

**Grade 4 Technical Assistance Program Plan  
for Examinations Council of Zambia  
Diane R. Garavaglia, Ph.D.  
August 2002**

Contract GS-10F-0112J

Task Order No. 690-M-00-02-00001-00

EMIS and Related Activities

American Institutes for Research

USAID/Zambia

SO2: Improved quality of basic education for more school-aged children

IR 2.3: Improved information for education decision making processes

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# **Grade 4 Technical Assistance Program Plan for Examinations Council of Zambia**

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## Introduction

In 1999, Zambia's Ministry of Education (MOE) embarked upon an education reform program—Basic Education Sub-Sector Investment Programme (BESSIP)—to increase enrollment and improve achievement for the children of Zambia. As part of this reform effort, Zambia is faced with determining how to assess and evaluate pupil performance. However, MOE currently lacks reliable data to make informed decisions about pupil performance. In response, the United States Agency for International Development (USAID) has funded an Education Management Information System (EMIS) task order with the American Institutes for Research (AIR) to assist MOE to strengthen its capacity to collect, analyze, and report data on education and thus have the information necessary to make better informed policy decisions.

A specific task within the EMIS task order is to provide technical assistance (TA) to the Examinations Council of Zambia (ECZ). The focus of the TA is to further ECZ's capacity to design, analyze, use, and interpret test scores. ECZ has already begun developing competency tests at grade 4. However, it has expressed a need for technical support to build the assessment staffs' skills, knowledge and equipment to enhance the quality of competency tests and test analysis. Some of the areas they have expressed TA include: sampling design strategies; test construction; item analysis with specialized software; data analysis, report writing, and project monitoring and evaluation.

Through its recent work with ECZ, AIR has identified specific areas of immediate capacity building which will further ECZ's ability to design and use competency tests. (Note that ECZ also is involved in designing and providing teacher in-service training on continuous assessments. Continuous assessment is different from competency testing in its purpose, design, and interpretation. This activity plan is focused only on providing TA for competency testing methods.) The activities presented in this plan have been devised to provide ECZ with TA in enhancing the quality of competency tests it produces. And, because Education Broadcasting Services (EBS) has asked ECZ to produce a test that will allow EBS to evaluate student performance in the Interactive Radio Instructional (IRI) centers, the TA will also further ECZ's procedures for delivering assessments in alternative environments, such as IRI centers. Therefore, the plan has been prepared to assist both ECZ and EBS in developing their schedule of activities for all components of producing competency tests that can be used to evaluate the IRI program.

As seen in the table of program activities, ECZ, EBS, and AIR will work cooperatively to meet both offices' assessment needs, however, the overarching purpose of the TA is to foster capacity building (as outlined in the existing Scope of Work) for ECZ. In effect, the grade 4 literacy and

numeracy tests that will be prepared by following the activities listed below serves two purposes: 1) to allow ECZ to deliver tests to EBS, per EBS and ECZ's agreement, and 2) allows AIR to offer the TA that ECZ seeks in the area of testing. Each activity will require each office to serve in a leadership role and take ultimate responsibility to ensure that the activities are begun, implemented, and completed accurately and timely. ECZ and EBS need to negotiate which office will take the lead for each activity. AIR is responsible for the following activities:

- Activity 1
- Activity 3
- Reviewing work produced in Activity 11

In all other instances, AIR will provide consultation and advice for ECZ and EBS's consideration. ECZ and EBS have sole responsibility for conducting each activity, in a timely way, and making final decisions. In addition to the above activities, AIR has proposed workshops that will occur after the evaluation report is delivered (Activity 26). They will serve as a way to review the entire process that ECZ/EBS followed to generate the tests and produce the evaluation report, and to foster discussions about lessons-learned that will inform future test development activities for ECZ.

The schedule for producing a test for EBS's use in January 2003 is extremely ambitious. Nonetheless, EBS has determined that a grade 4 literacy and numeracy test needs to be administered in the IRI centers in January 2003. To meet this deadline, ECZ and EBS will have to complete a series of testing activities within a few months, which typically require at least a year. Thus, if deadlines are missed, meeting the ultimate goal of administering tests in IRI centers in January 2003 will be jeopardized. AIR will not assume responsibility for missed deadlines for which it was not listed as the responsible office or for final products (e.g., test papers, plans, evaluation report) ECZ/EBS is responsible for producing. AIR will not assume responsibility or guarantee to meet subsequent deadlines, if ECZ and/or EBS miss deadlines earlier in the plan that will ultimately affect AIR's ability to complete its work according the plan. AIR's role is to provide the TA, which ECZ has indicated it needs, using the IRI tests as the medium for providing the TA. It should also be noted that Educational Development Center, Inc. (EDC) will assist EBS with TA as required to meet the objectives set fourth in this workplan and make available funding as required to facilitate EDCs efforts to provided TA relevant to this workplan.

