TECHNICAL ANNEX 1: BASIC EDUCATION IN THE 21ST CENTURY

Basic education is key to producing future leaders committed to sound economic policies, democratic governance, and the well-being of their citizens. An educated 21st century society can recognize and challenge corruption, hold its government accountable, and bring about productive social change. A citizenry with 21st century skills will also better be able to succeed in an increasingly "technology-mediated" world (World Economic Forum, 2015).

Under USAID's 2011-2017 Education Strategy, targeted interventions have yielded significant gains in basic literacy at the primary school level. To meet the diverse needs of the 21st century economy, USAID's next Education Strategy should build on these gains but also aim for acquisition of higher-level and broader skill sets. In addition to the focus on basic literacy and numeracy skills, the new strategy should focus on competencies such as critical thinking and problem solving skills, innovation, and entrepreneurial skills. These skills and competencies allow for greater responsiveness to the constantly evolving demands of a 21st century global economy.

PROGRESS HAS BEEN MADE BUT CHALLENGES PERSIST

From 2011-2015, USAID and partners implemented 151 basic education programs in 45 countries, directly benefiting more than 41.6 million children and youth (U.S. Agency for International Development, 2016). Over time, USAID initiatives have made progress in literacy acquisition and primary school enrollment. Global literacy rates are up 33 percent worldwide in the last 25 years, and primary school enrollment rates have tripled in that period (U.S.

Agency for International Development, 2016). According to the 2016 Global Education Monitoring Report, at current levels of intervention, universal primary completion will be achieved in 2042; universal lower secondary completion is projected for 2059, and universal upper secondary completion will finally be realized in 2084 (United Nations Educational, Scientific and Cultural Organization, 2016).

Despite progress, many education systems are falling short of preparing students for 21st century success. USAID reports that 250 million children worldwide have yet to acquire the most basic literacy and numeracy skills, even though 130 million of them have attended at least four years of school (U.S. Agency for International Development, 2016). In low-income countries, only one out of every ten young people will be on track to gain basic secondary-level skills in 2030 (The International Commission on Financing Global Education Opportunity, 2016). Without an appropriately skilled and educated populace, no development initiatives have been or will be sustainable.

HIGH RETURNS ON BASIC EDUCATION INVESTMENTS

Investments in basic education that aligns with the 21st century labor market will combat poverty, thus decreasing countries' dependence on foreign aid in the long-term. A recent study of 89 developing countries revealed that educational attainment is inversely coordinated with poverty- as educational attainment increases, likelihood of income less than US$1.90 per person per day significantly decreases (The World

Bank Group, 2016). If all students in low income countries acquired basic reading skills, specifically, world poverty could be reduced by approximately 12% (United Nations Educational, Scientific and Cultural Organization, 2014). As mentioned, current programs are making progress towards world-wide literacy. Best-practices from effective literacy acquisition programs should be documented, shared, and applied across a broader range of interventions for greater poverty reduction.

Higher level skills, acquired in secondary school, should prepare students for participation in the fast-paced, rapidly changing global economy. In the 21st century, automated technologies will continue replacing low-skilled jobs and employers will demand higher-level technical, social and critical thinking skills for the jobs available. Without effective secondary education, the increasing youth population in the developing world will lack opportunity for gainful employment (The International Commission on Financing Global Education Opportunity, 2016). However, if quality universal secondary completion can be achieved by 2050, per capita income in low-income countries could rise by 75% (United Nations Educational, Scientific and Cultural Organization, 2016). When students develop higher level academic and entrepreneurial skills in secondary school, they will be able to engage in the global economy as eager workers and consumers. They will lead their countries towards financial independence and increase markets for U.S. trade.

CULTIVATING MINDSETS FOR PEACEFUL DEMOCRACIES

The knowledge, attitudes and skills gained from quality basic education lead to greater commitment to and engagement in systems for democratic representation. According to a study of 18 countries in sub-Saharan Africa, people of voting age with primary education were 1.5 times more likely to support democracy than people with no education, and twice as likely to do so if they had completed secondary education (United Nations Educational, Scientific and Cultural Organization, 2014). The current world population is 7.4 billion people. 6.2 billion people live in less developed countries and 26% of the global population is under the age of 15. By 2050, global population is projected to reach 9.8 billion (Population Reference Bureau, 2016). It is critical that the growing youth populations know the benefits of and feel committed to democratic governance in the 21st century. Quality basic education is a determining factor in whether the growing youth population will lead their countries towards social stability and functioning democracy or suffer increased hardship and desperation.

