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## WHERE IS THE LEARNING? MEASURING SCHOOLING EFFORTS IN DEVELOPING COUNTRIES

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## ABBREVIATIONS

ALO-c	Assessment of Learning Outcomes Clearinghouse
ASER	Annual Status of Education Report
BMZ	Federal Ministry for Economic Development Cooperation (Germany)
CBJ	Congressional Budget Justification
DfID	Department for International Development (United Kingdom)
EDI	Early Development Instrument
EFA	Education for All
EFA EDI	EFA Development Index
EGRA	Early Grade Reading Assessment
FACTS	Foreign Assistance Coordination and Tracking System
FTI	Education for All Fast Track Initiative
GMR	Global Monitoring Report
IIEP	International Institute for Educational Planning
MCC	Millennium Challenge Corporation
MDG	Millennium Development Goal
MinBuza	Dutch Ministry of Foreign Affairs
NEA	National Education Account
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PIRLS	Progress in International Reading Literacy Study
PISA	Programme on International Student Assessment
READ	Russia Education Aid for Development
TIMSS	Trends in International Mathematics and Science Stud
UIS	UNESCO Institute for Statistics
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WEI	World Education Indicators

## INTRODUCTION

Achieving universal education is a twofold challenge: to get children and youth into school and then to teach them something meaningful while they are there. While important progress has been made on the first challenge, there is a crisis unfolding in relation to learning. Around the world, there have been major gains in primary school enrollment partly due to the United Nations' Millennium Development Goals and the abolition of school fees by many national governments. However in many countries, students are spending years in school without learning core competencies, such as reading and writing. To address this learning crisis, the global community and national governments need to place a much greater focus on the ultimate objective of education—to acquire knowledge and develop skills.

This shift in focus away from just enrollment to enrollment plus quality learning requires measuring learning outcomes. However, the global education community is not yet systematically using effective instruments for measuring primary school learning in low- and middle-income countries. This policy brief reviews the global efforts among the primary donors to support the measurement of learning outcomes. It then suggests steps needed to transition global education policy into a new paradigm of enrollment plus quality learning, which includes: scaling up the implementation of national education accounts and national assessment systems; increasing attention to monitoring early learning during child development to improve readiness for school; and expanding the systematic use of simple assessments of basic cognitive functions in the early grades to help teachers improve their practice.

## EDUCATION FOR WHAT? THE PLACE OF LEARNING IN GLOBAL EDUCATION POLICY

Worldwide, progress has been made on the first half of the global education goal— to increase enrollment of students on school. The number of out-of-school children has decreased from over 100 million in 2000 to around 70 million today, despite population increases in many developing countries. In particular, countries in South and West Asia have reduced their overall out-of-school population by 21 million while sub-Saharan Africa has reduced it by about 13 million.<sup>1</sup> The six Dakar Education for All (EFA) Goals that were endorsed by over 180 nations in 2000 had the right approach in their comprehensive conception of education by placing equal emphasis on universal access and quality. They began with expanding early childhood education, ensuring that all boys and girls have access to quality basic education, and continued through promoting learning, literacy and life skills for adolescents and adults. Together the six goals were conceived as essential components of education for all children and adults, not as individual parts that could be addressed or achieved in isolation from each other. Expanding the availability of education at all levels is relatively meaningless unless the education provided at each level contributes to the acquisition of knowledge and the development of skills.<sup>2</sup> Similarly, “improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills” for only a small select group does not fulfill the basic human right to education for all.<sup>3</sup>

Instead of working toward equitable access to quality lifelong education for all, international efforts have almost singularly focused on the easiest-to-measure goal of access. The global commitment to learning was significantly

scaled back with the adoption of the two education Millennium Development Goals focused solely on universal access to school for girls and boys. Learning unfortunately got lost in the pledge to get every child into school.

