



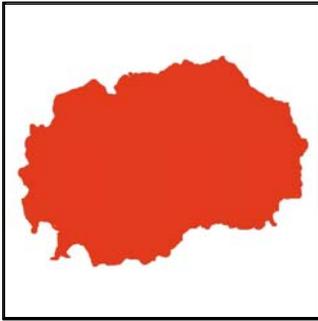
## USAID/Macedonia Secondary Education Activity, Monitoring and Evaluation Plan

January 2004

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EQUIP1: Secondary Education Activity (SEA)  
USAID/Macedonia and EGAT/ED  
SO 3.4: Students better prepared for employment through education programs

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## USAID/MACEDONIA SECONDARY EDUCATION ACTIVITY Monitoring and Evaluation Plan



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## Introduction

A quality basic education prepares learners for the challenges of life, including their transition from school to the workforce and active participation in civil society. For a country such as Macedonia that is striving to develop a modern economic infrastructure, primary education is not sufficient to achieve these goals. To prepare for a competitive, information-based economy, students need advanced analytical skills, a capacity to think critically, and an effective arsenal of approaches for solving problems. Secondary schools must therefore become more flexible to accommodate the needs of rapidly changing economic and social structures, and students must perceive an education as relevant to improve their lives.

The overall focus of USAID's Secondary Education Activity (SEA) is to help make students' experiences in vocational schools more relevant for their futures as productive workers and democratic citizens. The SEA team will address this focus by promoting more engaged, relevant classroom instruction, activities to prepare students for careers, and better managed, more flexible school administration. The framework also provides for the inclusion of other interventions as more is learned about the causes of low transitions between primary and secondary school as well as increased opportunities to involve businesses and communities in the educational process.

## I. SEA Monitoring and Evaluation Plan

This monitoring and evaluation plan is submitted to USAID to fulfill a requirement under the EQUIP1 Associate Award for this activity. This plan (1) explains how SEA objectives fit into the USAID results framework, (2) describes the role that monitoring and evaluation will play in the project life cycle, (3) outlines the technical approach to monitoring and evaluation for this project, including the expected timeline of activities for 2003-2004, and, (4) presents the performance monitoring indicators to be used in assessing progress toward and SEA objectives.

A separate section, at the end of this document, outlines AIR's plan for evaluating progress towards USAID/Macedonia's Strategic Objective 3.4.