The U.S. Government invests significant resources in ensuring quality basic education for children around the world. These resources are making a significant impact in the lives of millions. Future programming should build on this momentum and encourage flexibility and innovation to effectively respond to 21st century economic and social needs of growing youth populations. Bipartisan political support is needed to adequately resource and fully realize effective solutions.

TECHNICAL ANNEX 2: EDUCATION IN CRISIS SETTINGS

DIMENSIONS OF EDUCATION IN CRISIS SETTINGS

According to the United Nation's High Commissioner for Refugees (UNHCR), the world is experiencing the highest levels of displaced persons in recorded history. As a result, one in four, or approximately 75 million, school-aged children live in countries affected by crisis and conflict, and 50% of the children who are out of school worldwide are living in or fleeing these countries (Nicolai, 2016). For example, of the six million primary and secondary school-age refugees under UNHCR's mandate, 3.7 million have no school to attend (United Nations High Commissioner for Refugees, 2016).

Children need more than food, water, and shelter to regain a sense of normalcy and of hope for the future. In times of crisis and conflict, good quality schools offer children and youth
- shelter from harm;
- a safe place to recover from trauma and build psycho-social skills;
- life-saving information, such as how to recognize landmines and remain healthy;
- an essential foundation that allows them to stay in school and thrive; and,
- skills and perspectives necessary to support their families and rebuild or establish peaceful and democratic societies when they return home.

Alternatively, education equips children to make valuable contributions to new societies when resettlement is the only option. In contrast, out-of-school children in crisis and conflict settings are extremely vulnerable to exploitation as under-age laborers, child soldiers, and sex workers.

When asked what is most important to them, 99% of children in many different emergency settings all said, "Our education" (Save the Children - UK, 2015). Yet schools continue to be among the most predictable casualties of war; in the past 10 years, armed forces and groups in at least 26 countries have used schools for military purposes (Global Coalition to Protect Education from Attack, 2015). Even in less violent crises, schools that survive routinely become shelters for the displaced, and broken bridges and roads disrupt deliveries of textbooks and supplies.

With the average length of displacement approaching 20 years, most displaced children cannot wait to return to their homes or receive resettlement assignments to continue their education. Yet 86% percent of the world's refugees are sheltered in developing countries that struggle to provide basic education to their own children and will need help from other countries to absorb more (United Nations High Commissioner for Refugees, 2016). Worldwide, education receives only 1.4% of all humanitarian aid to extreme emergencies, and development aid to education in areas with continuing crises likewise falls short of need (Financial Tracking Service, 2016).

The Convention and Protocols on the Status of Refugees, ratified by the United States in 1980, recognizes education as an essential service to all children who are displaced from their homes for more than a few months. Nonetheless, of 25 UNHCR priority countries, only 16 of these countries allow refugees full access to their education systems at the primary and secondary school

level, the remainder placing limits on their access. Furthermore, in countries where children are allowed to access the national education system, missing or unrecognized identity documents frequently prevent school entry, progression, and formal evaluation (U.S. Agency for International Development, 2011). To mitigate these challenges, funding for non-formal programs to provide education and certification to children who cannot access the formal system should be scaled up. Non-formal education options should have pathways that allow children to transition into the formal system as soon as possible.

INTERNATIONAL RESPONSES

The international community has begun to rise to the challenge. The recent World Humanitarian Summit in May 2016 called for governments to commit to providing safe, quality, and inclusive access to primary and secondary education during and after crises (World Humanitarian Summit, 2016). At the same time, it recognized the need for a collaborative and agile approach to fund that access. In September 2016, the United Kingdom, the United States, the European Union, Norway, and the Netherlands pledged $87.5 million, or about half of the funds needed to launch the first year of Education Cannot Wait, a global fundraising campaign to provide 75 million out-of-school children and youth with the education they—and the world—needs (International Network for Education in Emergencies, 2016).

