



Education Consortium for the Advancement of STEM in Egypt (ECASE)

Quarterly Report
1st Quarter, Year 1

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Acronyms

21PSTEM	The 21 st Century Partnership for STEM Education
ACT	American College Testing (exam)
AIP	Annual Implementation Plan
AUC	American University in Cairo
BOT	Board of Trustees (school)
COP	Chief of Party
DCOP	Deputy Chief of Party
ECASE	Education Consortium for the Advancement of STEM in Egypt (USAID)
EGP	Egyptian Pounds
GILO	Girls' Improved Learning Outcomes Project (USAID)
GOE	Government of Egypt
HR	Human Resources
ICT	Information and Communications Technology
MAP	Management Assessment Protocol
M&E	Monitoring and Evaluation
MOE	Ministry of Education
MOHE	Ministry of Higher Education
NCEEE	National Center for Educational Evaluation and Examination
PAT	Professional Academy of Teachers (MOE)
PD	Professional Development
PMP	Performance Monitoring Plan
SCOPE	Standards-based Classroom Observation Protocol for Egypt
STEM	Science, Technology, (Engineering), Math
STTA	Short Term Technical Assistance
TIES	Teaching Institute for Excellence in STEM
TFI	The Franklin Institute
TILO	Technology for Improved Learning Outcomes (USAID)
WL	World Learning
US	United States of America
USAID	United States Agency for International Development

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1. Summary of activities

ECASE accomplished rapid operational and technical start up in the first full quarter of Year 1 (August 28, 2012 - December 31, 2012). World Learning worked collaboratively with consortium partners (21PSTEM, TIES, and TFI) to respond to the need for rapid project start up and rapid implementation of technical activities. In the first quarter of the project, World Learning immediately established offices in Cairo and the Chief of Party and Deputy Chief Party were available for immediate employment and led the recruitment and hiring of key staff positions in Cairo. The STEM Technical Leadership Team was very responsive to the need for rapid start up and took several trips to Egypt to respond to both technical needs and meet with MOE officials and other STEM education stakeholders. In addition to rapid operational start up, ECASE met with USAID, MOE, and school leadership to manage the beginning of the 2012/2013 academic year.

The work of the past quarter moved at an expeditious pace, providing just in time learning, iterative work products and adjustments to the plan. That said, significant progress was made against the Annual Implementation Plan, specifically as it relates to 6th of October and Maadi schools. Highlights of the quarter include the projects support of the implementation of the capstone projects in year one and two classes at 6th of October schools and pedagogical support to the Maadi faculty was provided as they commenced project-based and trans-disciplinary learning while, at the same time, planning for their implementation of the capstone project in for first year students. The ECASE team also provided significant support to the principals as they faced and handled many managerial and infrastructural challenges. Additionally, the team made significant headway developing full curriculum plans based on the mathematics, chemistry, physics and biology concept inventories.

The ECASE project team had only two weeks to plan before school started, necessitating a shift in the Design Phase of eight weeks originally proposed. The project had to accommodate this pressing need by changing its Design Phase plans and moving the professional development training to Egypt, thus, asking the project STEM Technical Leadership team to identify trainers to make themselves available for travel on a short notice to travel to Egypt and provide the necessary teachers and principal training support. In addition to working directly with teachers and school leaders to improved learning in STEM schools, ECASE made significant progress in this quarter to begin procurement for science lab equipment, supplementary curriculum and textbooks, and high quality internet connectivity to schools. In addition, the team had preliminary planning discussions the on the development of school-based FabLabs to be established later in the year as Applied Learning Centers.

Finally, conversations are underway with USAID and MOE representatives to hold key meetings to identify and begin design planning on additional Egypt STEM schools in Egypt, with the next school potentially located in Mansoura.

2. Activities leading towards accomplishment of Program objectives

2.1 Project Management

ECASE Operations

Within days of signing the cooperative agreement (CA) August 28th, 2012 ECASE was able to begin implementation and the COP, DCOP, and HR Manager and an assistant provided part time support to facilitate project startup. ECASE operated out of temporary furnished office premises from mid-September until a permanent office premises was secured and furnished by mid-November. This rapid preparation tremendously helped project startup and did not delay its mobilization. Personnel recruitment for ten positions was initiated in mid-September and the COP, DCOP were hired on a full time basis at the beginning of October. During this time the HR Manager, held interviews with candidates and positions were filled over the course of the quarter as final candidates become available for full time hire. These position include: Project Technical Assistant, Project Assistant, IT Manager, Finance Manager, Finance Officer, IT Manager, Procurement Manager.

Upon a request from USAID, World Learning delayed hiring of one of the proposed key personnel – Professional Development and Teacher Training Coordinator – to allow the identified person to continue employment on GILO, another USAID funded project. To fill the gap, World Learning hired a short term STEM Training Specialist to ensure consistency and coordination of professional development and science and Fab Lab development. World Learning proposed Justin Duffy, previously a consultant with consortium member TIES, and USAID approved the short term position for a 9 month period, from January – September 2013. The originally candidate for the PD/TT Coordinator position will begin work with ECASE upon closing of the GILO project and Mr. Duffy will provide STEM specific training to ensure continuity in approach.

World Learning established ECASE operating policies for finance, procurement, public private partnerships, IT support, travel, and HR. In the first quarter, ECASE made significant progress to begin to resolve the issue of internet connectivity at both schools. Procurement for science labs, supplementary textbooks, and Fab Lab equipment was also initiated with final vendor selection expected in January 2013 and product delivery to schools planned in the next quarter.

USAID awarded the project in late August, merely two weeks before school started. As a result, the project had to reshuffle its planned Design Phase mandated by the CA and respond to the immediate needs of schools and teachers while also undertaking design and planning activities. Originally, consortium partners expected the project to be awarded, at least, two months before schools start, allowing for intensive professional development interventions to prepare the teachers and principal of the existing 6th of October Boys School before the start of the academic term. As a result of the late award, staff at the Boys School had to resume their work with existing second year students and accept a new group of students in the first year class. In addition, the Maadi Girls' School held its grand opening at the beginning of the 2012/2013 academic term and welcomed the first group of first year students in addition to ECASE 1st Quarterly Report, August 28 – December 31, 2012

newly hired teachers and principal. As a result of the Girls School opening so quickly, the principal and teachers did not have any professional development or planning period before school began.

STEM Technical

In addition to rapid operational startup, ECASE was able to quickly mobilize technical trainers and by September 18th, representatives from TIES, 21PSTEM and TFI were on the ground in Cairo ready to provide training to teachers and principals the following day. In an effort to respond to the immediate needs of schools and teachers, ECASE organized a series of short term trip for members of the US-based STEM Technical Leadership Team to travel to Egypt for targeted professional development for teachers, administrators, National Board members, and MOE officials to ensure that professional development and curriculum and capstone development continued uninterrupted. Furthermore, the project shifted the intensive professional development that was planned to take place before the beginning of the academic year to coincide with school breaks in late January and early February so teachers have the time to devote to professional development and curriculum development in addition to their everyday duties of teaching and school leadership.

