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STRENGTHENING EDUCATION MANAGEMENT IN GEORGIA

EDUCATION MANAGEMENT PROJECT
FINAL REPORT

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LIST OF ACRONYMS

BSU	Batumi State University
EMIS	education management information system
EMP	Georgia Education Management Project
ERC	education resource center
GIS	geographic information system
GPS	global positioning system
IDP	internally displaced person
ISU	Ilia State University
IT	information technology
M&E	monitoring and evaluation
M.Ed.	master of education
MES	Ministry of Education and Science
PPEPD	principal performance evaluation and professional development
SIS	student information system
TPDC	Teacher Professional Development Center
UCLA	University of California at Los Angeles
USAID	U.S. Agency for International Development

EXECUTIVE SUMMARY

Beginning in 2003, Georgia launched an ambitious reform agenda to transform its education system to improve access to high quality education for children across the country. Early reforms included decentralizing many functions of the Ministry of Education and Science (MES) to schools and regional Education Resource Centers (ERCs). These and other reforms resulted in increased autonomy of schools and universities and empowered local educators and communities to take a leadership role in education; however, the reforms also ushered in new challenges inherent in managing a decentralized education system at the national, district, and local levels.

EMP Key Results by the Numbers

- 145 students enrolled in ISU's M.Ed. program and 60 graduates during the life of the project
- Strengthened the capacity of 2298 school principals across Georgia to serve as more effective stewards of their schools
- Trained 280 ERC staff members on education resource management and administration
- 20.6% increase in funding for rural schools compared with 2009 baseline levels
- Established of a 5-portal Education Management Information System overseen by the MES to promote data-driven policy making

Against the backdrop of these reforms, USAID launched the three-year, $5.7 million Georgia Education Management Project (EMP). EMP was designed to strengthen the management capacity in the education sector through the establishment of an education management training program for administrators and through support for necessary policy and administrative reforms. The project pursued this mandate by working to achieve the following two objectives: (1) to improve the long-term institutional capacity of Georgia to better manage the education system and lead its transformation; and (2) to ensure the effectiveness of education policies on management, finance, and accreditation[1] through support to MES, MES educational agencies, and ERCs.

EMP structured its implementation approach in accordance with a logical framework, depicted in Exhibit 1 below. This framework guided the design of activities and ensured that the project's investment and allocation of human and financial resources yielded intended results and overall project impact.

Exhibit 1. Georgia Education Management Program Logical Framework

IMPACT: Improved quality of social services	
OUTCOME: Management capacity exists within the government to ensure provision of quality services	
Output 1: Education workforce skills developed	**Input 1.1:** M.Ed. administration program established at ICU
	Input 1.2: Short courses in education administration developed for education professionals
	Input 1.3: Short courses developed for ERCs to increase their capacity in resource management and administration
	Input 1.4: Research program established in education administration master's degree program focusing on MES priorities
Output 2: Regulatory and policy environment strengthened	**Input 2.1:** School financial capacity strengthened
	Input 2.2: Decentralized management systems empowered through greater responsibilities of ERCs and other regional-level education units of the government of Georgia in education planning and management
	Input 2.3: EMIS further developed to provide data for decision makers

[1] EMP received a stop-work order on all accreditation work.

	Input 2.4: Accreditation standards developed
	Input 2.5: System established for increased dialogue between MES and non-school actors regarding reforms and quality of education

By the end of the project, EMP achieved all life of project targets. A summary of the key accomplishments achieved under each objective is provided below.

Objective 1 Key Results

- Established a master of education administration (M.Ed.) program at Ilia State University (ISU)
- Facilitated the enrollment of 145 M.Ed. students through promotional activities and scholarships
- Established a research program within ISU's M.Ed. program, the results of which include 23 group action research projects and 41 policy papers written by M.Ed. students during the life of the project.
- Facilitated long-term partnerships between ISU and EMP subcontractor, UCLA, and between the education departments of ISU and Batumi State University (BSU)
- Trained 2298 school principals in financial management, effective school leadership, and principal standards
- Strengthened the capacity of 280 ERC staff members to increase their human and financial resource management skills to improve education management at the regional level

Objective 2 Key Results

- Helped the MES develop a school financing scheme that provides for more equitable funding for schools across Georgia. EMP's support contributed significantly to a 20.6 percent increase in funding for under-served rural schools.
- Supported Georgia's decentralization process by empowering ERCs to more effectively support schools and ensuring school principals understand and have the skills to meet the ministry's expectations for their performance
- Developed an education management information system (EMIS) capable of collecting and analyzing data to enable the MES to make data-driven decisions on the best approaches to promote education quality throughout the system

Report Structure

This report is divided into five chapters. Chapter 1 provides a brief overview of the country context in which EMP worked. The chapters that follow detail the results achieved under each of the project's four major components. The report concludes with an overview of EMP's impact on the management of Georgia's education system.

CHAPTER 1: COUNTRY CONTEXT

EMP coincided with wide-sweeping reforms already underway in Georgia. In 2005, Georgia passed a Law on General Education that altered the manner in which schools were run by decentralizing many functions to schools. Under this law, schools are established as independent legal, public entities that are responsible for many administrative functions formerly housed at the MES or local education departments. In this model of decentralization, in which schools manage themselves autonomously, each school is governed by a board of trustees (composed of teachers, parents, high-school students, and a representative from the local government) that is responsible for authorizing financial expenditures and local implementation of the national curriculum. The 2005 law also abolished local government education departments, replacing them with local ERCs responsible for collecting data, organizing training and workshops for school staff, and overseeing school board election processes.

Through the implementation of this law, Georgia has made great strides in putting education into the hands of local educators and parents while upholding the role of the MES as the steward of educational institutions. However, the rapid pace of reform has also led to both successes and challenges in managing a decentralized system at the national, district, and local levels — and, at times, to the de facto recentralization of certain management authority. EMP was designed to build on those successes and address those challenges by strengthening the management capacity in the education sector.

The project had two objectives. First, to realize the goals of this ambitious decentralization plan, Georgian education administrators outside the central ministry — including school principals and ERC leaders — needed to take on new responsibilities that required they learn more robust and autonomous management skills. By helping Georgians establish an M.Ed. program and in-service training for active administrators, EMP improved Georgians' long-term institutional capacity to better manage the education system and lead its transformation.