Since the end of World War II, every USG administration has led the world in

responding to humanitarian crises and in creating new and more effective responses to communities living in crisis and conflict. Likewise, USAID'S 2011-2017 Global Education Strategy featured "equitable access to education in conflict and crisis environment for 15 million learners" as one of its three goals (U.S. Agency for International Development, 2011).

USAID's emphasis on equity reflects a growing appreciation in the international community for the role inequity—including inequitable access to education—plays in conflicts. In the United States, compulsory education for all has provided a way up the economic "ladder" and has prepared historically disadvantaged groups to participate more fully both in the free market and in the democratic process. In the same way, in countries now wracked by conflict, a fair and inclusive education can help transform the attitudes and social norms that perpetuated economic and political inequality and provoked conflicts in the past.

As stated earlier, we are committed to quality education for all as a basic and an enabling right, and we are convinced that education plays a unique and vital role in the economic and social development of all countries. By extension, speedy access to quality education following disruption and displacement is critical for the peace and well-being of all countries. In such contexts, access to education plays a critical role in supporting stability, reconciliation, and peacebuilding, as well as in strengthening children's resilience to future shocks.

TECHNICAL ANNEX 3: EARLY CHILDHOOD EDUCATION

Healthy and curious children are the global leaders of tomorrow. Unfortunately, an estimated 250 million children globally fail to meet their developmental milestones (Black, et al., 2016). This means nearly one-third of all the world's children are entering elementary grades without the cognitive, social-emotional, and language skills they need to fulfill their potential and become productive, contributing citizens. Pre-primary education helps children build these skills for academic and life-long success.

ECONOMIC AND LASTING IMPACT OF EARLY EDUCATION

Research abounds regarding the positive impact of pre-primary education. For example, in Bangladesh, children in a high-quality, USAID-funded preschool program outperformed a control group in verbal and nonverbal reasoning, as well as school readiness (Aboud, 2006). A World Bank evaluation of a community-based preschool program in Mozambique found that children were 24% more likely to enroll in primary school at the proper age and with the necessary "readiness" skills, if they had attended preschool (Martinez, Naudeau, & Pereira, 2012).

Countries will only be able to reach and exceed their development goals when their youngest children get a strong start. Attending pre-primary education increases school attainment (number of years of schooling), which in turn increases adult employment and lifelong earnings (Nores & Barnett, 2010). At an individual level, failure to reach one's full developmental potential results in an average adult income 26% lower than one's more advantaged peers (Richter, et al., 2016).

When children cannot reach their full potential, a nation's prospects for economic growth are limited. For every dollar spent on preschool programs, there is a $4 to $9 return to individuals and society (Center on the Developing Child, 2009). At the national level, it is now clear that the cost of failure to provide adequate early childhood services is several times higher than the cost of effective interventions.

COORDINATED EARLY INTERVENTIONS

Education and health outcomes are inextricably linked during the early childhood years. Malnutrition during this time can result in hindered cognitive development and impeded intelligence quotient (IQ) (Waber, et al., 2014). These adverse effects of malnutrition often result in delayed school entry, early school termination, poor school performance, and reduced work capacity, resulting in lower lifetime economic achievement (Walker, Chang, Powell, & Grantham-McGregor, 2005) (Waber, et al., 2014). Focused cross-sectoral coordination for promoting healthy early development is essential for helping ensure that all children enter primary school ready to learn and excel. A guiding principle of USAID's Multi-Sectoral Nutrition Strategy (2014–2025) includes providing and strengthening coordinated planning and programming across sectors, including health and education (U.S. Agency for International Development, 2016). We support similar coordination for future initiatives.