The most pressing needs at startup were focused on the lack of science laboratory equipment at the Maadi School, school internet connectivity, lack of English language proficiency amongst students and teachers, and the continued need for STEM focused professional development and school management support.

STEM Professional Development and School Management Support

ECASE consortium members were able to rapidly respond to the technical needs of the 6th of October and Maadi schools in part because of their prior engagement with the teachers in a previous contract for short term technical assistance for STEM schools in Egypt administered through USAID. The STEM Technical Leadership team was able to build directly off past successes and lessons learned and provide continuous support – especially in the areas of pedagogy, curriculum and capstone development, and school management. The work moved at an expeditious pace, providing just-in-time learning, iterative work products and adjustments to the plan. That said, significant progress was made against the Annual Implementation Plan, specifically as it relates to 6th of October and Maadi schools. Highlights of the quarter include the projects support of the implementation of the systems capstone in Grade 1 and the building capstone in Grade 2 at 6th of October – important aspects of STEM curriculum. In addition, pedagogical support to the Maadi faculty was provided as they commenced project-based and trans-disciplinary learning while, at the same time, planning for their implementation of the systems capstone in Grade 1. In fact, progress for capstones and trans-disciplinary curriculum is ahead of schedule and anticipated to exceed expected deliverables with three capstones this year and additional two to three capstones next academic year. The ECASE team also provided significant support to the principals as they faced and handled many managerial and physical plant challenges. Additionally, the team made significant headway developing full curriculum plans based on the mathematics, chemistry, physics and biology concept inventories.

Science Lab Equipment

The 6th of October School opened in September 2011 when Egypt was ruled by the Supreme Council for Armed Forces (SCAF). It enjoyed support from the Egyptian military who helped equip and furnish the school at that time. The Maadi School missed on that opportunity and that rendered the Maadi School without any equipment to date. The school actually teaches science classes without equipment in its laboratories. The Maadi School has been also struggling since its opening last September with lack of equipment in general. In order to remedy this situation the project has been forthcoming in providing minimal equipment like a printer, projector, digital video camera, school public announcement system, some stationary, cleaning material and other support to the school since its start. The project met with the MOE's Senior Science consultant on September 12th to understand the MOE's requirements, receive the specifications of the 6th of October school lab equipment, and assess laboratory needs at the girls' school in order to prepare a list and present the MOE with the science lab equipment most suitable for the planned curriculum at the Maadi School. In addition, ECASE held preliminary design and partnership meetings to plan for the establishment of school-based Fab Labs later in the year. ECASE discussed potential partnership with Fab Foundation, World Learning, and the Local Cairo Fab Lab. Design Action Teams are functional, met twice in the past quarter, and are on track to support the design, procurement definition, installation, and curricular integration of the Fab Labs.

Internet Connectivity

ECASE is committed to working with school leadership and key stakeholders to provide a solution so that both STEM schools have high quality internet connectivity, a fundamental requirement for STEM education. On October 18th, the project met with the IT specialists at the 6th of October and the Maadi schools to learn, first hand, about their problems and needs to establish reliable internet connectivity at the schools to ensure the students and teachers can fully utilize learning technology. Because of remote locations, both schools suffer from lack of telecommunication infrastructure in their respective vicinities; both schools do not have landlines. Any service that needs to be connected has to be through airwaves. As a result, the project started meeting with Internet Service Providers on October 22nd, to arrange for the school connectivity. TeData, Egypt's largest ISP, offered various technology alternatives, but preferred WiMax as the technology of choice for the 6th of October school. TeData attempted to provide the same technology at the Maadi School, but was not able to because it could not establish a line of sight with the nearest Egypt Telecom Exchange box. On November 7th a meeting was also held with Etisalat's Nile Online representatives to discuss the possibilities of connecting the Maadi School in light of TeData's inabilities. NOL suggested a microwave connection using 3G technology to support the Maadi School. ECASE will finalize the internet provider at the beginning of the next quarter and begin installation.

English Language Proficiency

English language abilities of both teachers and students are significantly below anticipated levels at the time of project design. The lack of adequate language proficiency has prevented students them from fully achieving the learning outcomes of their English taught

science and math classes. As a result, ECASE made adjustments to the project plan to ensure that students and teachers were supported to succeed in English language learning environments by continuing a partnership established before the ECASE award between 6th of October school and British Councils. In the first quarter of the project, British Council weekly English classes for students and teachers at 6th of October school and was contracted by World Learning to provide the same services for the Maadi school under a short term contract. In addition, British Councils gathered baseline data on English proficiency levels. This stop-gap solution allowed continuous language support while World Learning adjusted project plans to design and develop sustainable English language interventions for students and teachers. By the end of the quarter, World Learning had developed learning modules for both students and learners that build off previous learning and World Learning is poised to fully implement and expand upon the teacher and student English language classes originally proposed in an effort to fully meet the needs of students and teachers to perform in English medium STEM classrooms.

Immediately in the next quarter, the Operations Manager will meet with the US Team and World Learning to discuss high priority protocols for high-risk areas, such as Procurement. These items have been identified in Section 3, Challenges and Resolutions, of this report. In addition to the technical, political, and logistical needs of the project, the teams are now three months into their spend plans. Cost assessment will be provided with each partner's invoice to World Learning.

2.2 Project Activities

This section summarizes key accomplishments against the AIP for each objective area. All project activities are a part of a larger iterative process and many aspects of individual activities overlap with other activities. The summary below is presented according to the AIP framework for ease of monitoring and reference against the implementation plan.

Objective 1: Increase student interest, participation, and achievement in science and mathematics with a special effort to underrepresented groups such as girls and economically marginalized students

ECASE began implementing an **admission system that is transparent, inclusive, and criteria based (Activity 1.1)** by creating a teacher selection criteria which will be used to help support student selection criteria. The executive summary of this teacher selection criteria follows and was based on the Science Leadership Academy criteria. The criteria provides a framework to evaluate teacher candidates on the basis of understanding of inquiry-driven and inter-disciplinary approach to learning, ability or willingness to implement project-based learning in the classroom, ability to develop and implement collaborative curriculum methodology in the classroom, and motivation to be a part of open-minded system of education that positions STEM education in Egypt. In addition, the framework provides sample interview questions to guide selection committees.

A variety of integrated efforts were made to **promote the STEM school within the surrounding community (Activity 1.2)** and foundational meetings were held with school Board of Trustees (BoT) to design a framework/blueprint that will serve as a model for subsequent ECASE 1st Quarterly Report, August 28 – December 31, 2012

STEM schools. ECASE technical team met with BOT members at 6th of October school to identify focus areas and training needs to expand the role of BOTs in promoting STEM education.