Second, to flourish under the country's school-autonomy decentralization scheme, schools across Georgia need support in at least three areas:

1. A funding formula that provides equitable education to all Georgian students given each community's particular circumstances (i.e., dense or sparse population; rural, urban, or mountain location)

2. ERCs that are empowered to support schools effectively yet are not overburdened with other responsibilities, and principals who understand and have the skills to meet ministry expectations of their performance

3. A way to effectively collect and communicate information about school performance (student, financial, scholastic, etc.) so the MES and local actors can make data-driven decisions about how to promote education quality throughout the system

To achieve these goals, EMP worked to ensure the effectiveness of education management, finance, and community participation policies through support to the MES, MES educational agencies, and ERCs.

CHAPTER 2: MASTER'S OF EDUCATION ESTABLISHED AT ILIA STATE UNIVERSITY

To build the skills of the education workforce in Georgia's decentralized system, EMP helped ISU design and launch a masters' program in education administration. Professors from UCLA helped ISU professors develop new curricula and new reading materials and trained ISU faculty in lesson planning, interactive teaching strategies, and incorporating outside resources into instruction.

During the life of the project, three cohorts of students (145 at project's end) enrolled in the M.Ed. program and 60 students graduated from the program. Some 90 percent of graduates have gone on to work in the education sector.

Key Results

145 students enrolled in ISU's M.Ed. program

60 graduates of M.Ed. program from Cohorts I and II

90 percent of graduates now work in the education sector

2 accredited M.Ed. programs established with project support (at ISU and the joint ISU-BSU program)

9 foundational education management texts translated

1 academic writing manual created

2 annual ISU education management conferences held

Designing Program Content

With UCLA's assistance, ISU faculty developed 18 courses covering four key areas: research skills, application of theory in practice, the social and political context of education, and professional courses (including leadership and management). The hallmark of the program is its focus on action research. Master's students collaborate with counterparts at a partner school to study and devise solutions to specific problems that schools face. These included simplifying lesson planning for teachers, improving teaching of writing, and boosting teachers' collaboration in lesson planning.

To supplement this curriculum, EMP helped complete master's thesis guidelines and an action research handbook, translated important education management and leadership texts, and formalized procedures for administering the M.Ed. program.

ISU's approach to the master's thesis — the culminating academic activity for the M.Ed. students — offers students a real-world experience in collaborative project development that will be required of them as education administrators and leaders while allowing ISU professors to evaluate individual student performance. EMP staff supported ISU in developing guidelines that allow students to conduct action research alone or in groups of up to three. This arrangement is an exciting innovation in higher education in Georgia (and in the world). ISU expects that this focus on collaborative action research will help distinguish it nationally and regionally as a leader in the field of education.

Given the foundational role of action research in students' second-year coursework and master's theses, EMP supported ISU in developing a research handbook that reflects the curriculum of the research series and details the action research component. In addition, an action research protocol outlines the development of student action research projects, aligns action research with thesis development,

advises professors on organizing research groups at schools and other educational institutions, and suggests ways to connect students' academic interests to the needs of host institutions. As the first Georgian university to make action research a key element of a master's program, ISU anticipates that this focus will close the gap between the practice and study of education while enabling teachers and administrators to make research-based improvements within their institutions.

To provide ISU students the latest thinking in education management, EMP funded the translation of nine foundational texts (listed at right) and multiple readers (more than 820 pages of articles). Some education management concepts in these books had never been translated into Georgian before. Therefore, EMP convened several workshops for translators and created an online terminology forum to ensure consistency across translations. This activity created a foundation of Georgian-language academic literature, a critical element in developing the field of education management and leadership in Georgia.

Nine Foundational Texts Translated

Louis Cohen, Lawrence Manion, and Keith Morrison. *Research Methods in Education,* 6th edition. New York: RoutledgeFalmer, 2007.

Kate Turabian and Wayne Booth. *A Manual for Writers of Research Papers, Theses, and Dissertations: Chicago Style for Students and Researchers,* 7th edition. Chicago: University of Chicago Press, 2009.

Wayne Hoy and Cecil Miskel, C. *Educational Administration: Theory, Research and Practice.* New York: McGraw-Hill, 2001.

Robert Owens, Thomas C. Valesky. *Organizational Behavior in Education: Adaptive Leadership and School Reform,* 10th edition. Prentice Hall, 2010.

Lee G. Bolman and Terrence E. Deal. Reframing Organizations, 4th edition. San Francisco: Jossey-Bass, 2008.

Peter G. Northouse. *Leadership Theory and Practice,* 4th edition. Thousand Oaks: Sage, 2007.

Carlos Torres, *Education, Democracy and Multiculturalism: Dilemmas of Citizenship in a Global World.* Rowman & Littlefield Publishers, 1998.

Thomas J Sergiovanni. *The Principalship. A Reflective Practice Perspective,* 6th edition. Allyn & Bacon, 2008.

Gorton, Richard and Judy Alston. *School Leadership and Administration: Important Concepts, Case Studies, and Simulations.* McGraw-Hill, 2008.

EMP also developed a program administration guidebook to document procedures for overall program management. The guidebook includes procedures for developing new courses and guidelines for monitoring and evaluation, revising courses (using methods such as semi-annual faculty reviews), monthly faculty meetings, course monitoring, and evaluation indicators for student performance. ISU accepted all these and incorporated them into current management of the program. In Year 3, EMP supported ISU in obtaining accreditation from Georgia's National Center for Educational Quality Enhancement for the M.Ed. program.

Supporting Improved Academic Writing

EMP's evaluation of the M.Ed. program following its first year revealed that students were not always adequately prepared for academic writing. To address this problem, EMP worked with ISU instructors to focus on writing quality in classroom assignments. The program also worked with ISU to develop a Georgian language writing style manual. Drawing from the *Chicago Manual of Style,* it is the first of its kind in Georgian. To develop the manual, EMP supported a group of experts from ISU, USAID, and EMP in an academic style working group. The group consulted a translated version of Kate Turabian's *A Manual for Writers* (which is based on the

Chicago Manual), faculty from other ISU departments, the publisher of ISU's academic journal, and other outside journals. The manual's seven chapters focus on the writing styles appropriate to seven types of documents that are essential to the university: books, articles, theses and dissertations, academic reviews, project reports, presentations, and academic correspondence. Each chapter is divided into three main sections that provide guidance on format, structure, and reference citation.