### A. Strategic Approach to Monitoring and Evaluation

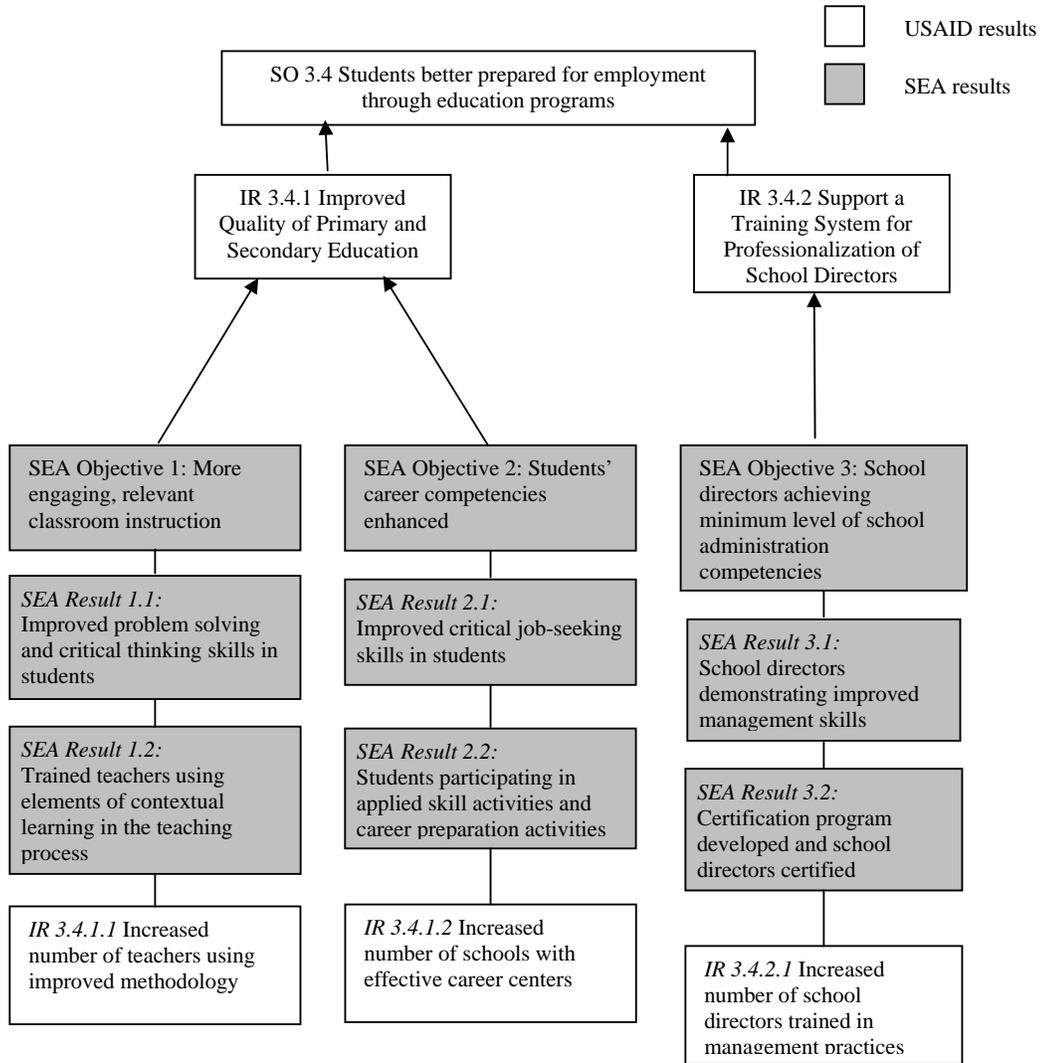
#### Results Framework

A prime objective of USAID/Macedonia's Education Program is to help students become better prepared for the workplace. This is indicated in USAID/Macedonia's Strategic Objective (SO) 3.4 "Students better prepared for employment through education programs." SEA project activities contribute to SO 3.4 via two Intermediate Results (IR). These are IR 3.4.1 "Improved quality and relevance of instruction at primary and secondary levels," and IR 3.4.2 "Support a training system for professionalization of school directors."

SEA activities may be separated into three areas of operation. First, SEA will train teachers in contextual learning methodologies. SEA will conduct workshops and training programs to instruct vocational teachers on how better to incorporate contextual learning practices into their lessons. Second, SEA will assist the Ministry of Education's efforts to develop a certification program for school directors. This will include devising an appropriate curricula and working to establish a permanent location for the certification program. Finally, SEA will be working to implement career development activities in schools—included in this is the establishment of career centers and activities such as virtual firms.

Figure 1 shows the relation between USAID's strategic objectives and intermediate results, and SEA's project objectives and results.

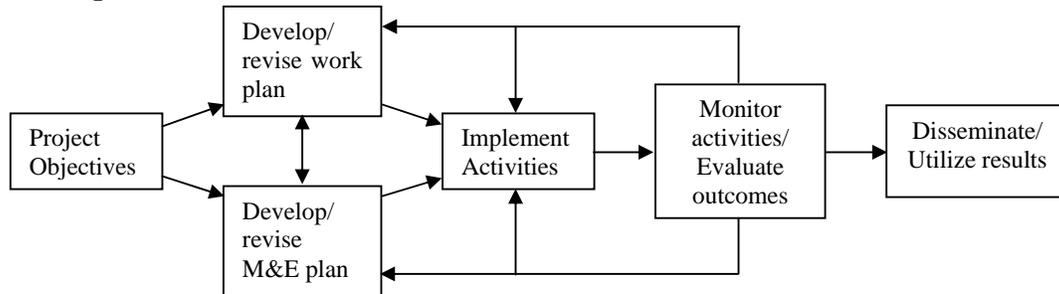
**Figure 1**



## Role of monitoring and evaluation

Monitoring and evaluation retain a critical importance throughout the life of a project. Figure 2 represents how monitoring and evaluation activities will engage with other project processes.