## Program Plan for Assessment and IRI Center Evaluations

Activity	Time Frame*	Responsible Office/Deliverable/ Date
<b><i>Review Existing Gr. 4 Items</i></b>		
1. AIR complete review of existing grade 4 test items. - Determine whether any existing Gr. 4 BCT items are valid for use in both GRZ schools and IRI centers - Identify items that are useable, that need to be modified and the number and types of new items that need to be written for both literacy and numeracy specifically for IRI program	Aug 23 – Sept 17 (ECZ/EBS delivers items by Aug 23)	AIR Technical memorandum documenting review  Item review checklists used during review.  Sept 13
2. ECZ/EBS reviews technical memorandum	Sept 18-20	ECZ/EBS/EDC provides comments to AIR
3. Based on results of Activities 1 and 2, AIR modify existing literacy and numeracy items and writes new items, <i>if necessary</i> , for IRI centers.	Sept 23 – Oct 11  To facilitate ECZ/EBS review of items, AIR will deliver items on a rolling basis.	AIR Numeracy and literacy items
4. ECZ/EBS conducts internal review of all items AIR modifies and writes in activity 3. ECZ/EBS decides on final version of items and makes all necessary changes on items.  AIR provides consultation.	Oct 7 – 18	ECZ/EBS Reviewed literacy and numeracy items  Oct 18
<b>Capacity Building Activities:</b> Roundtable discussion with ECZ and EBS representatives and possible conference call to AIR for consultation. Any questions prior to roundtable discussion can be e-mailed to AIR ( <a href="mailto:DGaravaglia@air.org">DGaravaglia@air.org</a> ) so that they can be addressed during the roundtable discussion.		

Activity	Time Frame*	Responsible Office/Deliverable/ Date
<p><b>Pilot Test Activities</b>  **ECZ/EBS needs to determine whether they will conduct a traditional pilot test or modified pilot test (e.g., focus group). This plan assumes a traditional pilot test.</p>		
<p>5. ECZ/EBS develop pilot test plan, The plan should address topics such as:</p> <ul style="list-style-type: none"> <li>- Survey or census administration</li> <li>- Sample size/representativeness (this informs number of pilot test forms that need to be printed)</li> <li>- Discussion about sampling designs</li> <li>- Dates</li> <li>- Other student data, such as demographic information</li> </ul> <p>Informational letters to districts/centers  -Test administration procedures</p> <p>AIR provides consultation.</p>	<p>Sept 2- Sept 13</p>	<p>ECZ/AIR  - Pilot test plan document</p> <p>Sept 13</p>
<p><b>Capacity Building Activities:</b> Roundtable discussion with ECZ and EBS representatives with conference call to AIR for consultation. Any questions prior to roundtable discussion can be e-mailed to AIR (DGaravaglia@air.org) so that they can be addressed during the roundtable discussion.</p>		
<p>6. ECZ Prints required number of pilot test papers for both literacy and numeracy using items approved in Activity 4.</p> <p>AIR provides consultation.</p>	<p>Oct 21 – Oct 25</p>	<p>ECZ  - Literacy pilot test papers  - Numeracy pilot test papers  - Evidence that pilot test papers have been copied.</p> <p>Oct 25</p>
<p>7. ECZ/EBS trains test administrators</p>	<p>Oct 23-25</p>	<p>ECZ/EBS</p>
<p>8. ECZ/EBS administers pilot test papers in IRI centers and regular schools</p>	<p>Oct 28 – Nov 1</p>	<p>ECZ/EBS</p>
<p>9. ECZ/EBS collect pilot tests from IRI centers and regular schools</p>	<p>By Nov 8</p>	<p>ECZ/EBS</p>
<p>10. ECZ/EBS conducts item analysis from pilot test administration (Item analysis includes a review of the pilot test items.)</p> <p>AIR provides consultation.</p>	<p>Nov 11 – 20</p>	<p>ECZ/EBS  - Item analysis results  - Documentation regarding modification of items</p> <p>Final version of items</p> <p>Nov 20</p>
<p><b>Capacity Building Activities:</b> Roundtable discussion with ECZ and EBS representatives with conference call to AIR for consultation. Any questions prior to roundtable discussion can be e-mailed to AIR (DGaravaglia@air.org) so that they can be addressed during the roundtable discussion.</p>		

Activity	Time Frame*	Responsible Office/Deliverable/ Date
<b><i>Live Test Paper Activities</i></b>		
<p>11. ECZ/EBS assembles draft versions of live test papers in both literacy and numeracy, based on results of Activity 10.</p> <p>Air reviews draft versions of live test papers.</p> <p>ECZ/EBS assembles final version of live test papers in literacy and numeracy.</p>	<p>Nov 20- 25</p> <p>Nov 26-28</p> <p>Nov 29- Dec 4</p>	<p>ECZ Draft version of final test papers in literacy and numeracy Nov 25</p> <p>AIR Comments on draft test papers Nov 28</p> <p>ECZ/EBS Final version of test papers Dec 4</p>
<p>12. ECZ/EBS modifies, as necessary, existing standardized test administration guidelines for live test administration in IRI centers.</p> <p>AIR provides consultation.</p>	<p>Dec 4</p>	<p>ECZ/EBS Draft administration guidelines Dec 4</p>
<p>13. ECZ/EBS, if necessary, adjust live scoring guidelines and procedures based on pilot test.</p> <p>AIR provides consultation.</p>	<p>Dec 4</p>	<p>ECZ/EBS Scoring guidelines Dec 4</p>
<p><b>Capacity Building Activities:</b> Between Nov 26 and Dec 4 a roundtable discussion with ECZ and EBS representatives can be had with a conference call to AIR for consultation. Any questions prior to roundtable discussion can be e-mailed to AIR (DGaravaglia@air.org) so that they can be addressed during the roundtable discussion.</p>		
<p>14. Directors of ECZ and EBS approve final test papers in literacy and numeracy, administration guidelines, and scoring guidelines.</p>	<p>Dec 12</p>	<p>Ministry of Education Memorandum of approval  Dec 12</p>
<p>15. ECZ prints required number of live literacy and numeracy live test papers</p>	<p>Dec 13-Dec 20</p>	
<p>16. ECZ prepares transport for live administration</p>	<p>Dec 13 – Dec 20</p>	