During the first quarter, it became readily apparent that support for English language learning for students was greater than anticipated at the time of award. ECASE worked with school leadership and USAID to identify solutions and shift activity funds to design a more comprehensive and in-depth strategy to ensure that students are **prepared for the rigors of English medium STEM education and leadership roles (Activity 1.3)**. ECASE maintained the 6th of October schools previous relationship with British Councils to ensure that English language instruction was not interrupted and also extended a contract for British Councils to do the same intervention in the Maadi school. British Council activities ended at the end of the first quarter and World Learning will take over English language instruction for students at both schools in the next quarter. World Learning has been working collaboratively with British Councils and school leadership to ensure a smooth transition and that learning builds off the competencies gained during the last quarter.

No activities took place under **Activity 1.4 Outreach to Egyptian preparatory schools** but this activity is scheduled to begin in Quarter 2.

Objective 2: Strengthen the STEM school local initiative through developing an effective model of specialized high school focusing on science and math for gifted students

Preliminary steps were taken to being **tailoring STEM schools to the surrounding community through school specializations (Activity 2.1)** but the creation of the final mapping tools was delayed due to changes in school leadership at 6th of October school.

ECASE made significant progress this quarter to **provide essential educational infrastructure to support experiential classroom activities (Activity 2.2)**. TIES adapted the school preparedness survey for the Egyptian context and administered the survey in both schools. The survey results allowed the ECASE to more fully understand and meet the IT and equipment needs of the schools and plan for professional development and other training can be targeted to best meet the needs of teachers and administrators. A full presentation of the results and analysis of this survey was schedule for this quarter but was delayed due to leadership transitions at the schools and will be delivered to school officials in the next quarter.

During this quarter, ECASE consortium members worked together to meet the urgent need for science lab equipment at the Maadi school and supplementary materials at the 6th of October school. TIES and World Learning worked closely to generate appropriate procurement lists and gain approval from the MOE and USAID to initiate competitive bidding process. RFP for lab equipment were issued in early November and bid analysis and negotiation took place by the end of the quarter. ECASE expects to select final vendors in the beginning of the next quarter and deliver equipment to the schools.

ECASE consortium partners recognize the vital importance of **creating sustainable and mutually-beneficial public private partnerships (PPPs) (Activity 2.3)**. In this quarter, ECASE drafted project level PPP protocols to guide project and school level PPP strategy. ECASE planned to work with the National Board to create a system of support for PPPs but was not able to do so in this quarter due to unrest in the country. This activity is planned for the next quarter. In addition, ECASE initiated a training module to build that capacity of school principals to develop and sustain a school portfolio of meaningful PPPs. Input from the principals will be integrated into this module during the next quarter. In addition, preliminary discussions were held with National Instruments to work on a scope of work/procurement list for LabView which will support the robotics extracurricular activities at the school and computer science in schools. In addition, ECASE reached out to Ted Purington, at AUC to connect to the STEM Center that is now nascent but growing. Meetings will be set in Q2 to further this work.

Preliminary work began in this quarter to **organize extracurricular activities that complement classroom content and school specializations (Activity 2.4)**. Planning for the establishment of Applied Learning Centers (Fab Labs) and PPPs needed to support these initiatives took place. TIES and World Learning have been working closely with principals and community stakeholders (Cairo Community Fab Lab) to explore Fab Lab design, equipment procurement, and sustainability through PPPs.

Objective 3: Build the capacity of a highly qualified cadre of STEM professionals and provide opportunities for training and sustained, intellectually rigorous professional learning

Preliminary integration of **adapted teacher and administrator performance standards for a STEM school context (Activity 3.1)** took place this quarterly. ECASE began the development of exemplary STEM teacher and administrator profiles into the Specialized Teacher Performance Standards and School Management tool but final completion was delayed due the delay in project award as well as delays in the MOE decree need to set the basic premise to the protocols. In addition, ECASE researched existing tools to gather baseline data in order to finalize SCOPE and MAP tools for the STEM context. This will work continue in the next quarter.

Substantial progress was made in the first quarter to lay the groundwork for **building teacher capacity to effectively implement STEM curriculum in the classroom (Activity 3.2)** through enhanced English language support as well as targeted professional development in STEM pedagogy and technology. ECASE administered baseline assessments in English and science and math content areas. In addition, ECASE continued weekly English language classes for students and teachers in both schools and developed an expanded English language program to more fully meet the unanticipated needs of low language proficiency. Intensive professional development for teachers was conducted in November and led by TFI. Teachers were responsive to this training and there was evidence (through classroom observation) that they integrated what they learned in the classroom. In addition, the PD team provide follow up support online through email exchange, although it was difficult to do live chat sessions or for Egyptian teachers to post regularly to the learning forum due to low internet connectivity at the

schools. Limited progress was to create formative classroom assessments this quarter due to internet connectivity problems but the majority of this activity is planned for subsequent quarters.

ECASE staff was able to **assess progress through classroom observations (Activity 3.3)** through continuous classroom observation and feedback for teachers at both schools. TFI and TIES led the development and implementation of classroom observation protocols in November and December. In addition, substantial daily support to schools was provided by the COP, DCOP and project support staff to ensure that each schools day to day operations went smoothly.

One of the most pressing needs this quarter was to continue **building school principals' ability to develop and implement strategic STEM action planning frameworks (Activity 3.4)** and ensure the smooth management teaching staff and of school operations. ECASE held one-on-one sessions with principals during visits by TFI and 21PSTEM staffs to provide just-in-time support for principles, provide a series of reading and discussion that focus on strengthening leadership ability, and provide support to enable principals' vision for school level goals and process to be integrated into project planning. Complimenting these intensive sessions, ECASE is developing a composite set of training throughout the year to ensure continuous PD support to the 6th of October School because the previous principal had received substantial training from ECASE consortium members during the previous contract and during the beginning of this CA.

The change in leadership, the issues with the NGO relationship on-site at the schools and more have made working with the principals an episodic. Despite these challenges, the principals trust and rely on the ECASE school leadership staff to provide support via email when face to face meetings are not possible. Finally, the principals and the ECASE school leadership team completed the Student Handbook for presentation and review by the MOE as well as the Advisory Handbook and trained both leadership and teachers on its use. Examples of support to principals include: providing options to make sound leadership choices, providing a sounding board during development of strategies for dealing with challenges as well as moving the school forward on a steady track, mentoring, as well as listening and offering suggestions. The team also developed and beta-tested a draft principal reporting system.

The relationship between the ECASE team and the principals is excellent and growing. It is intended that Q2 will have a much more profound number of hours spent with the principals supporting their needs but also focused on continuing to support their growth as STEM instructional leaders for their schools and the emerging STEM Model School system. In addition to work with principals, progress was made under this activity towards the creation of Egyptian STEM Model School Design Blueprint. TIES finalized the design blueprint format and integrated it into the draft STEM School Design Manual. A completed Design blueprint is planned for next quarter but requires the involvement of the National Board.