Thus the focus on the sub-population of out-of school children does a disservice to the 694 million children who are in school, of which about 615 million—or 89 percent—are living in developing countries. Although there is no doubt that getting the remaining 69 million children into primary school is essential, ignoring what is happening in the classroom for the hundreds of millions of children already enrolled sets the global education community up for failure. The considerable progress in increasing enrollment over the past decade will be jeopardized when children, parents and communities realize that the poor quality of education diminishes the promised economic and social returns. There is no inherent trade-off between expanding access and increasing quality. Cross-country data show a positive correlation between education coverage and average learning levels; in no case has an education system with high average learning levels not also achieved near universal primary completion.<sup>4</sup>

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## THE UNFINISHED AGENDA: MEASURING LEARNING

Advocates for education frequently reference a laundry list of the benefits accrued from better access to basic education, including higher personal lifetime earnings, smaller and healthier families, reduced incidence of HIV/AIDS, higher economic growth and increased participation in democratic processes. Yet empirical research shows that many of the true benefits of schooling are derived from the learning that occurs. The quality of education matters more than the quantity (e.g. years in school). Improving quality is more than just increasing the level of inputs at the school-level. It requires structural changes to institutions, including accountability systems that measure student performance, incentives to improve performance, and local level autonomy that gives schools the power to make changes in their practices.<sup>5</sup>

Yet learning outcomes data from numerous countries show children in school are failing to acquire the most basic of skills. For example, 9 out of 10 grade 2 students in Mali studying in French could not read a single word of connected text. In Kenya, 14 percent of grade 3 students were non-readers in English. In two regions in Uganda, 70 percent of grade 2 students could not read a single word in English and over 80 percent could not read in Lango. Roughly half of these grade 3 students in Uganda were unable to read one word in their respective languages.<sup>6</sup>

Despite promising initiatives, learning assessments geared toward developing country needs are not yet widely available. According to the 2008 EFA Global Monitoring Report's (GMR) analysis of printed materials, websites, experts and UNESCO regional offices, fewer than half of the countries in sub-Saharan Africa conducted some type of "national learning assessment" between 1995 and 2008, compared to 77 percent of countries in Western Europe and North America. In other regions—Central and Eastern Europe and Central Asia, the Arab states, East Asia, the Pacific, South and West Asia, and Latin America and the Caribbean—the figure ranged between 53 and 63 percent.<sup>7</sup>

In general, developing countries that want to benchmark their students' learning performance against other countries lack appropriate instruments for doing so. For a country to participate in internationally comparable assessments, it must have at least some measure of success in retaining students in school until age 15, the age when the majority of international assessments are conducted. The country must also be able to afford the high cost of assessment implementation. Only one country considered "low-income", the Kyrgyz Republic, participated in OECD's 2009 Programme on International Student Assessment (PISA)<sup>8</sup> and one, Ghana, in the International Association for the Evaluation of Education Achievement's Trends in International Mathematics and Science Study (TIMSS).

These measurement instruments that were developed for industrialized countries often exhibit "floor effects" when used in developing countries, meaning that a large number of the test-takers register zero scores, possibly due to either the extreme difficulty of the test or the lack of local relevance of the exam content. Not only does this lead to international embarrassment, but it also diminishes the helpfulness of the assessments since they cannot accurately portray students' actual level of understanding below the test's artificial bottom. Even if developing countries are provided with adequate financial support to participate in the existing international assessments, benefits from the results would be minimal to non-existent. Also, assessing student learning at age 15 leaves little time to alter the trajectory of a student's learning outcomes. Thus, those countries most at-risk of failing to provide their children with access to quality education are the ones least likely to participate and benefit from internationally comparable assessments.

While international assessments often raise awareness around learning levels in a country and may catalyze political will toward education reform, they do little to influence teaching practices that improve learning outcomes. Even if metrics are fine-tuned to measure specific aspects of education, the contributions of these assessments in countries with weak education systems will be extremely marginal without an accompanying strategy that addresses the need for timely information at the school-level. The Progress in International Reading Literacy Study (PIRLS), which measures trends in literacy achievement in grades 4 and 8, has developed a pre-PIRLS pilot for its 2011 assessment. This assessment will use easier reading passages and is aimed at those

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countries where students in upper primary are still developing fundamental reading skills. This is a positive step for assessing learning levels in many low-income countries but questions remain about how the results will be used in a way that helps countries improve performance on the ground. Assessment results must be able point to areas for improvement. Without this, assessments are relatively meaningless. As the World Bank's 2007 Global Monitoring Report on the Millennium Development Goals states, systematic and regular tracking of student learning is an essential part of establishing the requisite accountability by students, teachers, communities and policymakers. On the ground, teachers and students need to be accountable for teaching and learning that goes on in the classroom.<sup>9</sup> Unless assessments can provide relevant and timely information to these stakeholders and are accessible to those poised to make the changes that will actually improve learning outcomes, their effectiveness is limited.<sup>10</sup>