**Figure 2**



Monitoring and the effective use of feedback are critical to ensuring effective, responsive project management. Working from the initial annual work plan, the COP and project staff will begin to implement activities. Frequency of monitoring activities will vary by purpose. Regular meetings of project staff provide the opportunity to review how activities are being implemented, and how the staff are performing their respective duties. Such meetings allow challenges and problems to be discussed among a supportive group of peers who may be able to offer suggestions and provide new insights for tackling obstacles. Similarly, staff meetings are a time to share practices and strategies that are working well.

Consistent updates to and discussions with USAID, home offices, and other key stakeholders help to ensure that all parties continue to share a common vision, and are important for maintaining efficient allocation and provision of project resources. More formal, periodic evaluations of specific project activities are also crucial to understanding how well project goals and objectives are being met. These and other monitoring and evaluation activities all contribute to a concerted, continuous assessment of project performance. Moreover, they provide the information and tools that help to refocus efforts when writing successive annual work plans.

Just as information from monitoring and assessment activities will be an important input back into the project cycle, information and lessons learned will also be shared with other audiences in order to contribute to the wider effort of improving education, both in Macedonia, and in other countries in which USAID works. Along with project reports and other documents, the SEA website and SEA project site on the EQUIP1 website will be important gateways for sharing knowledge.

Successful monitoring and evaluation of the project depends on the work of many individuals. The chief of party, as the person coordinating project implementation, has a critical role. He oversees both the programmatic and financial elements of project operation in the field. He is also the prime contact with USAID and home office support staff. The chief of party plays a major role in facilitating continuous assessment among project staff, such as leading staff meetings. He also directs the process of work plan drafting and revision. Another key individual is the research, monitoring, and evaluation (RME) coordinator. Under the direction of the chief of party, this coordinator will identify and conduct monitoring and

evaluation activities, design instruments for collecting data, and maintain the database of information produced from these processes. Analysis of data collected is a coordinated effort between the chief of party, the content area coordinators responsible for the activities being evaluated, and finally the RME coordinator. The RME coordinator plays a unique role in supporting the content area coordinators, by providing the necessary instruments and supplementary analysis that are needed to assess program progress and suggest improvements. Cooperation and shared responsibility among all staff members is essential to successful monitoring and evaluation efforts.

## B. Technical Approach to Monitoring and Evaluation

The main goals of the monitoring and evaluation system are to provide feedback on implementation and to identify potential successes and problems as early as possible to facilitate timely adjustments to project operation. The following M&E plan is based on the assumption that monitoring and evaluation are different, but interrelated activities.

### Project Monitoring Tools

#### *Reporting*

Reporting is a critical tool for recording information on the project's progress, successes, and obstacles and for communicating this information to the individuals who need it—staff implementing and managing the project and USAID/Macedonia. The SEA project staff and home office support will work together to produce several types of reports, varying in frequency and content.

On a weekly basis, project staff will provide to the chief of party a brief summary of their activities. These weekly reports provide an important record of implementation activities. Moreover, they will be useful when compiling quarterly program reports. The Associate Award for this project stipulates that quarterly program reports will be written and submitted to USAID and will include the information described in 22 CFR 226.51 (d). This section requires a comparison of actual project accomplishments with the goals and objectives for the period, quantitative data on project outputs (if applicable), and (if appropriate) reasons why established goals were not met. Other pertinent information will be included as well, which may include discussions of obstacles or best practices, and copies of consultants' reports. Another important reporting function will be to provide USAID with data on program performance indicators. This will be done on an annual basis, to accommodate USAID's data reporting needs.