No activities were planning during this quarter in support of **Activity 3.5 identifying and building the capacity of teacher trainers, Activity 3.6 Create a virtual STEM professional development learning platform, Activity 3.7 Experiencing best practices in STEM through interactive US Study Tours.**

Objective 4: Strengthen MOE capacity at the systems and policy level to sustain and replicate STEM model schools

ECASE laid the groundwork for an intensive workshop on **designing school-driven curriculum (Activity 4.1)** to be held at the beginning of Q2. This workshop will focus on the Grand Challenges Design Studio and teachers, principals, MOE officials, and other key stakeholders will participate. The workshop will begin the long term adaption and contextualization of the proposed STEM curriculum framework and Egyptian driven Grand Challenges. Significant progress was made this quarter to enable school-driven curriculum through the development of trans-disciplinary capstone projects at each grade level and in both schools. These capstone projects provide the cornerstone of inquiry-drive, project-based STEM education and also are an important aspect of the STEM curriculum and standards framework. The purpose of capstone projects is to bring rigorous, real-world STEM challenges into the classroom for all students to engage with inquiry learning in a manner that is aligned with the Egyptian STEM Guiding Design Principles and the MOE Decree. Specifically, capstones help to:

- provide students at the STEM schools with the opportunity to master STEM phenomena and apply their understanding in a real world context
- establish a baseline of Capstone work for Egypt’s STEM model schools
- create a pervasive school community understanding of the value proposition of capstone work

Throughout the student work on the capstones, the teachers used rubrics to assess the learning outcomes that were determined and to grade the students on their achievement. The capstones are the first of what will be many performance-based opportunities for STEM education for the Egyptian students. As the first, this period of capstone work has been closely monitored by ECASE curriculum and STEM training specialists for quality, adherence to the templates which guide the efficacy to project-based, real-world STEM education. In the future, the capstones will be grounded in the use of the Egyptian STEM Grand Challenges.

Capstones in Practice

Egg-drop and Design Challenges were designed and implemented the first week at both schools. Many students demonstrated an understanding of the design process, the value of experimental failure and redesign. Student engagement in project-based learning was evident and their ability to master the physics/math underlying the project was also evident.

The STEM Technical Leadership team led the development of a comprehensive Capstone Manual - this manual is in draft form and will undergo further revision and adaption as part of the iterative design process to ensure that it is applicable to the Egyptian context. The capstone process has been designed and implemented in the 6th of October school with two capstone projects completed (System Capstone in Grade 1 and Building Capstone in Grade 2). The ECASE team supported this work through the Project-based Learning/Capstone Action Team who worked intensively with the teachers during three separate trips to Egypt. These trainings focused on principles of

project-based learning and trans-disciplinary training, capstone customization, and feedback
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from teachers on the content and process as they implemented the projects during the school year. The capstone for the Maadi school will be implemented in the next quarter and is based off the Systems Capstone developed in the 6th of October school but revised to reflect the context of an all-girls environment as well as the lessons learned from 6th of October. The intensive work on capstone and curriculum this quarter puts ECASE ahead of projected timeline for capstone development and positions the project to test additional two or three capstones next academic year.

ECASE curriculum specialists built off the results of these workshops to integrate lessons learned and results into a curriculum proposal for the remainder of the 2012/2013 academic year and propose an interim curriculum for the following academic year. ECASE also held curricula working sessions for US-based and Egypt-based members of the Curriculum Action Team. This quarter the team prepared working documents to link all Next Generation Science Standards (<http://www.nextgenscience.org/next-generation-science-standards>) with all aspects of the proposed curriculum – a key integration that also supports the projects work to develop assessment instruments for STEM curriculum. In addition, the team identified relevant units of study based on exemplary US curricula and delivered initial training for teachers to use and adapt these units for Egyptian classrooms. During PD training for teachers, significant time was allocated to introducing the interim plan for science curriculum and new materials, an in depth exploration of guided inquiry as a strategy. The results were compelling with significant buy-in by the science teachers, who really liked the new materials and participation from Math and English teachers who gained a new understanding of their roles in the new curriculum.

ECASE also made substantial strides in the **development of comprehensive assessment instruments aligned to STEM curriculum (Activity 4.2)** this quarter. 21PSTEM led the creation, administration, and analysis of baseline assessments in math and science for all students in both schools. The results of these assessments are being used to inform curriculum development and also provide a basis of understanding to measure project outcomes and impact. In addition to baseline assessments, the Assessment Action Team also developed end-of-course assessments that included two units of study for each course (for Math Year 1 – proportional reasoning and the straight line and for Math Year 2 – polynomial functions and rational functions). Furthermore, the action team revised the interim curricula in order to make clearer reference to Egyptian textbooks. For example, to start the math curriculum development the team examined math books currently used by the regular Egyptian high schools and create a listing of topics covered in these books and determined normal sequencing, updates on topics taught in 6th of October in Grade 1 and designed assessments.

For science, the curriculum process was initiated with the three science concept inventories for the purpose of assessing or taking inventory of the stage of conceptual development in specific science domain. In this way the project would know the proportion of students who are at certain levels of development in their thinking. The concept inventories allowed the team to measure the ratio of accurate science conceptions to misconceptions. Ultimately this information would allow the project to use these inventories to measure how well the STEM student's progress in their basic understandings of physics, chemistry and biology rather than recalling definitions and procedures; or performing calculations. A main reason for using inquiry pedagogy is to promote conceptual development. During this quarter each student

took the biology and physics assessments by late November. Due to low levels of English proficiency, assessments had to be readministered in Arabic.

In order to provide more rigorous analysis, the Assessment Action Team also used the survey of enacted curriculum (SEC) algorithm to content analyze the thanaweya amma math exams and the ECASE project's Math 1 and 2 baseline assessments. These scores were compared to the PISA, TIMMS and the US Common Core in math to create a common language of comparison to help determine how students in STEM schools are performing and provide input into improved curriculum design. The assessment results clearly showed a future challenge for STEM schools and ECASE is taking steps to anticipate and address these challenges by introducing new topics in the curriculum that are not mentioned in the old Egypt curriculum. To address this there will need to be more knowledgeable teachers and/or train existing teachers for new content in addition to new pedagogy.

ECASE is also tasked with supporting the MOE to identify appropriate college-readiness assessments and high school exit/college entrance exams. During this quarter ECASE researched the Egyptian college-readiness assessment system as well as international assessments and authored a report recommending short and long term solutions for Egyptian college readiness assessment systems for STEM high school graduates. Recommendations were made to the National Board that the ACT is the more appropriate exam and further research and analysis will be conducted in the next quarter.