## MAJOR GLOBAL ACTORS: MAPPING THE LEARNING MEASUREMENT GAP

The number of major actors in the global education field is relatively limited. Moreover, none of the large multilateral organizations or bilateral donors that have mandates to work on education programs with low-income countries has a consistent approach to support learning and assessments at the country-level. While assistance with education reform is a multi-faceted endeavor, it is clear from the data available from the past decade that national governments and their donor partners need to include an explicit focus on learning outcomes at the local level in order to ensure that children are in school and learning. Our review of the current approaches used to measure learning by the top 11 global education actors illustrates the gaps in systematic approaches to measuring learning outcomes. It is important to note that while several of these actors are engaged in discussions about how to address this gap, this policy brief seeks to provide a real-time picture to take stock of what currently exists:

**UNICEF:** The United Nations Children's Fund (UNICEF), which provides humanitarian and development assistance, including education, particularly to children in developing countries, recognizes that access to poor quality education is equivalent to no education at all. It utilizes its child-friendly schools model to promote quality education, focusing on five core elements: child characteristics and experiences, learning environment, educational content, educational processes and expected outcomes of education. Yet, UNICEF does not have one consistent approach to how it measures learning outcomes in relation to its education interventions, taking a more ad hoc approach across different projects.

**UNESCO:** As the lead U.N. agency for the EFA Goals, the United Nations Educational, Scientific and Cultural Organization (UNESCO) has several initiatives that attempt to systematically collect learning outcomes data. The UNESCO Institute for Statistics' (UIS) only direct measure of learning outcomes is the level of youth (ages 15-24) literacy. It also utilizes a number of proxy indicators for learning—such as grade repetition, school cycle completion, trained teachers and pupil-teacher ratio—to estimate the quality of education at the national level. Similarly, the EFA Development Index (EFA EDI) reported within the Global Monitoring Report (GMR) relies on proxies for learning to measure the overall progress toward universal education. The EFA EDI equally weighs indicators for the four most-easily quantifiable EFA Goals: universal primary education (measured by primary net enrollment rate), youth and

adult literacy (literacy rate for ages 15 and older), gender parity and equity (gross enrollment rate and adult literacy rate by gender) and quality of education (measured by the survival rate to end of primary). Since comparable data on learning outcomes from a sufficient number of countries is not yet available, UNESCO determined that survival rate to the end of primary school was the best available proxy of education quality.<sup>11</sup> However, the validity of equating quality with survival is questionable given that simply attending school to grade 5 is hardly a ringing endorsement of the quality of the education system.<sup>12</sup>

In 2008, UNESCO convened an international seminar on assessing and improving quality learning that was tasked with proposing recommendations for measuring learning outcomes and improving learning processes around the world. Seminar participants concluded that while global indicators of learning outcomes are both sought and possible, specific learning achievement targets and measuring progress toward those targets remain within the purview of national, local and community systems.<sup>13</sup> UIS is currently designing a new Assessment of Learning Outcomes Clearinghouse (ALO-c) project, through which it will systematically collect data on children's learning levels by assessing what countries are doing to monitor student achievement and what they are doing with the results.

**World Bank:** As a multi-billion dollar supporter of education development that produces a substantial level of research on education, the World Bank undoubtedly plays an instrumental role in shaping education policy globally. About half of the education projects that the World Bank has implemented over the past decade had a learning assessment component.<sup>14</sup> Of those that did, the typical projects included one-time support for large-scale or national assessments of reading and math. These assessments were usually successfully implemented but had limited sustainability over time and suffered from an inability to retain trained assessors or use the results to inform policy and practice.