Financial reporting is a crucial element of effective program management. Precise and regular financial accounting procedures at both the field office and home office levels ensure high levels of transparency and accountability. Continuous budget assessment will be conducted by appropriate project staff in the Macedonia office and in the home offices. SEA's finance manager will provide monthly budget reports to the home offices of both SEA implementing organizations, the American Institutes for Research (AIR) and the International Reading Association. As prime contractor, AIR is responsible for providing quarterly financial reports as stipulated in the Associate Award for this project. In addition, a final financial report will be submitted, as specified by the Associate Award.

### *Database*

A project database will be developed in order to ensure accurate monitoring of project activities. The database will track most output and result indicators. The database will contain basic school information, activities that each school has participated in, and results from M&E activities conducted. The database will be used as a storage facility for project related information, to be used when reporting on project activities, and to provide a starting point for research activities.

### Project Evaluation

#### *Qualitative and Quantitative Studies/Interviews*

In order to monitor subproject activities effectively, evaluative studies, interviews and focus group discussions may be used, particularly at the beneficiary and project stakeholder levels. Such studies will chiefly be for internal consumption, and choice of scale and scope will reflect this. When evaluating activities such as workshops and seminars, our goal will be to gather information that will assist us in improving our methods and strategies. For this reason, useful questions to be asked when interviewing and surveying participants include, “What did you like most about this workshop/activity,” *and* “How might this workshop/activity be improved?” We will also emphasize attention to the benefits and consequences of the activities, not just their occurrence.

#### *Midterm and Final Evaluations*

A midterm project review will occur on or about the project’s thirtieth month. The purpose of the activity will be to reflect on progress in meeting project goals and in planning of the sustainability of project outcomes. The review will include facilitated meetings with all SEA staff as well as key stakeholders. Recommendations from this review will be included in the quarterly program report and reflected in revisions to the project work plan.

A final program evaluation and report will be produced at the project’s completion. The final report will include the information described in 22 CFR 226.51(d) covering the full life of the project.

### Timeline of Monitoring and Evaluation Activities

The following chart provides an overview of anticipated monitoring and evaluation activities that correspond to the SEA 2003-2004 work plan activities.

### Timeline of SEA Monitoring and Evaluation Activities

	2003			2004									
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
<b>1. Performance Monitoring Indicators</b>													
Development of instruments for selected indicators				→									
Collection of baseline data <i>(to begin upon the completion of instrument development)</i>													
<b>2. Reporting</b>													
Quarterly program reports		■		■			■			■			
Quarterly financial reports		■		■			■			■			
Weekly staff reports		→											
<b>3. Annual work plan</b>													
Review and drafting of new plan									→				
<b>4. Pilot Programs</b>													
Evaluate pilot programs									→				
<b>5. Database</b>													
Maintain and update database		→											
<b>6. Other M&amp;E Activities</b>													

C. Indicators for SEA activities

**SEA Objective 1: More engaging, relevant classroom instruction**

Result	Performance Indicator	Measurement Unit	Population	Data Source/ Collection Method	Frequency of Data Collection	Responsible person	Baseline	Year one target
<b>SEA Result 1.1:</b> Improved problem solving and critical thinking skills in students	Level of problem solving and critical thinking skills utilized by students	Average value	Final year students in SEA schools	Questionnaire, test, and/or observation (TBD)	Annual	RME Coordinator	TBD	TBD
<b>SEA Result 1.2:</b> Trained teachers* using elements of contextual learning in the teaching process	Percent of trained teachers* using elements of contextual learning in the teaching process	Percent	Teachers* in SEA schools	Questionnaire and observations	Annual	RME Coordinator	TBD	TBD
	Number of workshops held for use of contextual learning	Count	N/A	Project database	Annual	RME Coordinator	0	TBD
<i>IR 3.4.1.1:</i> Increased number of teachers* using improved methodology	Number of teachers* trained	Count	Teachers* in SEA schools	Project database	Annual	RME Coordinator	0	TBD

\* In addition to teachers, SEA may train school psychologists or school pedagogues, as these individuals can play a large role in introducing new teaching methods into the classroom.