The final activity under Objective 4 for this quarter focused on **building the capacity of the National STEM Board (Activity 4.3)**. During the quarter ECASE team members met frequently with the National Board representatives and involved board members in decision to guide project and school level activities as much as possible. ECASE worked with the National Board to establish structures that support their work:

- To keep the Board informed on progress made in schools and against project targets
- To respond to the needs of the schools as determined by the Board
- To grow the vision for the value of the Board within Egypt

Board meetings were at the behest of the Board Chair, Dr. Amr Saad from AUC and the agenda typically focused on progress at the schools, issues that the Board might consider and discussions of STEM education in Egypt in general. ECASE DCOP, Dr. Reda Abouserie was the central person working with the Board with members of the STEM Technical Leadership Team (Jan Morrison, TIES and Joe Merlino, 21PSTEM) supporting this effort. During this quarter it was determined by the Board, the MOE and USAID that the National Board will govern the two Cairo schools (6th of October and Maadi schools) and the remainder of the STEM schools will have their own National Boards and will be regionally focused. Together, however, all STEM Boards they will comprise the Egyptian STEM Model School Network which will be designed in Q2 through continued collaboration between USAID, MOE, ECASE and the National Board. In addition, the National Board will design and launch their strategic action plan framework in the next quarter.

Objective 5: Support the MOE in the upgrading of science and mathematics curriculum standards, students assessment, and teacher preparation for the mainstream

No outputs were planned for activities under Objective 5 in this quarter. Activities in the other objectives lay the groundwork for future achievements to **capture best practices in STEM education (Activity 5.1)** and **build the capacity of CCIM and NCEEE to apply Egyptian STEM best practices to mainstream science and math curriculum (Activity 5.2)**. Indeed, key MOE officials from CCIM, NCEEE, and PAT have already been involved in project activities under other objectives.

Monitoring and Evaluation

ECASE submitted the Annual Implementation Plan for Year 1 to USAID and gained approval in late October 2012. ECASE developed a draft performance monitoring plan (PMP) and submitted to USAID during this quarter. USAID responded with additional indicator requests and World Learning is working with USAID to revise and finalize the PMP to ensure agreement on program targets. ECASE anticipates that the final PMP will be approved in the next quarter and subsequently, final monitoring and evaluation tools can be refined and finalized to begin reporting against project indicators in the 2nd quarter.

2.3 Projected Activities for next quarter

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
Objective 1: Increase student interest, participation, and achievement in science and mathematics with special effort to underrepresented groups such as girls and economically marginalized students						
1.1	Implementing an admissions system that is transparent, inclusive, and criteria-based	1.1.1 Two-day workshop in Year One with Ministerial Executive Committee to set admissions framework and general selection criteria guidelines	TFI	Frederic Bertley/Chris Lehmann	A teacher selection criteria was created which will be used to help support student selection criteria. The workshop will be held in Q2.	Two-day workshop to be held.
		1.1.2 One-day workshop with school administrators and other stakeholders to develop admissions systems	TFI	Frederic Bertley/Chris Lehmann	A teacher selection criteria as created will be used to help support student selection criteria. The workshop will be held in Q2.	One-day workshop to be held.
		1.1.3 Yearly admissions process review with Ministry and school administration(1 day)	WL; MOE		No Outputs Planned this Quarter	
1.2	Promoting the STEM school within the surrounding community	1.2.1 Orient and develop STEM School Board of Trustees (BoT) at each school	WL; TIES	Jan Morrison; Anne McClellan	In working toward a BoT design framework/blueprint that will guide BoTs in subsequent schools, TIES held a 6 th of October school BoT Chair Meeting in October 2012 to discuss creating a list of needs for training for BoT.	Maadi BoT Chair to hold meeting. Training for BoTs at 6 th of October school.

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
		1.2.2 One-day “Effective Engagement with Board members” workshop with school administrators and BoT members	WL; TIES	Jan Morrison	No Outputs Planned this Quarter	
		1.2.3 3-day workshops to adapt Egyptian STEM School Advokit	WL; TIES	Anne McClellan	No Outputs Planned this Quarter	
		1.2.4 1-day workshop for parents and community on Fab Lab technology	TIES	Jan Morrison, Justin Duffy	No Outputs Planned this Quarter	
		1.2.5 Targeted field trips to relevant sites and related business, industry, and universities	WL	Reda Abouserie	No Outputs Planned this Quarter	
1.3	Preparing students for the rigors of STEM education and leadership roles	1.3.1 Maintain English language proficiency training at 6th October school and Implement English language training for select students that demonstrate need in the Ma’adi school	WL	Reda Abouserie	World Learning contracted with British Council to provide short term English language training in the Maadi girls’ school. British Council continued its trainings at 6 th of October.	World Learning will begin providing all English language training at both schools.
		1.3.1.1 Conduct baseline English proficiency tests for Ma’adi students and analyze data	WL	Reda Abouserie	British Council conducted proficiency tests as part of language training contract.	WL to conduct baseline test at start of language training
		1.3.2 Three week STEM English and Leadership Summer Camp	WL	Justin and Samir	No Outputs Planned this Quarter	

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
		1.3.3 Identify local partner organizations through small grants process	WL	Reda Abouserie	No Outputs Planned this Quarter	
1.4	Outreach to Egyptian Preparatory Schools	1.4.1 In partnership with STEM school administration, identify preparatory schools for targeted intervention	WL	Reda Abouserie	No Outputs Planned this Quarter	
		1.4.2 Quarterly Discovering Science Program	WL; TFI	Frederic Bertley	No Outputs Planned this Quarter	
		1.4.3 Training Preparatory teachers in Science Education for Public Understanding (SEPUP) through PPP with LabAids	TIES		No Outputs Planned this Quarter	
Objective 2: Strengthen the STEM School local initiative through developing an effective model of specialized high schools focusing on science, technology, and mathematics for gifted students						
2.1	Tailoring the STEM School to the surrounding community through school specializations	2.1.1 Adapt community mapping tools and school specialization analysis framework	TIES; WL	PPP Coordinator	Tools and frameworks rely on consistent leadership. Leadership in transition in 6 th of Oct and Maadi schools with changes in mid quarter.	Develop final mapping tools with leadership teams.
		2.1.2 School specialization mapping exercise	TIES; WL	PPP Coordinator	No Outputs Planned this Quarter	
		2.1.3 2-day workshop to present results to National Board and further refinement of the tools by the end of the year	WL; TIES	PPP Coordinator	No Outputs Planned this Quarter	

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
		2.1.4 Refinement of the tools in preparation for subsequent STEM model schools	WL; TIES	PPP Coordinator	No Outputs Planned this Quarter	
2.2	Providing essential educational infrastructure to support experiential classroom activities	2.2.1 Adapt school preparedness survey for Egyptian context	TIES; WL	IT and Procurement	Survey was designed and administered.	
		2.2.1.1 Presentation of the results and analysis to schools officials	TIES	Jan Morrison and Anne McClellan	All school officials have the results of the survey for their use (The baseline for teacher readiness and will be administered again at the end of the 2012-2013 school year.)	Presentation to school officials
		2.2.2 Administer survey in existing STEM schools	WL; TIES	Jan Morrison and WL IT and Procurement	Surveys were fully administered to 6th of Oct and Ma'adi School teachers.	
		2.2.3 Procure essential infrastructure for science, computer, and Fab Labs	WL	Procurement	RFQs distributed for science equipment and Fab Lab RFQ developed.	Purchase science equipment. Bid Fab Lab RFQ and select provider.