Developing the Skills of ISU's Faculty

During Year 2, EMP and UCLA continued to build capacity at ISU to deliver and administer a world-class graduate program in education administration and leadership. A key part of EMP's Year 2 approach was to use faculty meetings to allow ISU personnel to drive M.Ed. decision-making. Over the course of the year, project staff stepped back and ISU faculty assumed responsibility for daily program decisions and functions, relying on project staff for advice but not for leadership. In this context, EMP and UCLA provided ISU instructors with support related to preparing effective syllabi, selecting reading materials, creating class assignments, and developing sound student evaluation rubrics. UCLA staff also held professional development workshops on addressing attendance and tardiness, aligning the syllabus with instruction, using appropriate pedagogical strategies, creating a learning environment, writing effective dissertations, and conducting action research at schools.

EMP and UCLA also led the American Education Administration Training and Practices Observation Tour for nine professors from the Ilia, Tbilisi, Batumi, and Kutaisi state universities; two students from the USAID-funded ISU M.Ed. program; and two school principals participating in the M.Ed. practicum program. The study tour enabled participants to investigate how UCLA manages its M.Ed. program and to meet and network with U.S. school principals to learn the skills that help them succeed in their day-to-day work. The tour also helped ISU faculty to learn more about managing research at an internationally recognized research-oriented university.

Promoting Access to the M.Ed. Program

Several students dropped out during the first year of the master's program because they did not receive state funding for the program and could not continue without financial support. It became clear that many future students would experience the same predicament. To address this problem, EMP allocated funds for scholarships at ISU during Years 2 and 3 of the project. EMP worked with ISU to develop administrative procedures for overseeing the scholarship program (including evaluation rubrics for selecting recipients and evaluating application documents). EMP provided partial and full scholarships to nearly 50 students.

As another way to increase access to the M.Ed. program, EMP supported ISU in designing courses in alternate formats, including online. As the university broadens the reach of the program, it sees online formats as a key tool; the online program was quite successful, and ISU plans to continue developing online courses as well as those that use a blended face-to-face and online approach. ISU now requires all M.Ed. classes be recorded and uploaded to the university's distance learning portal.

Partnering with Batumi State University

In Year 2, EMP organized a study tour that brought staff from ISU, BSU, and other universities to UCLA to observe its education management program. Subsequently, BSU and ISU decided to create a joint program that could make ISU's course materials available to BSU students. EMP and ISU staff trained BSU faculty to deliver some courses; and others, delivered by ISU faculty, are available to BSU students online. ISU also provided BSU several policy instruments that it could incorporate into its practices to improve its overall program management — including guidelines for developing an effective syllabus, tools to monitor the effectiveness of departmental curricula, and support related to attracting applicants to the program. Development of this joint program expands EMP's impact far beyond the capital to Georgia's western shore.

Reaching Out to the Education Community

With ISU and UCLA, EMP organized a number of events to support increased understanding of education management issues among education stakeholders. During the project's three years, EMP sponsored public lectures by UCLA and ISU professors on education administration and leadership topics. In addition, in Years 2 and 3, EMP held the first two annual ISU Education Management Conferences in Tbilisi. The goal of the conferences was to provide each graduating cohort a forum in which to present their action research, advertise the M.Ed. program to broader audiences, and motivate public and private schools to become active partners in action research. Each event was attended by some 200 students, faculty, donors, and education management practitioners.

Finally, in Year 2, EMP worked with BSU and UCLA to hold an education management summer school to launch BSU's new M.Ed. program. UCLA and ISU faculty co-taught education management courses with seven BSU faculty members to build the skills of BSU professors to teach the courses.

Tying Masters' Research to Real-World Policy Challenges

As a part of the M.Ed. curriculum in its second year, ISU — in consultation with EMP and UCLA — changed graduation requirements from requiring individual thesis papers to group-based thesis development based on action research projects in schools. ISU signed MOUs with schools that were willing to host students doing action research. As a result of the change, 21 students of Cohort I and 44 students of Cohort II were grouped into teams of three and worked closely with schools and other education institutions. With this practical, collaborative approach, ISU's M.Ed. Cohort I In addition, ISU M.Ed. students from Cohort II wrote 41 policy papers as part of the Policy Development Course. The ISU Graduation Committee reviewed these policy papers in addition to the Action Research projects, and these papers helped students fulfill graduation requirements.

Students produced 7 action research reports and Cohort II students produced 16 such reports for a total of 23 reports, which were presented at the ISU M.Ed. Annual Conferences on June 22, 2011 (for Cohort I) and May 29, 2012 (for Cohort II).

Chapter 3: Improving the Effectiveness of Georgia's School Funding Formula

In 2005, Georgia initiated large-scale reforms designed to increase local control over education while reducing corruption, inequitable distribution of educational funds, and lack of transparency in distributing those funds. To increase effectiveness, efficiency, equity, and transparency in funding, the MES introduced per-student voucher funding that included three rates based on geography (for schools in mountain, rural, and urban areas).

Key Results

- Number of deficit schools decreased 91 percent after implementation of revised funding formula
- Per-student funding for rural schools up 20.6 percent, while per-student funding for urban students decreased only 3 percent
- 40,000 nonexistent students removed from student count, thereby aligning funds distribution with realistic education needs

By 2009, the ministry had recognized that the primary goals of the formula — effectiveness, efficiency, equity, and transparency — were being eroded by several factors. Perhaps the most significant was the practice of deficit funding. While the government had recognized that additional funding might be needed for some schools (particularly small ones, which lacked economies of scale), by 2009 the number of schools seeking additional funds to clear deficits was more than 50 percent of the total. Clearly, the system was neither effective nor transparent. In addition, decreases in the number of students attending small schools exacerbated the disadvantages that small schools already faced in the funding system.

The government of Georgia sought technical assistance from USAID to address these problems. In response, EMP staff worked closely with MES personnel to revamp the funding formula so it was based on curriculum requirements, statutes governing school personnel, and information about expenditures reported by schools. In addition, EMP developed collection systems to bring data from the schools to the ministry and trained personnel throughout the system to ensure the reliability of the data collected. As a final key intervention in improving school funding, EMP supported training for all principals in the country to improve their ability to manage the funds their schools receive.

Collecting Basic Data about Expenditures

An important aspect of revising the formula and managing it in the future is gathering accurate information from schools about student numbers and actual expenditures. In response to the ministry's request for a system through which it can collect reliable data about schools, EMP helped develop a five-database portfolio (discussed in detail in Chapter 5) that would capture information on schools' annual budgets, state voucher and other income, and quarterly and annual expenditures. Among other things, the system

Saving Money Through Verified Data

One function of the EMP-supported five-database portfolio was to collect information from schools about their enrolled students. EMP helped cross-check this data against that held by the Civil Registry Agency. As a result, the MES identified 40,000 student entries in its databases that were either duplicates or errors (determined after the cross-check with the agency and checking with the school). This discovery freed up money previously allocated due to data entry errors to fund the education of students currently in school.

collected student enrollment information and verified it against the Civil Registry Agency (see box above).