A 2006 report from the Independent Evaluation Group of the World Bank found that only one in five primary education projects had an explicit objective to improve learning outcomes, and far fewer focused on improved learning outcomes for the poor.<sup>15</sup> The report asserted that the MDG push for universal access to education served to dampen an institutional commitment to improving learning outcomes at the World Bank. It recommended that improving learning outcomes must be at the center of all support for primary education, regardless of whether a project is sponsored by the World Bank's Education Sector Board or another sector.<sup>16</sup> Since then, one can only find occasional mention in World Bank documents of the Alliance for Learning and Education Results (ALERT), which was developed to support countries in their efforts to measure learning outcomes and to use the findings to improve education policy-making at the country-level. However, the scarcity of details available publicly indicates that it is not yet a central component of the World Bank's education work in developing countries. In 2011, the World Bank will release a new education strategy; while drafts of the strategy have placed a higher emphasis on learning, details on implementation of the principles have not yet been developed.

In partnership with the Russian government, the World Bank in 2008 launched the Russia Education Aid for Development (READ) trust fund that seeks to help low-income countries improve learning outcomes by building sound, sustainable assessment systems. Increasing this capacity includes national-level agree-

ment on learning goals, conducting a self-diagnosis of existing systems and capacities, implementing assessments and making policy changes based upon the assessment results.<sup>17</sup> Within the first year, programs were initiated in its seven target countries<sup>18</sup> with the completion of a self-diagnosis of the current assessment system and the preparation of an action plan for future work. According to the fund's first annual report from late 2009, the collection of country data illustrates the diverse sets of conditions in each country, including varying capacity levels, institutional arrangements, system sizes and existing information on learning outcomes.<sup>19</sup>

**Education for All Fast Track Initiative:** Launched in 2002 as a global partnership to accelerate progress toward the universal primary education MDG, the Education for All Fast Track Initiative (FTI) has been primarily focused on improving access to primary schooling in developing countries around the world. In the last couple of years, the FTI Secretariat has strived to emphasize the importance of learning, most notably by its 2010 adoption of two reading skills indicators (proportion of students who, after two years of schooling, demonstrated sufficient reading fluency and comprehension to “read to learn”; and proportion of students who are able to read with comprehension, according to their countries’ curricular goals, by the end of primary school). This year FTI partner countries were encouraged to generate baseline data on learning outcomes that they will be asked to report against regularly. While the adoption of early reading indicators by a global partnership is clear progress toward raising the profile of assessing learning, time will tell whether the FTI will be able to lead the global community toward shifting the focus from access to access plus quality learning.

**OECD:** The Organisation for Economic Co-operation and Development (OECD) is made up of 33 high-income economies that maintain high levels of human development and are committed to democracy and the market economy. As part of its World Education Indicators program (WEI), the OECD has a set of indicators for cross-national comparisons that initially included “the learning environment” and “student achievement.” These two indicators were further elaborated, focusing on three different accounting measures of how time is spent, access to and use of computers, and student attitudes towards mathematics and science in grades 4 and 8. Reducing the quality of education to these seemingly arbitrary measures of classroom experience clearly demonstrates that the concept of student achievement is being defined by what is measurable rather than by what needs to be measured, namely learning outcomes.<sup>20</sup> While these indicators have expanded over time to include the impact of education on participation in the labor market, social outcomes and economic benefits; however, each of these outcomes is measured by education level attainment, not by the level of learning. Furthermore, this level of data collection has not been expanded to non-OECD countries.

**United States:** The U.S. Agency for International Development (USAID), which operates under the foreign policy direction of the U.S. State Department, is the principal federal agency for providing assistance to countries that are recovering from disaster, combating poverty, and engaging in democratic reforms. Currently, the common basic education indicators that USAID uses to report back to Congress are limited to country-wide enrollment levels, number of teachers and administrators trained, number of classrooms constructed or repaired, number of teaching and learning materials provided, and number of



laws, policies, regulations, or guidelines developed or modified to improve equitable access to or the quality of education services.<sup>21</sup> A 2007 Government Accountability Office report documented the absence of measuring learning and recommended that USAID develop a plan to better assess the results of basic education programs, especially those programs aimed at increasing educational quality.<sup>22</sup> Yet, even in the recently-released Congressional Budget Justification (CBJ) for FY 2011, the representative performance measure for investments in basic education is the “primary net enrollment rate for a sample of countries receiving basic education funds.”<sup>23</sup> The CBJ asserts that increased net enrollment rates lead to increases in school completion rates and thus higher educational attainment, a causal chain with very limited supporting evidence.