EARLY LITERACY AND NUMERACY: PREPARING FOR SUCCESS

Emergent literacy and positive attitudes towards reading serve as the foundation of

more complex reading and writing skills and enable the lifelong pursuit of learning (Department of Education and Child Development, 2013). USAID has set ambitious goals for improved reading outcomes and has made some progress towards those goals for primary school-aged students. Yet, many children are not reading successfully, in no small part because of their lack of emergent literacy skills when they enter Grade 1. By providing effective emergent literacy support in the pre-primary years, USG programs can contribute to improved reading outcomes and other critical skills and abilities of future thinkers and leaders.

The skills and attitudes that a child develops in relation to math concepts throughout the pre-primary period lay the foundation for academic success across subject areas (Duncan, et al., 2008) (Clements & Sarama, 2011). Existing data suggests there is a global crisis in the acquisition and development of math skills. Early Grade Mathematics Assessment (EGMA) results in 10 countries showed that Grade 2 students struggled with basic math skills, such as addition and subtraction (Nielsen, 2014). For example, nearly 61% of Grade 2 students tested in Zambia were unable to correctly solve a single conceptual subtraction problem (Brombacher et al., 2015).

Focusing on reading and math starting at primary school age is not early enough to significantly improve learning outcomes. Interventions must begin earlier, both at home and in formal education, for young learners to build essential emergent literacy and numeracy skills. These skills are necessary to prepare children for future leadership of informed societies and capable workforces.

INCREASING MOMENTUM FOR EARLY CHILDHOOD EDUCATION

The evidence for and momentum around early childhood education is building. The United States is making progress towards an international goal for all children to have access to quality early learning opportunities by 2030. In April 2016, the World Bank launched a new initiative focused on increased investment in the early years and formed an Early Childhood Development Action Network in partnership with the United Nations Children's Fund (UNICEF) and, later, the World Health Organization. A recent series in the renowned medical journal, *The Lancet*, outlined new evidence about early intervention, including data about the impact of intervention, the higher scale impact on the economy, and the epigenetic far-reaching effects (Richter, et al., 2016).

The time is right for the U.S. Government to embrace the empirical evidence and align its foreign assistance investment strategy with its global education goals. Approaches for early childhood interventions must be adapted to meet the specific contexts, but core best-practices exist and should be integrated across sectors for optimal early learning. Every child deserves the best possible foundation for lifelong learning and thinking. The U.S. Government and should seize this opportunity to do more for our youngest children.

We specifically recommend that USAID's next Education Strategy include support for early childhood care and education, including pre-primary education and linkages with multi-sectoral interventions that support child development from ages 0–8.

TECHNICAL ANNEX 4: GIRLS' EDUCATION

Global education programs should aim for equality at the local and systemic levels, so that all children—regardless of their gender—realize their full potential and graduate ready to lead their nations towards economic independence and social stability. The economic benefits of girls' education are substantial, especially at the post-primary levels. For every year beyond fourth grade that girls go to school, their wages rise 20% (United States Agency for International Development, 2015). Yet, in many regions, girls are left out of education. Programs must focus on the most marginalized girls, recognizing that needs differ by age group and other demographic considerations.

EQUITABLE ACCESS TO EDUCATION

According to the 2016 Global Education Monitoring Report, gender parity (equal levels of boys and girls attending school) was achieved globally in 2014 in primary, lower secondary, and upper secondary schools (United Nations Educational, Scientific and Cultural Organization, 2016). The international education community has rightfully celebrated this progress. However, gender gaps persist in many countries, most dramatically in sub-Saharan Africa, where girls living in poverty are often without the necessary support to access even primary education (United Nations Educational, Scientific and Cultural Organization, 2016). Globally, 62 million girls between the ages of 6 and 15 are not in school, and 16 million girls between the ages of 6 and 11 will never enter school, compared to 8 million boys (The World Bank Group, 2016).

In 2015, the United States committed to a vision for "a world in which every woman and girl enjoys full gender equality and all legal, social, and economic barriers to their empowerment have been removed" (United Nations, 2015). Realization of gender equality in education first requires recognition of the underlying barriers to girls' full participation, beyond enrollment.