EMP supported development of the Web-based database and worked with the MES to develop budget forms that schools and ERC staff would use to collect data for entry into the new financial database. EMP also helped develop policy guidelines for use of the new forms and database. The forms are filled out by schools and entered into the database. However, in a process designed to guard against data entry errors, staff at the regional ERCs must review the forms and data before they are cleared to enter the system and be visible to other users.

Training Key Personnel to Collect Reliable Data

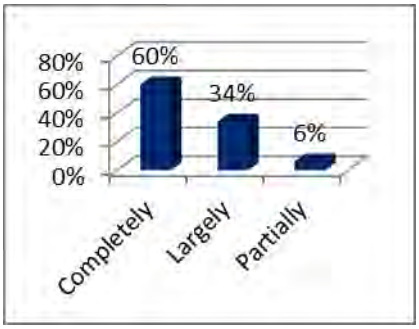
To promote collection of accurate and reliable data, EMP supported broad training of those involved in supplying data to the databases. EMP targeted three groups for training: MES database administrators, ERC staff (who verify and approve the entered data), and school staff.

To support ERC staff in implementing the new funding formula (discussed in the next section) and financial management guidelines for ERCs issued by the ministry, EMP supported training for ERC heads and financial managers. The training activities were designed to ensure that ERC staff had the capacity to fully support schools as they began to take more responsibility for managing their finances. Training covered the following topics:

- Overview of the new funding formula and its intended consequences
- ERCs' role in conducting financial oversight of schools and supporting successful implementation of the revised funding formula
- The new financial information software and the importance of accurate data collection and analysis
- School finance management (budgeting and finance analysis)
- New electronic procurement regulations and procedures

EMP also included staff from the ministry's regional coordination, budgetary, and procurement divisions to ensure sustainability of the new policy. Over the life of the project, EMP trained 280 ERC staff and another 15 ministry staff. The ERC training participants enthusiastically endorsed the training and expressed overall satisfaction with the program (see chart at right.)

Findings of Satisfaction Survey of ERC Training Participants



To ensure the training was effective, EMP monitored participants to see if they could work effectively with the new formula and financial database. In general, this seemed to be the case. While 96 percent of those surveyed reported that they were using the school revenue and expenditure forms developed by the project, 100 percent reported that the forms were easy to complete and useful. All ERC staff reported that their financial specialists gave detailed instructions to schools on filling out the financial forms; almost all (98 percent) reported that they had collected all requested financial

information from schools. A slightly lower number (88 percent) reported that they always reviewed financial data submitted by schools, while the remaining 12 percent said they did so only if the data seemed problematic. The majority of respondents (62 percent) said the introduction of the collection forms and the financial database had reduced their workloads, as they no longer had to fill out the balance sheets reflecting school financials by hand.

Training Principals to Manage School Finances More Effectively

To supplement the revision of the funding formula to make it more effective and equitable, EMP staff worked directly with principals — who manage the funds delivered by the formula — to improve their ability to effectively steward educational funding. EMP supported the development of a multi-day course for principals on financial management. The course materials were based on a range of background materials, including the textbook on school budget formation from USAID's General Education Decentralization and Accreditation project and the budget form prepared by EMP. Materials include PowerPoint presentations, exercise sheets, an Excel budgeting tool that is compatible with the database portfolio, and review questions to ensure participants have a strong understanding of the core financial management topics (see box above).

Financial Management Training Topics

- Budget planning
- Budget approval
- Finance staff management and delegation of authority and responsibilities
- Financial procedures
- Budget execution
- Procurement planning and new electronic procurement regulations and procedures, process, and reporting
- Budget monitoring

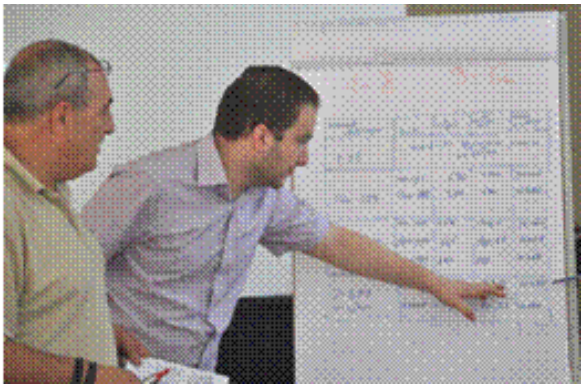
Over the life of the project, EMP trained more than 2,200 principals in school financial management. Participants reported that they found case studies, role playing, interactive presentations, group discussions, and testing the most effective parts of the training. The majority of principals also recommended providing these training activities to school accountants. As a result of the training, most participants concluded that monitoring school finances is an essential part of their work that should not be viewed as an extra activity.

Revising the Funding Formula

The main purpose of formula funding is to distribute scarce resources in a manner that allows schools to meet the needs of their students by providing equitable resources to schools to fulfill their educational mandate for all children while also providing incentives for school to use these funds efficiently. To achieve this goal in Georgia, EMP collaborated with MES to create a funding formula that provided

(From left) EMP Consultant Data Gochashvili, Deputy Minister Giorgi Chakhnashvili, and Budget Division Head Lasha Saginadze work on revising the funding simulator.

schools with per student funding based on multiple factors. The ultimate goal of the revision was to create a funding formula that would determine the calculated need of schools based on school circumstances and demographics and then translate this data into a voucher-based funding scheme. Maintaining the voucher element to the funding system was a critical piece as the government wanted to maintain the incentives for schools to minimize costs and maximize parent and student satisfaction that are associated with voucher funding models. The formula includes factors for those students who require more resources (e.g., ethnic groups, students from low socioeconomic levels, and special-needs students).



Lasha Saghinadze, head of the MES budget division, discusses the new funding formula structure with the EMP team.

The national curriculum requirements are at the core of Georgia's revised funding formula. Therefore EMP and MES staff first calculated the number of teachers needed — based on reported enrollment, maximum recommended class size, and regular full-time work hours — to meet curriculum requirements. The resulting number was multiplied by a salary that is close to the highest possible for teachers according to statute. Thus, the funding formula accounts for the fact that each school has unique circumstances and requires slightly different staff configurations, even with the same number of enrolled students. Each curriculum factor allowed for flexibility such as higher than average salaries and class sizes within the maximum recommended by statute.