From a programmatic point of view, USAID has supported the design and implementation of a rapid assessment of children’s reading called the Early Grade Reading Assessment (EGRA) in at least 19 countries. However, the assessment results have not yet been included as USAID performance indicators in the Foreign Assistance Coordination and Tracking System (FACTS), which is used for country-level planning and monitoring, and for examining U.S. government foreign assistance activities more broadly.<sup>24</sup> At time of publication, USAID’s Office of Education has proposed new indicators to FACTS that specifically focus on learning outcomes. How their addition alters the focus of education investments in the near future will need to be observed.

The Millennium Challenge Corporation (MCC), an independent foreign aid agency within the U.S. government that operates separately from USAID, targets good-performing countries through a focus on sound policies, country ownership and results. In order to qualify for funding from the MCC, countries are rated on a series of indicators, two of which are related to education: girls’ primary education completion rate and public expenditure on primary education. During the annual public review of selection criteria in 2007, the MCC was asked to investigate the possibility of including a measure of a government’s commitment to the quality of education. The MCC’s research process is well-documented in its September 2007 issue brief, “MCC’s Findings in the Search for an Education Indicator,” but it is important to note here that the decision not to add a measure on education quality was based on the determination that current cross-country indicators lack statistical rigor, comparability or widespread availability and that commonly-used proxies for quality (such as student-teacher ratios, survival rates and qualitative household surveys) could “undermine ongoing efforts to redefine the policy dialogue in terms of learning outcomes.”<sup>25</sup> While this decision demonstrates a nuanced understanding of the importance and challenges of measuring learning, it also fails to demonstrably push the agenda forward in terms of measuring educational quality and learning outcomes.

**Netherlands:** Development cooperation is one of the principal tasks of the Dutch Ministry of Foreign Affairs (MinBuza) and for several years, the Netherlands has been regarded as one of the top donors to global education. In May 2009, MinBuza summarized the Netherlands’ approach to education by stating that the ultimate impact of its development work would be “an educated population enjoying equal opportunities, equipped with the skills required to participate in the labor market and earn an adequate income.”<sup>26</sup> Its corresponding results chain for education linked improved checks on the quality of edu-

cation, more and better-equipped staff, and increased availability of curricula and teaching materials to improving children's knowledge and increasing the relevance of the education received in order to ensure a smoother transition from education to the labor market. The Netherlands employs this "results chain" to demonstrate Dutch aid's impact on development given the challenges with attributing specific results to the Dutch government alone and data-related issues, including being heavily qualitative, time-lagged, without control groups and generally constrained in developing countries. The education results chain seeks to show, step-by-step, the intervention logic of Dutch aid and how results are achieved. The narrative report on improving the quality of education includes statements around improving teaching materials and curricula, training teachers and reducing class sizes, establishing early childhood education programs, and improving vocational education and training. However, the quantitative data included in the development report are limited to various trends in primary school participation and Dutch financial commitment to education with no information on learning outcomes.

**United Kingdom:** In the United Kingdom, development cooperation is carried out by its Department for International Development (DFID). DFID's 2010-15 education strategy "Learning for All" states a commitment to the education MDGs and to the broader Education for All Goals with a "clear, prioritized strategic vision: quality basic education for all." One component of achieving this vision focuses on improving the quality of teaching and learning, particularly in basic literacy and numeracy. In its strategy, DFID commits to: establishing and protecting cognitive functions in early childhood in countries with severe child malnutrition; supporting other country-specific early childhood programs; training at least 130,000 teachers per year and assisting in the creation of national teacher development and management plans; and working with national governments and other partners to conduct simple, low-cost assessments for basic literacy and numeracy that provide information at the individual, school and system levels. Although promising, the implementation of this new learning-focused strategy may be hindered by the May 2010 change in government; although U.K. spending plans through 2015 protect the overall development budget, cuts of up to 80 previous development commitments, including those made in the education sector, will be made and there is concern that security priorities will dictate the development agenda.