## SEA Objective 2: Effective career preparatory activities

Result	Performance Indicator	Measurement Unit	Population	Data Source/ Collection Method	Frequency of Data Collection	Responsible person	Baseline	Year one target
<b>SEA Result 2.1:</b> Improved critical job-seeking skills in students	Measures TBD pending trip to Slovenia and strategic planning							
<b>SEA Result 2.2:</b> Students participating in applied skill activities and career preparation activities	Percent of students having participated in an applied skill activity*	Percent	Students in SEA schools	Survey/ Questionnaire	Annual	RME Coordinator	TBD	TBD
	Percent of teachers integrating career development activities into classroom instruction	Percent	Teachers in SEA schools	Survey/ Questionnaire	Annual	RME Coordinator	TBD	TBD
<i>IR 3.4.1.2:</i> Increased number of schools with effective career centers	Percent of schools providing four or more career development interventions to students**	Percent	SEA schools	Survey/ School records	Annual	RME Coordinator	0	TBD

Notes:

\*A goal of career centers in SEA vocational schools will be to provide students with opportunities to practice the skills they are receiving in an applied context while still in school. The types of activities may include: job shadowing, internships, participation in a virtual firm, participation in a vocational competition, participation in a school company, experience working at home.

\*\*Career development interventions will vary by school context and need. Interventions may include: interviewing and CV writing introduced into curriculum, presentations by business leaders, internet access to research careers online, introduction of virtual firms into curriculum, assistance in setting up supervised work experience programs, organizing vocational competitions.

### SEA Objective 3: Better managed, more flexible school administration

Result	Performance Indicator	Measurement Unit	Population	Data Source/ Collection Method	Frequency of Data Collection	Responsible person	Baseline	Year one target
<b>SEA Result 3.1:</b> Certification program developed and school directors certified	Measures TBD pending trip to Slovenia and strategic planning							
	Percent of school directors certified	Percent	Directors in SEA schools	MoE records	Annual	RME Coordinator	0	TBD
<b>SEA Result 3.2:</b> School directors demonstrating improved management skills	Measures TBD pending trip to Slovenia and strategic planning							
<i>IR 3.4.2.1:</i> Increased number of school directors trained in management practices	Number of school directors trained through certification programs	Count	Directors in SEA schools	Project database	Annual	RME Coordinator	0	TBD
	Number of non-school directors trained through certification programs	Count	Teachers or administrative staff in SEA schools	Project database	Annual	RME Coordinator	0	TBD

## D. Further Steps

At present, the specific form and content of project interventions are unclear. Much will be determined following the planned trip to Slovenia, scheduled for January 19-24, during and after which project staff and key stakeholders will engage in strategic planning for the project activities. It is expected that several more performance indicators will be developed once the details of project activities are decided.

Furthermore, instruments for collecting necessary data will need to be developed. These will be developed by the RME Coordinator in conjunction and in cooperation with AIR home office staff.