Once the formula for establishing schools financial needs was established, the project worked with the ministry to translate this data into a voucher funding model. The goal was to create as few voucher categories as possible to maintain the simplicity of the system and eliminate schools' need to request voucher funding. In addition, ensuring that schools were equitably funded given the diversity in demographic and geographic circumstances was also a critical concern. A key element of creating an equitable funding system required the project to review the student population density to determine how to properly fund rural and remote schools. To achieve this, the project and the ministry agreed to use school size as a proxy for population density with the understanding that as better information became available, this would need to be reviewed. Therefore, seven size categories of schools were established with student voucher rates and base funding amounts established for each (see chart). To achieve further funding efficiency equity, separate a separate voucher rate was established for Grades 1-8 and 9-12 in each category, and a factor was applied to all students attending in multi-language schools to account for the extra costs associating with educating language minority students.

	Student Number	Base Amount	Voucher (1-8)	Voucher (9-12)	Lang. factor
1	1-160	Calculated Amount			
2	161-230	30,000	430	616	1.08
3	231-299	17,000	390	468	
4	300-449	14,000	385	462	
5	450-599	10,000	370	444	
6	600-999	0	350	420	
7	≥1000	0	330	396	

As the main focus of EMP's work on the funding formula was to help ensure that children are not left behind in this competitive, voucher-funded education environment, the revised formula contained six new components (see box below). Each was created to rationalize funding vis-à-vis the national curriculum and ensure that disadvantaged communities are provided with the resources necessary to meet curricular requirements in an equitable way.

Six Components Added to the Revised Funding Formula

1. **Policy change:** The per-student voucher amount is tied to population density using school population as a proxy.
2. **Funding structure**: A school receives vouchers in addition to base funding
3. **Grade coefficient:** an additional coefficient is introduced for students in grades 9-12
4. **Non-Georgian schools' coefficient:** An additional coefficient is introduced for schools with a majority of non-Georgian students
5. **Small school (1-160 students) funding:** Funding for such schools is provided based on their calculated needs
6. **Special/boarding school funding:** Funding for such schools is provided based on their calculated needs

EMP and MES staff agreed on the parameters of the new funding formula in Year 2, and EMP staff mentored MES budget division staff in designing a simulator using the previous year's student enrollment data to provide the ministry a more detailed understanding of the expected impact of the new formula. After discussion within the ministry, the simulator was presented to Georgia's Council of Ministers. The new regulation for school funding was passed into law and began to be used on January 1, 2011.

Supporting and Monitoring the Effectiveness of the Formula

After the MES announced the new financing model to ERC heads and finance specialists, EMP worked closely with the ministry to develop key documents to help ERC staff understand the new formula. EMP prepared a detailed description of the relevant decree, with concrete examples of how a school budget is calculated using the new finance regulation. EMP also distributed a budget and expenditure form manual as part of the training activities described above.

During spring 2011, once school expenditure data under the new formula was available, EMP staff worked with the ministry to analyze the impact of the formula. It was immediately clear that schools' need to request deficit funds had decreased dramatically — down 91 percent from the same time one year earlier. However, some schools still requested additional funds. The majority of such deficit schools were multi-campus, multi-language, or special schools (78 percent), while the remaining 22 percent appeared to struggle with individual financial management issues. Specific issues facing the majority of remaining deficit schools are described below.

- *Schools in regions with internally displaced persons (IDPs).* Schools located near IDP settlements are overstaffed, as the government has instructed them to employ IDPs. The ministry understands the need for IDP employment (and

that this is part of national policy). At the same time, it does not have the funds to support overstaffed schools. As the number of schools with this issue is small, it is not prudent to adapt the formula for their individual needs. The ministry will address this problem separately.

- *Very large buildings and very small classrooms.* Very large school buildings (built by donors and often referred to as "philharmonic schools") are difficult to maintain as their high heating costs are not in proportion to other curricular costs. On the other extreme, some schools have classrooms that are too small to accommodate the recommended 25 to 30 students. The ministry has advised many of these schools to enlarge class sizes to more efficiently utilize their funding; some schools, although willing to comply, lack the facilities to do so for all of their classes. In both cases, the number of affected schools is small. EMP recommended that the ministry address these issues outside the funding formula.

- *Multi-language and multi-campus schools.* Under the new funding model, multi-language schools that have dual or tri-language programs (e.g., Armenian and Georgian programs) come up short of funds. In addition, in some cases schools that operate separate campuses cannot increase class sizes because the relevant students are geographically separated. The ministry identified this issue as a top priority and asked EMP to analyze multi-language/multi-campus data to identify a solution that maintains the integrity of the revised formula.

Overall, the data suggest that EMP-supported work on the funding formula improved equity among rural and urban schools as the average annual per-student funding for rural schoolchildren increased by 20.6 percent while the average per-student funding for urban schoolchildren decreased by only 3 percent.

CHAPTER 4: STRENGTHENING DECENTRALIZATION AND ACCOUNTABILITY

Key Results

ERC staff trained and empowered to take on two key responsibilities: overseeing school financial compliance and supporting school report cards

School report card available online with information about school data about the school and its educational performance

School principal standards created, and principal evaluation system launched

Supporting the Decentralization of Education in Georgia

As discussed above, Georgia began a process of decentralizing its education system in 2005. At that time, the government abolished local government education departments and replaced them with local ERCs that serve an average of 25 schools. They are responsible for supporting schools by organizing training and workshops for school staff, collecting data, and overseeing the process of electing school boards. To determine the status of decentralization in Georgia and whether ERCs had effectively taken on their new duties to support schools, EMP conducted a study to evaluate the progress of changes related to Georgia's decentralization of the education system and to recommend further steps that Georgia can take to support the increased accountability of all participants in the education system. .

This study used a framework for analyzing accountability (from the World Bank's World Development Report 2004) and a methodology for identifying locus of decision-making (from the OECD's "locus of decision-making" approach). The resulting analysis and recommendations were based on a survey of ERC heads and regional coordinators from the central ministry; focus groups with ERC staff, school staff, parents, and other stakeholders in six regions; a survey of focus group members; interviews with key informants; and feedback from three presentations of preliminary findings, two at the central ministry and one at a workshop for ERC heads.

The study found that ERCs were not perceived by their own staff or by school staff as useful resources available to improve school quality but instead as "postmen," since they served primarily as conduits to communicate information between the central ministry and schools. ERC personnel were empowered to make few meaningful decisions and while they performed many useful — even necessary — tasks, these tasks did not foster their accountability for improving education and, thus, to improving educational outputs and outcomes. In effect, ERCs' responsibilities under-utilized their professional staff, an otherwise potentially valuable human resource.