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
		2.2.4 Ongoing IT support to pilot schools focusing on internet connectivity	WL	IT	PPP efforts begun with possible corporate partners such as Cisco for connectivity support. Bids tendered for connectivity at both schools.	Focus on procuring long term corporate partner to support connectivity.
		2.2.5 Initial 3-day workshop for teachers/administrators on use of Fab Lab technology including curriculum design and Fab Lab maintenance and troubleshooting	TIES		Training has been started utilizing the Egyptian Community Fab Lab. The acquisition of Fab Labs for the schools remains in procurement stage.	Workshop planned.
2.3	Creating sustainable and mutually-beneficial public private partnerships (PPP)	2.3.1 Develop school-level PPP portfolios	WL; TIES	School Administrators; WL PPP and DCOP	Creation of school level public private partnership protocols were shifted to Q2 due to changes in school leadership.	Develop school-level PPP portfolios
		2.3.2 Convene the National Board to create a system to support PPPs for existing STEM schools; Establish process and protocols	TIES	Jan Morrison and Richard Rosen		First meeting to address this component planned for late January.
		2.3.3 Convene all ECASE Egyptian partners/stakeholders to confirm commitment to schools; set procedure for delivering on commitments; discuss future PPP commitments	TIES	Jan Morrison and Justin Duffy	No Outputs Planned this Quarter	

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
		2.3.4 Introduce training module that builds on the capacity of school principals to develop and sustain a school portfolio of meaningful PPPs	TIES; WL		TIES has initiated a training module, but the principals' input has not yet been integrated.	Principal inputs planned.
		2.3.5 Monthly tracking of PPPs	WL	PPP	Being led by CoP.	
2.4	Organizing extracurricular activities that complement classroom content and school specializations	2.4.1 Development and implementation of extra-curricular mini-courses (Applied Math and Engineering; Molecular Biochemistry; Neuroscience; Digital Computational Technology; Fab Labs; Lego Mindstorm)	TFI; TIES	Frederic Bertley/US University Partners; Jan Morrison; Justin Duffy	No Outputs Planned this Quarter	
		2.4.2 Integrate mini-courses into teacher professional development programs (5-day training for each year of the project)	TFI	Frederic Bertley/Matthew VanKouwenberg / Daniel Marino	No Outputs Planned this Quarter	
		2.4.3 Create transferable platform for STEM exposure and learning through Mini-courses in Egypt	TFI	Frederic Bertley/Matthew VanKouwenberg /	No Outputs Planned this Quarter	

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
				Daniel Marino		
		2.4.4 Identify PPPs for Applied Learning Centers	TIES; WL	PPP and DCOP	The process to meet the need as Applied Learning Centers was begun. A Fab Lab Action Team was created and met twice in Q1.	Built into PPP objectives and to follow procurement and installation of Fab Labs.
		2.4.5 Establish one Applied Learning Center in existing STEM schools	TIES; WL	Fab Lab Action Team; TIES	No Outputs Planned this Quarter although Fab Lab procurement process and systems put in place support this for Q2 execution.	
		2.4.6 National Student STEM Symposium- 6 students to US symposium (March 12-14, 2012)	TIES; WL	Jan Morrison and Justin Duffy	Students were identified but MOE determined this to be disruptive so soon into process. This activity is targeted in 2014.	
Objective 3: Build the capacity of a highly qualified cadre of STEM professionals and provide opportunities for training and sustained, intellectually rigorous professional learning						
3.1	Adapt teacher and administrator	3.1.1 Introduce STEM teacher profiles to Ministry for review (Tied to Activity 1.1.1 with support (TFI))	WL	COP and PDTT	Submitted to MOE with criteria for teacher selection.	

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2	
	performance standards for a STEM school context	3.1.2 Integrate profiles of exemplary STEM teachers and administrators into Specialized Teacher Performance Standards and School Management Tool	WL; TFI; 21SPTE M	DCOP and PDTT		Profiles will be created in Q2 as a result in the delay of the launch of the Decree setting the basic premise of the protocols.	
		3.1.3 Finalize SCOPE and MAP tools for STEM context and use to inform teacher performance standards	WL; 21PSTEM	PDTT	Research on existing tools to use as a baseline is on-going.	Additional work to be completed.	
3.2	Building teacher capacity to effectively implement STEM curriculum in the classroom	<i>Skills Refresher in English Language</i>					
		3.2.1 English proficiency exam administered to pilot school teachers and administrators	WL	Reda Abouserie	Completed in Maadi school through contract with British Council.	WL to lead exams in both schools start of Q2.	
		3.2.2 English Language training for STEM pilot teachers and administrators	WL	Reda Abouserie and STTA	Training provided under contract to British Council in Maadi and by the British Council in 6 th of October per pre-ECASE engagement.	WL to lead all language training starting Q2.	
		3.2.3 School-based English language conversation group workshops	WL	Reda Abouserie and STTA		To be led by WL.	

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2	
		<i>Best Practices in STEM Pedagogy and Technology</i>					
		3.2.4 4-week Summer Professional Development Institute	TFI; WL	Frederic Bertley; Justin and Samir; PDI Action Team	No Outputs Planned this Quarter		
		3.2.5 One-week continued teacher training	TFI; WL	Frederic Bertley; Justin and Samir; PDI Action Team	Teacher PD was conducted by TFI in November.	Additional week to be completed in Q2.	
		3.2.6 Online discussion forums	TFI	Matt VanKouwenberg; PDI Action Team	Some email exchanges have occurred between the TFI PD team and Egyptian STEM teachers, the infrastructure to do live chat and post regularly to a forum is not available.	Address connectivity to support regular live chat and forums.	
		3.2.7 Video Conferences with US teachers	TFI	Matt VanKouwenberg; PDI action Team	Existing infrastructure was not sufficient to support this type of communication.	Continue to address connectivity issues to support video conferencing.	
3.2	Building teacher capacity to effectively	<i>Creating Formative Classroom Assessments</i>					

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
	implement STEM curriculum in the classroom	3.2.8 10, 2 hour distance learning workshops on Formative Assessment	21PSTEM	Donna Cleland; Assessment and Curriculum Action Team	Distance learning is on hold due to internet connectivity	Continue to address connectivity issues to support video conferencing.
		3.2.9 Development of Learning Outcomes Training and PARLO introduction workshop	21PSTEM	Deborah Pomeroy; Neil O'Connell; Kathleen Krier; Assessment and Curriculum Action Team	No Outputs Planned this Quarter	Workshop and training to be implemented at start of Q2.
		3.2.10 PARLO software setup for each pilot school	21PSTEM	Neil O'Connell; Kathleen Krier	No Outputs Planned this Quarter	Workshop and training to be implemented at start of Q2 with PARLO software set up.
		3.2.10 Online technical PARLO Support	21PSTEM	Neil O'Connell	No Outputs Planned this Quarter	Workshop and training to be implemented at start of Q2 with support to start.
		<i>Teaching English Language in Content Classes (TELIC)</i>				

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
		3.2.11 2-week face-to-face TELIC training	WL	Samir and STTA	No Outputs Planned this Quarter	Delayed because teachers do not have necessary English proficiency required for TELIC. Likely delayed one quarter.
		3.2.12 3-month online TELIC course	WL	STTA	No Outputs Planned this Quarter	Delayed because teachers do not have necessary English proficiency required for TELIC. Likely delayed one quarter.
3.3	Assessing progress through classroom observations	3.3.1 Classroom Observation: establishment of observation protocols (adherence to curriculum, group dynamics, clear learning outcomes, PBL, evidence of on-going assessment, linkages to standards, English language use)	WL; TFI; TIES; 21PSTEM	Justin, Samir, and Reda	Classroom observation protocols developed in November and implemented in December.	Continued implementation of observation protocols.
		3.3.2 Daily support to school leadership for school management and consistent teacher development	WL	Reda and Justin	Support provided led by Reda with some short term assistance provided by Justin in November and December.	Reda and Justin to now provide the daily support starting Q2.

