken:

- The project staff completed a review of the achievements of the program against each of the measurable activities. This review was instrumental in providing the external evaluators reliable information on all of the activities of the program.

- As part of close-down activities for the EMIS program Dr. Rich Tobin and Dr. Rudi Klauss visited Zambia to take part in several program review meetings. They met with USAID officials to discuss successes, challenges and lessons learned from the program. They also participated in the project final review briefing held with the USAID mission. From their presence and involvement in these very important functions they were able to identify critical areas to be addressed in the new program supported by USAID, and recommend possible solutions to them.

- Two consultants from ADEA conducted a final external program evaluation. The consultants traveled to Eastern and Central provinces to interview staff and held briefing meetings with both the ministry and USAID mission. The evaluation notes the success of the project in collecting and disseminating nationwide data during the period 2001-2003. Additionally, the evaluation cites, among others, the project's training efforts, IT infrastructure improvements, subregional conference, and technical assistance to ECZ as significant achievements.

  Reflecting on the project's current progress in reinvigorating the MOE's information sector, the evaluation also offers several key recommendations for further improving the MOE's EMIS system. These include extending the EMIS system to all provinces; improving the ASC by removing some static infrastructure indicators and creating more opportunities for publishing and disseminating results; and expanding and continuing computer literacy and advanced computer skill training utilizing "train the trainer" and other local resources, so that school teachers and personnel at the provincial and district levels can fully benefit from the EMIS system.

QUARTERLY FINANCIAL REPORT FOR JANUARY TO MARCH 2004

Zambia EMIS

Quarterly Expenses
January-March 2004

	Accrued as of December 31, 2003	January	February	March	First quarter total	Project to date total
LABOR	$1,643,906.50	$49,327.21	$52,485.40	$101,598.13	$203,410.74	**$1,847,317.24**
ODC's	$911,072.80	$10,832.92	$57,737.31	$20,063.48	$88,633.71	**$999,706.51**
Total Expenditures	$2,554,979.30	$60,160.13	$110,222.71	$121,661.61	$292,044.45	**$2,847,023.75**

APPENDICES

Appendix A – Table of Work Days Delivered

<u>**Work Days Delivered**</u>
Period: 11/30/2001-5/31/2004

AIR	Labor Category	Work Days
	Administrative/Clerical	0.3
	Analyst	9.1
	Consultant	564
	Junior Analyst	201.3
	Senior Analyst	57.9
	Senior Consultant	89.1

AED	Labor Category	Work Days
	Consultant	45
	Junior Analyst	184.4
	Senior Analyst	266.8
	Senior Consultant	635.4