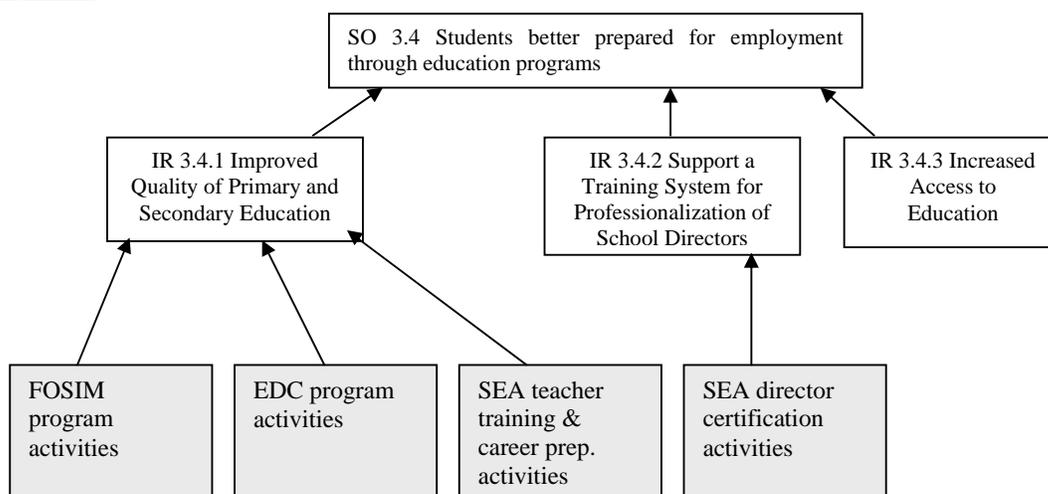
## II. Plan for the Measurement of Strategic Objective 3.4

Since independence in 1991, the people of Macedonia have struggled against the many challenges that accompany a shift to a market-based economy. In particular, low employment stands as one of the greatest social problems resulting from this change. A key effort of USAID's Macedonia mission is to help tackle the problem of unemployment through education efforts aimed at developing a skilled workforce, relevant to the needs of a modernizing, and competitive, global economy. This is reflected in the mission's Strategic Objective (SO) 3.4 – "Increased number of youth better prepared for employment through education activities." Several USAID-sponsored projects contribute to this objective, among which SEA is a prime contributor. Indeed, employability is a complex quality, influenced by many factors.

Employers look for a range of skills and characteristics when hiring employees. Key among these are leadership skills, creative thinking, the ability to solve problems and to communicate ideas. Among vocational students, technical skills are also crucial. Yet finding employment is not just about the job-related skills a person possesses, but also the ability to effectively seek jobs and market oneself to employers. Several programs receiving USAID education funds contribute in different, but complementary ways to these needs and challenges, including FOSIM, EDC, and the SEA project.

Among these projects receiving support from USAID, AIR, as prime contractor for SEA, has the unique responsibility of collecting data on progress toward SO 3.4 for all projects. USAID/Macedonia has outlined three intermediate results through which to measure progress toward the strategic objective. These three intermediate results are shown in Figure 3. The activities of both FOSIM and EDC will contribute to IR 3.4.1 "Improved Quality of Primary and Secondary Education." The activities of the SEA project will contribute to both IR 3.4.1 and IR 3.4.2 "Support a Training system for Professionalization of School Directors." None of the three projects contribute to IR 3.4.3.

**Figure 3**



Given this framework, collective progress toward SO 3.4 will be assessed by the extent to which all programs' activities contribute to or promote achievement of either IR 3.4.1. or IR 3.4.2. To the extent that USAID would like a single measurement for SO 3.4, a composite variable may be constructed from indicators gathered for the two IRs. However, such a composite variable would provide less compelling evidence for progress than would closer evaluation of the two IRs independently.

Of the two intermediate results, measurement of IR 3.4.2, "Support a Training System for Professionalization of School Directors" will be a more straightforward process, for two reasons. First, only one of the three programs is working toward this result. Second, measurement of this intermediate result will depend primarily upon activity-based indicators, seeking to answer the questions "how" and "to what extent" the SEA project has supported the processes of director training and certification. These data will be readily available from the SEA project database and SEA monitoring and evaluation activities.