Activity	Time Frame*	Responsible Office/Deliverable/ Date
<i>Evaluation of IRI centers Research Plan (Note: These activities occur simultaneously as several of the above activities.)</i>		
<p>17. ECZ/EBS develop plan for conducting the evaluation. Plan should include topics such as,</p> <ul style="list-style-type: none"> <li>- Sample size/representativeness (information also informs the number of live test papers that need to be printed)</li> <li>- Discussion about sampling designs</li> <li>- Access and notification to centers</li> <li>- Information about other inputs variables</li> </ul> <p>ECZ prepares for data analyses</p> <p>AIR provides consultation.</p>	By Nov 29	<p>ECZ Evaluation Plan</p> <p>Nov 29</p>
<p>18. ECZ/EBS develop analysis plan for analyzing scores from test papers and other data sources. Plan includes statistical indices, disaggregation of data, plan to link (e.g., equate) test scores, etc</p> <p>ECZ prepares SPSS program code, based on analysis plan.</p> <p>AIR provides consultation.</p>	Dec 13	<p>ECZ/EBS Analysis plan document</p> <p>Dec 13</p>
<p><b>Capacity Building Activities:</b> Between Dec 26 and Dec 13 a roundtable discussion with ECZ and EBS representatives can be had with a conference call to AIR for consultation. Any questions prior to roundtable discussion can be e-mailed to AIR (<a href="mailto:Dgaravaglia@air.org">Dgaravaglia@air.org</a>) so that they can be addressed during the roundtable discussion.</p>		

<i>Conduct Test</i>		
19. ECZ/EBS trains test administrators	One week prior to live test administration date	
20. ECZ administers live test papers in literacy and numeracy in IRI centers.	Jan 13-17, 2003 or Jan 20-24 (consult with EBS to select optimal week)	
21. ECZ collects live test papers from IRI centers	One week after test administration data	
22. ECZ (or local statistician) analyzes test data (and other data sources collected during study), based on analysis plan.	Two weeks after test papers are collected	
23. ECZ writes draft evaluation report (Note: Some chapters, except the results and conclusion chapters, could be drafted in advance of this date.)  AIR provide consultation.	ECZ/EBS determines date	ECZ Draft Study Report
24. ECZ writes final study report and conducts joint-office approval process of report.	ECZ/EBS determines date	ECZ Final study report and approval process
25. Ministry of Education approves final study report	ECZ/EBS determines date	Ministry of Education Approval letter for final report
26. ECZ/EBS edits report based on Activity 23 and distributes approved study report to stakeholders.	ECZ/EBS determines date	ECZ Distribute final study report

<b><i>Additional Activities for Overall Programmatic Implementation</i></b>		
ECZ needs to develop an overall, detailed schedule of all assessment activities and associated deadlines to guide its work.	Immediately	
EBS needs to develop an overall, detailed schedule of all evaluation activities and associated deadlines to guide its work.	Immediately	

\* The dates in the program plan assume that work on the grade 4 test papers will begin no later than August, 2002.

### **Post-Evaluation, Capacity-Building Activities**

<b>Activity*</b>	<b>Time Frame</b>	<b>Deliverable</b>
1. AIR prepares and conducts a workshop and discussions about lessons-learned on “Test Design, Validity, and Item Writing” - Can include discussions about item banking	Within two months following receipt of final report	Training materials: - Handouts - Sample documents
2. AIR prepares and conducts a workshop and discussions about lessons-learned on on “Data Analysis and Validity” - Include characteristics of a good report	Within two months following receipt of final report	Training materials: - Handouts - Sample documents
3. AIR prepares and conducts a workshop on and discussions about lessons-learned on “Appropriate Use and Interpretation of Test Scores” - Can include a discussion about project monitoring and evaluation	Within two months following receipt of final report	Training materials: - Handouts - Sample documents

\* Capacity building will occur throughout the activities listed above through conversations and reviewing of materials. The workshops listed above serve as a mechanism to pull everything together that was done throughout the process of developing tests for the EBS and review lessons-learned with ECZ and EBS.

\*AIRs in-country rep will coordinate and facilitate capacity building activities between ECZ, EBS, AIR and EDC.