Some practical barriers to girls' attendance and success at school include lack of access to water and sanitation facilities during times of menstruation, unsafe passage to and from school, and prohibitive school fees. These problems can be addressed through improved infrastructure and financial inputs. However, entrenched social and cultural norms also limit girls' access to quality learning opportunities. In many cultures and societies, girls face threats of forced child marriage, early pregnancy and motherhood, gender-based violence, seclusion during menstruation, and greater responsibility for household labor than boys. To address these barriers to girl's education, programs must increase awareness of and appreciation for the benefits of girls' education at every level of society.

INCLUSIVE LEARNING ENVIRONMENTS

The focus of the international education community is now turning to what and how girls and boys are (or are not) learning differently once they are in the classroom. The Education for All movement recognizes that "...biases in teacher behaviour and training, teaching and learning processes, and curricula and textbooks often lead to lower completion and achievement rates for girls" (United Nations Educational, Scientific and Cultural Organization, 2000). Learning materials that promote powerful roles for girls are essential to ensuring girls'

self-esteem and sense of belonging in their schools.

Increasing learning and empowering girls and boys throughout basic education requires robust engagement and development of countries' teachers, school leaders, and communities. In many regions, the teacher workforce at the secondary level is predominantly male, depriving young women of academic role models and mentors. Parents are often overlooked as key members of their students' academic support teams. Their guidance and encouragement helps students develop academic identity and confidence.

At the very minimum, all students need and deserve to feel safe and protected at school. School-related, gender-based violence (SRGBV), defined as "acts of sexual, physical, or psychological violence inflicted on children in and around schools because of stereotypes and roles or norms attributed to or expected of them because of their sex or gendered identity" is much too common in many countries (United Nations Girls Education Initiative and United Nations Educational, Scientific and Cultural Organization, 2013). The experience, or even the threat, of SRGBV often results in poor performance, irregular attendance, dropout, truancy, and low self-esteem. The outcome is devastating to victims, families, and societies and must be addressed through community sensitizations and improved reporting structures.

Engagement of boys and young men as allies in girls' education is a necessity. However, boys face their own set of gendered barriers to quality learning. Poverty often drives young men into the workforce, and in some regions, a lack of

community values about young men's education hinders enrollment and school completion. Additionally, boys experience forms of SRGBV such as corporal punishment and bullying that lead to male drop-out (United Nations Girls Education Initiative and United Nations Educational, Scientific and Cultural Organization, 2013).

ALL LEARNERS AS LEADERS

Robust agency by and on behalf of girls is necessary to ensure their access to leadership opportunities. Girls and young women must have the ability, as individuals, with their peers, and with the support of their stakeholders, to shape their own environments and futures. This requires opportunities to build critical thinking and self-advocacy skills.

For many years, USAID and implementing partners have been eliminating gender bias from curriculum, identifying and engaging with key education stakeholders to shape perceptions and attitudes, and strengthening education systems for sustainability of efforts. Based in our extensive experience, we have identified the following six best practices: (1) ensure that teachers, administrators, parents, community leaders, and employers are fully aligned and coordinated; (2) give girls and women educational opportunities that integrate awareness in health, nutrition, and physical and emotional well-being; (3) design initiatives inclusive of boys and men; (4) increase opportunities for girls' leadership training; (5) improve knowledge and awareness of harmful practices and human rights abuses; and (6) impart essential life skills. These approaches nurture creativity and self-confidence, and open doors to self-sufficiency and prosperity for all children.

TECHNICAL ANNEX 5: TRANSPARENCY AND ACCOUNTABILITY

MONITORING AND EVALUATIONS (M&E) IN USG PROGRAMS

USG-supported education programs, whether funded through projects administered by U.S.-based implementing partners or through transfers of funds to multilateral agencies such as the Global Partnership for Education, must be able to collect timely, actionable data for the costs and benefits of education investments to (a) increase transparency and accountability in using USG resources; (b) inform practice and programming with the goal of replicating successes (and eliminating those programs that are not effective); and (c) assist beneficiary countries in measuring and reporting against the international education goals, particularly those aligned with USAID's Education Strategy (2011–2017).

Successes and shortcoming can be understood through a variety of evaluations, including (1) rigorous impact evaluations to test the effectiveness of educational interventions against a counterfactual, (2) performance evaluations using qualitative and quantitative methods to determine under what conditions an intervention works best and informs "best-practice" design, and (3) value-for-money evaluations that compare outcomes to costs to assess return on and feasibility of investments made.