Measurement of IR 3.4.1, "Improved Quality of Primary and Secondary Education" will necessarily be a more complex process, as it is essential that the instrument used be able to capture the efforts of each project. Moreover, each of the three projects, FOSIM, EDC, and SEA are geared toward different aspects of educational quality. Education quality has myriad dimensions, and when thinking about how education impacts students' employability it is necessary to focus on the key knowledge, skills, and activities Macedonian students need to succeed in the workplace. As identified by the objectives of the three projects, these include critical thinking and problem solving skills, literacy in information and communications technology (ICT), and access to career information services and work-based learning opportunities.

These elements interact and support each other, creating a reinforcing web of competencies. For example, cognitive skills such as critical thinking and problem solving are integral to achieving ICT literacy. Computers and communications technology play an increasing role in the modern economy, and familiarity with and access to computers and the Internet provide students with the tools for exploring job markets, learning about their respective job fields, and becoming more familiar about the global context in which the Macedonian economy operates. In addition, ICT literacy is an important skill when participating in activities such as virtual firms. Participation in work-based learning, in turn, creates opportunities for students to practice and improve on their ICT, critical thinking and problem-solving skills.

When designing the instrument to assess these skills and activities, AIR will be able to draw on several existing frameworks and instruments for defining and testing the constituent competencies. These may include the OECD's Programme for International Student Assessment (PISA)<sup>1</sup> framework for problem-solving knowledge and skills and the Educational Testing Service's (ETS)<sup>2</sup> framework for ICT literacy.

To illustrate, the PISA 2003 framework provides a useful system for delineating and measuring the various components of problem solving. Problem-solving skills are a fundamental educational objective that cut across curricula, permitting students to engage with knowledge, by integrating ideas and concepts, and then applying that knowledge to real situations and problems. The act of problem solving demands both logical thinking and

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<sup>1</sup> OECD (2003) *The PISA 2003 Assessment Framework – Mathematics, Reading, Science and Problem Solving Knowledge and Skills*.

<sup>2</sup> Educational Testing Service (2002) *Digital Transformation: A Framework for ICT Literacy*.

analytic reasoning. With respect to employability, good problem-solving skills increase students' flexibility—making them efficient learners who can adjust to different employment situations. PISA identifies three types of problem solving. These are decision-making, systems analysis, and troubleshooting. Across all three types of problem solving, a number of processes are identified that provide a structure for examining student work, namely:

- understanding the problem,
- characterizing the problem,
- representing the problem,
- solving the problem,
- reflecting on the problem, and finally,
- communicating the problem solution.

In addition to providing a system for understanding and assessing the various components of problem solving, PISA 2003 also provides a series of items, from which the AIR team may choose to draw upon when designing the assessment instrument.

In a similar manner, the ETS framework for ICT literacy provides a useful way of understanding students' abilities to utilize ICT resources. ICT literacy cannot be understood solely as the mastery of technical skills, but rather the ability to access, manage, integrate, evaluate, and create information. By paying attention to these component competencies it is possible to distinguish between students who are passive users of technology and those who are able to actively use ICT as a tool for accomplishing higher order goals and objects. The ETS framework also provides sample items.

The instrument to be designed by AIR will include items to gauge each of the key skills and activities identified. This instrument will be administered to a sample of students in schools receiving interventions from any of the three projects. Both FOSIM and EDC are working in primary and secondary schools, while SEA is focused solely on secondary schools, and specifically schools with a vocational element. Given the ultimate intent of measuring students' better preparedness for employment, the most appropriate population will be those students in their final years of secondary school. It is not the aim of assessment to measure the progress of any particular cohort of students, or any particular school. Disaggregating data by the types of activities present in students' schools will provide evidence of the impact of the three education projects on educational quality.

The process of designing the instruments for measuring the two intermediate results will begin following the approval of this monitoring and evaluation plan. Sufficient time will be allocated to allow for proper development of instruments. A key concern that will guide this process is to provide valid and replicable measures that can be used in each subsequent year. Prudent and carefully thought out initial choices are therefore critical.