To overcome these problems, EMP recommended that the MES consider key reforms aimed at strengthening the accountability system in Georgia. EMP staff pointed out that clearly defined roles and responsibilities for local boards of trustees and ERCs, related to holding schools accountable for educational outputs and outcomes, would lead to improved education quality. Such accountability is particularly important in a system like Georgia's, with significant school autonomy and local control of decision-making. To support the MES in considering how to address this issue, EMP developed a policy paper that offered three alternatives (see box below) for the MES to improve education accountability and strengthen the school autonomy model of decentralization.

Policy Alternatives for the MES to Improve School Accountability and Education Quality

Policy Alternative 1. Roles and responsibilities of system players (MES, ERCs, boards of trustees, local governments) remains the same (status quo).

Policy Alternative 2. To improve school accountability and ultimately education quality, the MES delegates targeted decision-making power to ERCs, decentralizes new targeted functions to ERCs and boards of trustees, and clarifies ERC roles and responsibilities.

Policy Alternative 3. To improve school accountability and, ultimately, education quality, the MES decentralizes new targeted functions to ERCs (e.g., supporting the principal evaluation process using new principal standards; overseeing school financial management; supporting boards of trustees) and clarifies ERC roles and responsibilities. Delegating targeted decision-making power to ERCs would only be considered in the future once ERCs' performance with respect to their new functions and clearer roles was reviewed.

As described for Alternative 3, EMP proposed that the ministry assign three additional responsibilities to ERCs: overseeing school financial compliance, facilitating implementation of school report cards, and supporting board of trustees' activities. The ministry agreed that ERCs should take on these responsibilities, and EMP supported implementation of the first two. In support of the first (and to facilitate rollout of the new funding formula), EMP developed policy guidelines for ERC oversight of schools' financial effectiveness and efficacy. Below we discuss EMP's work in support of school report cards.

Strengthening Accountability of Schools: School Report Cards

At the beginning of the EMP project, little information was available to Georgian parents, principals, local boards of trustees, or the central ministry about schools' educational and financial performance. The school voucher model was intended to empower parents to choose the best schools for their children, but their choices could only be as good as the information available to them.

To help empower Georgian parents to make informed decisions, EMP supported the ministry to create a school report card system (called an "eCatalog") to provide information about each school's educational and financial performance in a manner that makes sense to a wide range of stakeholders and allows comparisons between schools using common descriptive and school performance data. School report cards are a tool that allows parents and policy-makers to measure performance over time and hold schools accountable for gains and losses.

The school report card contains two parts: descriptive data about a school, such as contact information, location, enrollment rate, number of certified teachers, and

condition of school infrastructure; and data on school performance, such as student achievement, student participation in Olympiads, and graduates' enrollment in higher educational institutions. Most of this data is drawn directly from the ministry's databases (the EMIS is discussed in Chapter 5); a limited amount is collected from the schools and verified by the ministry.

The eCatalog was launched in March 2012 through the ministry's website, in time for parents to use in selecting schools for their first-graders for the 2012-2013 school year.

Strengthening Accountability of Principals

All schools need effective leaders who have the skills and resources they need to lead student achievement. Research has shown that school improvement efforts depend in many ways on the abilities of the principal. Key factors that affect principals' performance include their decision-making authority, the availability of financial, human, and other resources needed to run a school effectively, and access to professional development opportunities to ensure they are well-equipped to manage increasingly complex schools. Finally, school principals must be held accountable to outcome-based performance standards.

Director Standards

- Create shared expectations and help parents, teachers, and policy-makers agree on goals
- Provide directions to ERCs and boards of trustees, inform director selection, and guide training
- Permit fewer directives and provide more flexibility because aims are clear
- Suggest basis for sensible performance evaluations, rewards, and consequences

Georgia's MES recognized principals' importance in improving education outcomes. To that end, EMP supported the ministry to develop performance standards. EMP then supported the creation and rollout of a pilot evaluation system that measures principals' performance against those standards.

Members of the principal standards working group participate in training provided by an EMP consultant in 2010.

(Clockwise from lower right) Syndicate President Tato Shavshishvili, TPDC Deputy Director Teona Kupatadze, TPDC Director Gia Mamulashvili, and Standards Coordinator Nino Elbakidze preparing the final principal standards revision.

EMP and the ministry formed a standards working group charged with discussing and developing performance standards for principals around three primary areas of responsibility: planning and managing the learning process, managing a culture of

teaching and learning, and managing school resources. The standards produced by the working group and announced by the MES in 2010 are summarized below.

Summary of Georgia's Principal Standards

Developing the Public School

1. The school principal is a strong and motivated leader who supports a public school's continuous improvement in order to increase students' achievements
2. The principal is an effective manager who ensures a public school's financial, material, and human resources are managed effectively to achieve the school's goals

Managing the Educational Process

3. The principal cares about students' achievement and supports each student in realizing his or her full potential.
4. The principal ensures creation of a safe and encouraging educational environment at the school

Supporting Professional Development

5. The principal supports teachers' professional development and creates a constructive and encouraging environment for faculty.
6. The principal invests in his or her own professional development

Promoting Accountability

7. The principal promotes accountability in accordance with public school laws and is open and transparent

Managing Relationships with Parents and the Public

8. The principal ensures that parents and other members of the community are involved in public school activities

EMP and the MES then formed a working group to create an evaluation system for principals based on the new standards. The working group discussed the system's purpose and goals in the Georgian context and reviewed various principal performance evaluation models used in other countries. The working group considered the role of school principals in the evaluation systems, their responsibilities, how those responsibilities are defined by principal standards, and the correlation between principal standards and the principal's performance. While the working group initially set out to design a system focused on evaluating principal performance against standards, it shifted focus to develop a competency-based performance evaluation system whereby prinicipals would be evaluated on eight core competency areas.

Following consolidation of the principal performance evaluation and professional development (PPEPD) system and evaluation of instruments and tools, in May 2012 EMP partnered with a local organization, the Center for Training and Consultancy to develop a training module in performance evaluation and trained more than 20 evaluation experts assigned by the MES to participate in the pilot. Following the PPEPD system pilot and feedback workshop EMP finalized the PPEPD system and handed it over to the deputy minister for implementation and execution. EMP solicited feedback from principals on the evaluation tool and received positive responses from principals, teachers, and parents.