Combined, these evaluation strategies have had a powerful impact on the effectiveness and sustainability of education strategies and programming. For example, over the past decade, multiple impact assessments have revealed that learning outcomes are best improved by providing strong early grade reading programs in local languages, resulting in USAID's Goal 1 strategy and multiple host government education reforms

(Pflepsen, 2011) (Buhmann & Trudell, 2008) (Global Education Monitoring Report, 2016). Countries as diverse as Egypt, Kenya, Yemen, and Nepal have made early grade reading a priority based on USG-supported evaluations (Snilstveit, et al., 2016). Formative and summative performance evaluations and targeted research have resulted in operational guidance and further refined the global community's understanding of how to support education programs. For early grade reading, these evaluations have shown the efficacy of scripted lessons, supplementary reading materials, interactive teacher training, and ongoing coaching, as well as using student assessment in the classroom and for system management. Employing these approaches, the majority of USAID's reading programs have shown significant positive effects on reading skill development (U.S. Agency for International Development, 2016). This information is foundational to national education plans, "including *credible* strategies informed by effective practices and standards" that many USAID partner countries are now preparing to take to scale (United States Congress, 2016).

LEVERAGING DATA FOR INCREASED IMPACT

Whether developing new books to improve reading outcomes or creating training programs to ensure that marginalized youth have the skills they need for employment, development practitioners need "just-in-time data" to tell them if they are on the right path. Monitoring of program implementation is a powerful accountability mechanism, revealing whether promised activities and input have been provided. Monitoring also provides opportunities to

observe whether the implementation and roll-out of activities is proceeding as planned, with adherence to the planned design; when implementation or distribution of inputs is unequal or does not match need, program officers can help make sure that those activities are redirected. Monitoring is critical both to adjusting the approach, if needed, and to understanding evaluation results. Evaluation should always be connected to monitoring, allowing implementers to understand how the activities and inputs contribute to and result in the desired outcomes.

It is important that a full range of monitoring and evaluation activities continue to be part of education programming to address the core questions of effectiveness, efficiency, and sustainability. Use of affordable options for information and communication technology for rapid data collection, analysis, and feedback should be expanded. External evaluations should be conducted to verify reported results and bring added perspective to deepen understanding of program strengths and weaknesses. Experimentation and research are integral to the learning process. Whether incorporated into program design or conducted independently, targeted inquiries can answer key design questions, as part of a deliberatively developed research agenda, whether formulated at the program, country, agency, or global levels.

Guidance about conducting M&E should explore different options and methods of collecting data. Not all issues require costly randomized control trials or large surveys to provide viable information to inform and assess—"just-enough" approaches to M&E are also needed to contain costs, conserve resources for implementation, and not overburden program or country staff. More efficient instruments to measure results—

especially student outcomes—must be designed for routine use, such as group-administered reading and math assessments, school readiness assessments, and social-emotional learning assessments.

Standardized monitoring data has been very helpful for allowing Washington-based decision makers to understand implementation progress across dozens of countries and field sites. However, both practitioners and managers need a better understanding of how to obtain, use, and share data. Program designers and managers must have sufficient understanding of M&E design to ensure that their plans, requirements, and budgets are realistic. Feedback loops are critical if data is to inform decision-making, whether at a project-, agency-, or government-level. Provision must be made for sharing data and its interpretation in and among partner countries and in the education development community.

Education programs vary greatly in dosage, duration, and context. An early grade reading program in a conflict-ridden country may differ significantly in results and costs from a similar program conducted in a stable, well-resourced environment, yet both may be considered successful. Aggregation and cross-country comparison must be undertaken cautiously, if at all. At the same time, setting targets for program performance must be realistic, based on historical and comparable country data, rather than wished-for results. And, finally, greater understanding of M&E should foster an appreciation that even interventions that demonstrate no discernable statistical effect may still be viable and that valuable lessons can be obtained from "failure" and transformed into successful new practices, approaches, and techniques that further education for all.