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
3.4	Building school principals' ability to develop and implement strategic STEM action planning frameworks	3.4.1 Training in School Leadership and 'Whole School' Change Management	TFI; 21PSTEM; TIES	Frederic Bertley and Chris Lehmann; Gary Cooper; Leadership Action Team; Jeff McClellan (MC2)	No Outputs Planned this Quarter	To be implemented in Q2.
		3.4.1.1 Two, one-week intensive mentoring and training for principals with joint classroom observations and feedback sessions with principals and teachers	21PSTEM	Gary Cooper and Deborah Pomeroy	One on one sessions with the principals have been provided by TFI and 21PSTEM. Rather than intensive sessions, a composite set of training throughout the year will continue, with professional development planned in early Q2.	Protracted training to be implemented to address the more significant need for continuous training and mentoring.
		3.4.2 5-day Strategic Action Planning Workshop for School Administration Teams	TIES	Reda; STEM School Design Action Team	No Outputs Planned this Quarter	Planned for Q2
		3.4.3 Creation of Egyptian STEM Model School Design Blueprint	TIES	Jan Morrison, Rich Rosen, STEM School Design	Design Blueprint Format developed and a part of the STEM School Design Manual. The delay in the National Board Meeting delayed completion of the Design Blueprint.	A completed Design Blueprint is planned for Q2.

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
				Action Team		
		3.4.3 Collaborative Online Discussions for leadership training	TIES; 21PSTEM	Jan Morrison; Gary Cooper and Deborah Pomeroy	Handbook for Students created to support leadership in the schools. Face to face leadership support was implemented with limited online discussions due to connectivity issues.	Q2 principal training is planned for both school principals in January. Further Online discussion are limited due to internet connectivity issues. This is being addressed.
		3.4.4 Quarterly school management video conferences	TIES; 21PSTEM; TFI	STEM School Design Action Team	Video conferencing has not been feasible to date due to internet connection issues at the schools. In person management support has been frequent.	Following increased connectivity video conferencing planned. In person support will continue.
		3.4.5 Weekly Field Visits	WL	Reda, Justin and PDTT	No Outputs Planned this Quarter	
		3.4.6 End of School Year 3-day Retreats	TIES; WL	Jan Morrison	No Outputs Planned this Quarter	

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
				and Justin Duffy		
3.5	Identifying and building the capacity of teacher trainers (occurs in Years 3 and 4)	3.5.1 2-week summer TOT	WL; TFI; 21PSTEM; TIES	Matt VanKouwenberg; PDI Action Team	No Outputs Planned this Quarter	
		3.5.2 One-week TOT (Winter/Spring Break)	WL; TFI; 21PSTEM	Matt VanKouwenberg; PDI Action Team	No Outputs Planned this Quarter	To be implemented in February of Q2.
		3.5.3 Online collaboration with US Master Trainers	WL; TFI; 21PSTEM	Matt VanKouwenberg; PDI Action Team	No Outputs Planned this Quarter	
		3.5.4 Co-training with US Master Trainers	WL; TFI; 21PSTEM	Matt VanKouwenberg; PDI Action Team	No Outputs Planned this Quarter	
3.6	Create a virtual STEM professional development learning platform	3.6.1 Design on Qiditi learning platform	TIES	Richard Rosen	No Outputs Planned this Quarter	Q2
		3.6.1.2 Create Qiditi Action Plan	TIES	Richard Rosen	No Outputs Planned this Quarter	Q2
		3.6.2 Updating of technical content	WL	IT Specialist	No Outputs Planned this Quarter	Q2

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
3.7	Experiencing Best Practices in STEM through Interactive US Study Tours	3.7.1 Egyptian STEM teacher training and study tour to U.S	WL; TFI; TIES; 21PSTEM	Frederic Bertley	No Outputs Planned this Quarter	Planned for Q2
Objective 4: Strengthen MOE capacity at the systems and policy level to sustain and replicate these model schools						
4.1	Designing school-driven curricula	4.1.1 Yearly 5-day workshops with teachers and MOE participants for long term adaptation and contextualization of STEM curriculum framework and Grand Challenges	21PSTEM	Assessment and Curriculum Action Team; DCOP	Output delayed by changes in school leadership at 6 th of October.	Grand Challenge Designed Studio will be held in Q2 as planned for January.

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
		4.1.2 Developing trans-disciplinary Capstone Projects (curriculum development, standardization)	21PSTEM; TFI; TIES	Matt VanKouwenberg; PBL/Capstone Action Team	Capstone Manual started with additional adaptation needed. In addition, the Capstone process has been started and implemented with two Capstones (Systems and Building) being completed by students at 6 th of October. Ma'adi School Capstone is completed and will be launched in Q2. This work was accomplished by covering PBL and trans-disciplinary training, capstone customization, and feedback by faculty on the content and process. Results integrated into a curriculum proposal for the remainder of the 2012-2013 school year and proposed interim curriculum for the following year. ECASE ahead of project timeline with 3 capstones being taught in year 1 and 2-3 more for implementation in year 2.	Finalize Capstone Manual
		4.1.2.1 Curricula Working Session	21PSTEM	Joe Merlino, Deborah Pomeroy Vivian Loewenstern	Working documents created to link all Next Generation Science Standards with all aspects of the proposed curriculum.	Process to be continued in Q2.