CHAPTER 5: BUILDING GEORGIA'S CAPACITY TO MAKE DATA-DRIVEN DECISIONS IN EDUCATION

USAID's assistance to the MES in developing its management information systems was designed to improve the capacity of the government of Georgia to better manage the educational system through increased access to pertinent data that it can use to drive its policy decisions. To collect and analyze this data, EMP collaborated with the ministry to build a student information system.

Key Results

- SIS operational within the ministry, piloted in 20 schools, and ready to roll out to all schools
- Data center and data warehouse operational and secure
- 38 SIS video tutorials created to support rollout
- Full rollout of the SIS to be

Building the Student Information System

When EMP started in 2009, the ministry had limited technical infrastructure and human resources to support an EMIS. At the time, the data collection method involved submitting individual ad hoc requests to ERCs. An analysis by EMP and ministry staff found that this presented a significant negative administrative burden to ERC staff, who spent almost half their time collecting, aggregating, and reporting data in response to ministry requests.

As a result, ministry and EMP staff agreed to build an EMIS system through a modular approach, with EMP supporting the development of a foundational SIS module. The ministry could then develop additional modules to capture, store, and analyze data on human resources, finances, content and learning management systems, transportation, and other school operations information as financial and human resources became available. The SIS was designed to collect, consolidate, and disaggregate accurate student information so MES decision-makers across the system (teachers, principals, and ERC and ministry staff) are better informed about the circumstances of students and schools. The SIS collects data related to registration, scheduling, attendance, grading, and other basic information on schools and teachers. EMP formed the EMIS working group of ministry personnel to advise on SIS development and consulted with school-based staff to ensure it met system-wide needs. In addition, the EMIS was designed to reduce the administrative burden across all levels of the education system (schools, ERCs, and central ministry) to allow these professionals to focus on other priorities.

While the work on the SIS required two years, the ministry also had immediate needs for reliable, basic school data. Therefore, while work progressed on the SIS, EMP agreed to develop a portfolio of databases that could collect, consolidate, and verify basic school-level data and before completion of the SIS and more sophisticated EMIS modules. The database portfolio consisted of six elements, described below.

Elements of Database Portfolio

Student information. Captures student name, sex, ID number, school ID code, date of birth, and citizenship

School card. Captures information about public and private schools: basic school parameters, contact information, bank details, school specifics, number of shifts, information about teachers and administrative personnel, major teaching language and sector, educational study groups, laboratories, and computer hardware

School principals. Captures data on school principals or principals in charge including name, ID number, contact details, status (elected, appointed, principal in charge)

School board of trustees. Captures information about past, current, assigned, and elected board members, including their names, ID numbers, the year they joined the board, and expiration date

ERC. Captures data about ERCs and staff, including name, contact details, ID numbers, position, and mobile phone numbers

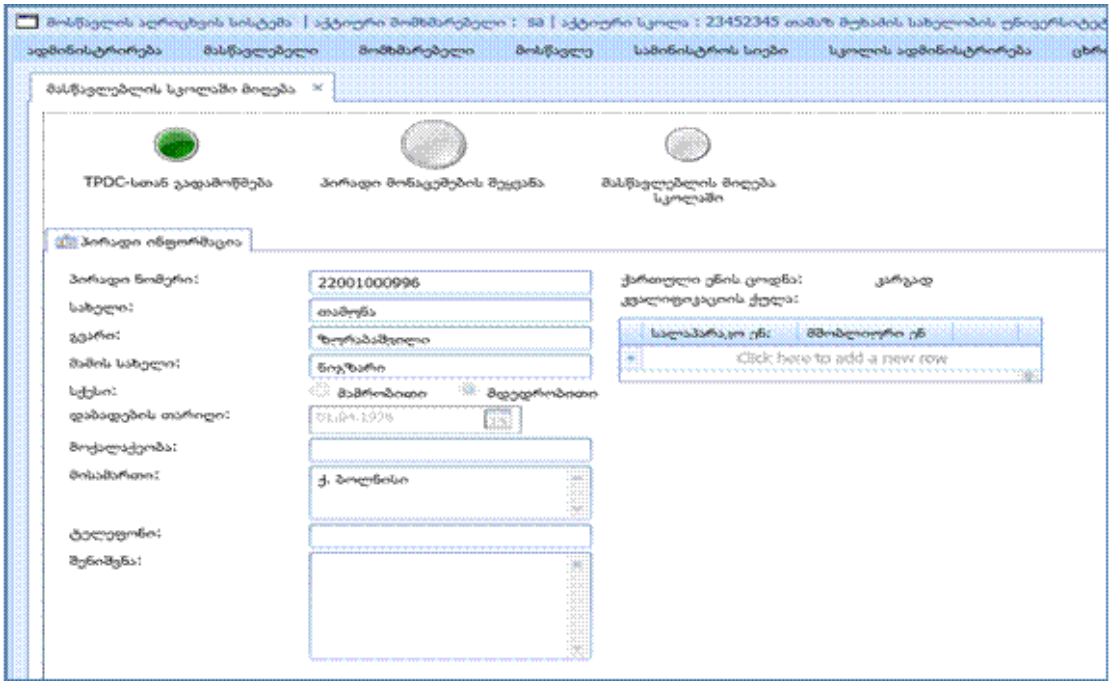
School budget and expenditures. Captures information on a school's annual budget (state vouchers and other income) and quarterly and annual expenditures

The database portfolio became operational in Year 2 of the project. The databases produced critical financial information that informed the revision of the funding formula described in Chapter 3.

It is designed to calculate student counts and produce statistical reports as required by administrative regulations, policy, and law for all MES entities.

The SIS was finished in Year 3 is designed to calculate student counts and produce statistical reports as required by administrative regulations, policy, and law for all MES entities. It provides multiple benefits, including:

- Reduced data processing and handling at schools and ERCs due to automated submission of student data from local system
- Reduced data handling at MES central offices by eliminating numerous reports submitted by schools and ERCs
- Consistent and timely calculation of student counts and statistics across all schools as needed
- Quick MES response to questions from schools and ERCs about issues related to student data
- Easily available student mobility information for planning at schools, ERCs, and central offices
- Integrated view of students' needs and progress, enabling the MES to analyze of the effectiveness of funding
- Extension of SIS student database to capture and monitor achievement of academic standards



A screenshot of the SIS interface.

In addition to the SIS, EMP supported the MES to develop a geographic information system (GIS) that enables reviews of large data sets in graphical form. The GIS also and helps identify geographic trends or patterns, which can inform resource allocation decisions for schools. For its first phase, the GIS has the following capabilities:

- *School optimization and capacity planning*. The system includes geographic boundaries that could be used to project where schools should be built, by when, whether schools need to be closed, or which of several geographically proximate schools should be closed.

- *School profiles*. The system includes an inventory of resources in each school (computers, labs, boilers, rooms, gymnasiums, etc.) The profiles will include student information (e.g., number of students, grade levels, etc.) This data, in the context of infrastructure information, can be used to determine the effect of different class sizes may on schools to support capacity planning. The system will also include staff-related information that contributes to a complete picture of the composition of a school. For example, certification information can be entered into the system to identify correlations exist between staff competencies and improved student achievement.

- *Achievement*. As discussed above, the GIS enables analysis of student achievement and the role of issues such as mobility, discipline, and minority needs, among others, in the teaching and learning process.

- *"What if" planning.* The three capacities described above enables the MES to make projections related to staffing, resources, and learning systems and allow the ministry to consider "what if" scenarios such as:

  — Whether large class sizes have a negative effect on student achievement?

  - Whether the space exists to reduce class size
  - Whether it is necessary to move students to another school to reduce class size
  - If such a change has implications for busing

- *Bus routes*. The final component of this phase of GIS development was to develop a bus transit plan for the schools outside of Tbilisi that depend on buses to get students to class.

EMP supported the procurement of the GIS license and GPS devices that the ministry used to establish the geographic coordinates of some 3,000 education facilitates throughout Georgia — including all schools.

Creating the Infrastructure to Support the Student Information System

A critical need identified during planning for SIS development was for a data center. At project start, the ministry had only five standalone servers that could not store data from the approximately 2,200 public and 250 private schools in Georgia. To address this deficit, the ministry and EMP agreed to co-fund development of a data center to house the SIS. The data center was planned to provide the MES with the following capabilities:

- Efficient performance for a large number of users (which will grow over time)
- Scalability for future module integration
- Security against Intranet and Internet hackers
- Reliability through equipment redundancy and resilience
- Manageability for cost-effectiveness and efficient management and technical support
- Connectivity to other data resources such as the Civil Registry to enable exchange of information between government agencies

To support the creation of the data center, EMP procured blade servers, network infrastructure, and other hardware to run the SIS, as well as a reserve cooling and fire alarm and extinguishing systems. Using its own funds, the ministry procured the primary cooling system and renovated a space for the data center. In total, the ministry contributed more than $600,000 toward creation of the data center.

As development of the SIS, the database portfolio, and other MES data collection systems continued, it became clear that the ministry needed a data warehouse to ensure proper integration between the approximately 10 planned or existing systems. EMP worked with ministry staff to design and build a data warehouse that consolidated data from all existing systems and the EMP-supported GIS system. These data are used to create the school report card system (described above) and other reports.

Building Capacity to Implement the Student Information System

To prepare for rollout of the SIS, EMP developed and delivered training to the school personnel who would operate it and teachers in more than 200 public schools in Tbilisi, Batumi, and Kutaisi.

Given the large number of Georgian schools and their wide distribution across the country, EMP developed 38 video tutorials to train school staff in all aspects of SIS operation and use. The video tutorials provided access to training anytime and anywhere for first-time learning or refreshers. The MES agreed to use video tutorials covering registration, attendance, grading, and administration processes. The videos were developed around tasks rather than specific job functions to allow personnel to become acquainted with all facets of the SIS and related responsibilities.

Reporting Educational Statistics

With its foundational EMIS, the ministry now has the capacity to report verified data against international educational indicators, such as those created by the World Bank and other international organizations (Exhibit 2).

Exhibit 2. Reporting Capabilities of the MES' SIS Based on World Bank Indicators

Areas/Goals	Indicators	Disaggregation	EMIS Application
Educational Participation	1. Net enrollment rate	By gender, school type, grade, level of education, and locality	SIS/E-students
	2. Promotion rates		
	3. Repetition rate		
	4. Dropout rate		
	5. Transition rate		
	6. Completion rate		
Educational Expenditure	7. Educational expenditure as a percentage of GNP		FI reporting (5 tables)
	8. National education expenditure per pupil		
	9. Percentage distribution of education expenditure by level		
	10. Percentage of family contribution to annual education cost	By student gender, level of education, school type, race/ethnicity, locality	
Teacher Characteristics	11. Average hours of teaching per teacher per week	By gender, age, subject of teaching, levels of education	SIS
	12. Average teacher salary	Same as above	SIS/FI reporting (5 tables)
	13. Average learner-teacher ratio	By school type, levels of education, subject of teaching (secondary or above), locality)	SIS/E-students
School Characteristics	14. Average class size	By subject of teaching, grade, levels of education	SIS
	15. Learner/non-teacher ratio	By school type, levels of education, subject of teaching (secondary or above), locality)	SIS/E-students
	16. School capacity utilization rate		SIS
	17. Graduation rate	By gender, age, level	SIS/E-students

Areas/Goals	Indicators	Disaggregation	EMIS Application
	18. Degree completion rate	By discipline and subject	SIS
	19. National standardized achievement test results	By school type, core subjects, levels of education primary grade, basic grade, and secondary grade	SIS
Educational Outputs	20. Examination pass rate	By gender, grade, subject, level of education, locality, textbooks	SIS
	21. Average number of hours of instruction learner receives per week	By core subjects, levels of education, school type	SIS
Daily Transactional Information	22. Daily grades	By school type, core subjects, levels of education, gender, locality, type of school, time period, shift	SIS
	23. Daily attendance	By school type, core subjects, levels of education, gender, locality, time period, shift	SIS
Disciplinary Issues	24. Disciplinary violations by students/teachers	By school type, levels of education, gender, locality	SIS/ER officers
Textbooks	25. Textbooks in use	By school type, levels of education, core subjects	E-students

Conclusion

EMP has left a lasting legacy in Georgia. In its three years, EMP supported the development of new institutions; aided the implementation of new or revised policies to improve access to high quality education across the country; strengthened the capacity of Georgia's education leaders working at all levels of the educational system; and supported the creation of management systems adapted to the Georgian context. In helping to establish the first graduate program focused on education administration at two top Georgian universities, EMP has contributed to the emergence of a cadre of young professionals who will be well equipped to take on managerial positions in the education system. Furthermore, EMP supported collaboration between ISU and BSU and between ISU and UCLA, which will promote continued knowledge sharing between U.S. and Georgian institutions beyond the life of EMP.

Project staff are grateful for the support of USAID, ISU staff, MES representatives, and the thousands of other education professionals who participated in EMP activities. All these partnerships were critical to the project's successful implementation.