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
		4.1.2.2 Units of Study Working Session	21PSTEM	Deborah Pomeroy	Team identified units of study for the semester starting in February. These are from exemplary US curricula. Initial training was delivered for the teachers in using and adapting these units for Egypt.	Continued support to teacher to be provided.
		4.1.3 Create Capstone and PBL handbook	21PSTEM; TFI; TIES	PBL/Capstone Action Team	Capstone Manual was published and is iterative.	
4.2	Developing comprehensive assessment instruments aligned to STEM curriculum	4.2.1 Create, administer, and analyze baseline assessments (math, science) to inform curriculum	21PSTEM	Joe Merlino	Assessment complete for math and science. Administered to 6th October and Ma'adi students. Assessments graded and results used for curriculum planning purposes.	
		4.2.2 Co-development of End of Course Assessments	21PSTEM	Assessment and Curriculum Action Team	End of Course assessment produced 1. Developed two units of study for each course: For Math Year 1, Proportional Reasoning and The Straight Line and for Math Year 2 Polynomial Functions and Rational Functions. 2. Revised the Interim Curricula document in order to reference the Egyptian books	
		4.2.3 Analysis using the Survey of Enacted Curriculum (SEC) algorithm of TA, standards, baseline assessment with international standards	21PSTEM	Assessment and Curriculum Action Team	Created an Assessment Report, Analysis of Math and Science Assessments and a Presentation given in December	

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
		4.2.4 Research and develop appropriate Egyptian college-readiness assessment system	21PSTEM; MOE; NCEEE		Egyptian College-Readiness Assessment System International assessments were researched. Report authored recommending short and long term Egyptian college readiness assessment systems.	
		4.2.5 Recommend appropriate summative exit exam to use for impact evaluation of student learning in STEM schools	21PSTEM; MOE; NCEEE	Assessment and Curriculum Action Team	Recommendations were made to the National Board and approved for the percentage of student performance on summative and performance based instruments.	
		4.2.5.1 International comparison of high school exit/college entrance examinations	21PSTEM	Joe Merlino	Examined with recommendation to National Board that ACT is the lead exam.	Further research will be conducted in Q2.
4.3	Building the Capacity of the National STEM Board	4.3.1 5-day workshops with Ministerial Executive STEM Committee and National Board to develop planning process for STEM Schools Network Plan	WL; TIES; TFI; 21PSTEM	STEM School Design Action Team and National Board		Integrated into GCDC for Q2 and additional Board Meetings.
		4.3.2 Quarterly meetings with National STEM Board to monitor implementation of Strategic Action Planning Framework and provide technical assistance	TIES	Jan Morrison	The National Board has re-ordered their priorities.	Strategic Action Plan Framework will be designed and launched in Q2.

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
		4.3.4 Design Egyptian STEM Schools Network Framework and network tools	TIES	Jan Morrison and Richard Rosen	STEM Egypt School Framework (Blueprint) Network with descriptive graphic and protocols established	
		4.3.5 Bi-monthly meetings via videoconferencing and digital platform	TIES	Jan Morrison and Richard Rosen	The National Board did not meet about this in Q1, but is scheduled to do so in Q2.	
Objective 5: Support the MOE in the upgrading of science and mathematics curriculum standards, students assessment, and teacher preparation for the mainstream						
5.1	Capturing Best Practices in STEM Education	5.1.1 3-day Best Practices in STEM conferences	TIES; WL	Jan Morrison and Barb Skarzynski	No Outputs Planned this Quarter	
		5.1.2 Media events and press releases to promote STEM in Egypt	WL	COP and DCOP	No Outputs Planned this Quarter	
5.2	Building the capacity of CCIM and NCEEE to apply Egyptian STEM best practices to mainstream science and math	3 day Curriculum Workshops	21PSTEM; WL; TIES	DCOP	No Outputs Planned this Quarter	

No.	Activity/Task	Task	Responsibility	Lead	Status Q1	Projected Q2
	curriculum					
Monitoring and Evaluation						
	M&E	Performance Monitoring Plan	WL		PMP	
		Quarterly Performance Monitoring and Reporting	M&E		Quarterly Reports	
		Data Quality Visits	M&E		Quarterly Reports	
		Integrating data into program strategy	M&E and DCOP		Quarterly Reports	
		Mid-term Evaluation	M&E		Annual Progress Report	
		Final Evaluation	M&E		Final Report	
Reporting and Communications						
	Quarterly Progress Reports	Technical and Financial Reporting	COP and PM		Quarterly Reports	
	Annual Progress Reports	Technical and Financial Reporting	COP and PM		Annual Progress Report	
	Annual Work Plan	Technical and Budget Projections	COP and PM		Annual Work Plan	
	Recipient Exit Plan	Demobilization Plan (Ninety Days prior to completion)	COP and PM		Recipient Exit Plan	
	Final Report	(Ninety Days after Award completion date)	COP and PM		Final Report	

3. Challenges and Resolutions

ECASE encountered both minor and more significant challenges this quarter, as is expected during any project start-up phase. Some of these challenges were made more acute by the continued political uncertainty in Egypt.

Major Challenges	Corrective Action	Status
Lack of understanding by MOE and Egyptian stakeholders of USAID contracting periods and the delays in support or differences in project mandate and scope (as differentiated from previous projects) to schools that are beyond the control of ECASE implementing partners	ECASE achieved rapid operational and technical start-up and continues to develop close, collaborative partnerships with USAID and MOE to manage expectations	Ongoing communication with MOE and USAID
Immediate need for science lab equipment to be delivered despite the required lead time to fully comply with USAID procurement rules and regulations	ECASE is in full compliance with USAID rules and regulations and has competitively bid all lab equipment. ECASE is working closely with vendors to deliver goods as soon as possible	Procurement process is in final stages, vendors will be selected in Q2 and installation will also take place in Q2.
Turnover in school leadership and the replacement of the principal at both schools (after substantial investment by the project and the previous contract to build the capacity of these professionals	ECASE worked intensively with both of the new principals to ensure that school leadership was able to confidently lead teaching staff of STEM schools	Continued PD for school leadership and working to establish teacher criteria
Teacher turnover, specifically at 6 th of October School	ECASE addressed this by repeating some of the foundational training concepts and using peer-to-peer training techniques to bring new teachers up to speed	Continued monitoring of the school climate and support to teachers and school leadership as needed
English Language proficiency was lower than anticipated for both students and teachers	ECASE provided immediate language support	ECASE is redesigning the English language interventions to provide continuous weekly language support to both students and teachers to allow for more rapid mastery of English

		language that is needed to full participate in STEM classrooms.
Lack of infrastructure support to the schools because of competing stakeholder interests.	Although this is outside the scope of ECASE, project staff have been working closely with school leadership, National Board, and relevant stakeholders to ensure that basic infrastructure (food, electricity, basic materials such as pens and paper, etc) were consistently provided to the schools to maintain operations	

Annexes

Annex 1: ECASE Meeting Summary

Annex 2: September Training Schedule

Annex 3: October Training Schedule

Annex 4: ECASE STEM Capstone Manual (for adaption)

Annex 5: Systems Capstone Report (6th of October School)

Annex 6: Science Assessments Overview

Annex 7: Forced Concept Inventory (FCI) Overview Results

Annex 8: Math Baseline and Interim Curriculum Report

Annex 9: Math Baseline and Interim Curriculum Summary Presentation

Annex 10: Egyptian STEM Model School Student and Parent Handbook

Annex 11: Egyptian STEM School Design Process

Annex 12: National Board Presentation (September 2012)

Annex 13: ECASE Year 1 Annual Implementation Plan