**Germany:** Germany's Federal Ministry for Economic Cooperation and Development (BMZ) is tasked with developing German development cooperation policy. In recent years, Germany's official development assistance (ODA) to education has gradually shifted from focusing primarily on higher education to increasingly supporting primary education. In particular, BMZ has invested in strengthening its approach to capacity development through both financial and technical cooperation. A 2007 special report, *Capacity Development for Education for All: Putting Policy into Practice*, concludes with 10 recommendations that participants deemed the most important to follow-up on. The 10<sup>th</sup> step, "continue the exchange process on the quality of education: establish therefore a task force working on education quality" again demonstrates that while quality is regarded as an important component, there remains a real absence of concrete policies that ensure quality or measure learning.<sup>27</sup>

**Japan:** At the U.N. MDG Summit in September 2010, Japan announced its new education cooperation policy, which takes a holistic and comprehensive approach to "school for all" that supports safe learning environments, school-based management, openness to the community, and inclusive approaches. With

respect to ensuring the quality of education, Japan is committed to improving teachers' competencies through training as well as providing textbooks and other learning materials. In this document, there is no specific mention of how improved learning outcomes may be monitored and evaluated.<sup>28</sup>

**France:** In 2010, the French Ministry of Foreign and European Affairs released its “external action for education in developing countries 2010-15” strategy, which includes four priority goals. Two of these four goals address the issue of quality: “support improvements in the quality of teaching” and “contribute to improving the quality of French-language teaching.” As for specific interventions, it cites the need to support countries in the implementation of a “standard method for measuring academic skills” and the establishment of “bodies dedicated to quality-related issues.” Additionally, in its promotion of national capacity, France focuses on education system management by supporting an “evaluation culture” that enables decision-making based upon result indicators. This new strategy represents the most promising bilateral donor position. But due to France’s geographic priorities, the strategy will be solely focused on poor French-speaking, sub-Saharan African countries with close ties to France.

Thus, while many of the major players in the international development field recognize the importance of focusing on learning, the overall effort to measure learning achievement heretofore has been completely inadequate. There is an ever-growing emphasis on quality that needs to go beyond accounting for inputs in a systematic way.

## THE WAY FORWARD: FIRST STEPS TOWARD A GLOBAL PARADIGM SHIFT

The education sector is far behind other sectors, such as health, in the systematic collection of policy relevant information at the country level. This begins with knowing how much is being spent on education, what it is being spent on, and determining how it contributes to student learning at the end of the day. With a better understanding of where the money goes and what it “buys,” national governments, local schools and communities, and global actors can each make evidence-based decisions about how to reform education policy and practices to increase student learning.

**Recommendation 1: Shift the paradigm.** Globally, we are falling short by orders of magnitude of what is necessary to ensure that children learn. It is time for a paradigm shift in education reform that moves from input-focused to outcome-driven policies. The argument for monitoring and evaluating schooling is simple: you cannot fix what you don't know is wrong. Although the real assessment of student outcomes needs to be

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conducted at the country, district and school levels, the global education community must recognize that it is not happening on its own in a systematic way and therefore should spearhead measuring the success of achieving education for all through increased levels of learning. In the lead up to the MDG Summit in New York, several proposals for new or reformed education goals were offered. Each new goal identified areas in education, like post-primary education and learning outcomes, that need greater attention on the global stage.<sup>29</sup> While a significant overhaul of the existing goals is unlikely to happen in the final five years before the 2015 target, such proposals and discussion illustrate the importance of addressing these interconnected educational issues, which include ensuring learning in the classroom, at the global level in order to align donors and implementing governments better around common educational objectives.

**First Step: Make learning the ultimate education objective.** As the lead organization on the Education for All movement, UNESCO should direct a joint effort to move learning up the global education and development agendas. There are critical roles of all major donors, such as those detailed above, to play in ensuring that all efforts toward education reform keep the ultimate objective of the acquisition of basic knowledge and skills for all children in their sights. The final push to the 2015 target provides an important opportunity to engage in a high-level dialogue around the ultimate goals of education, including the consideration of evolving the current education development goal to focus on learning.

**Recommendation 2: Address lack of timely data from the education sector.** In order to make progress on education reform, the international education community needs to focus first and foremost on the fact that, for many low-income countries, even the most basic information about the education sector is either not available or out of date. That is not just true for information on learning outcomes. Data about public spending is available for 77 countries, but private spending on education is only known for 39 countries.<sup>30</sup> The most recent data on ODA disbursements for education are available for 150 countries in 2008.<sup>31</sup> In this respect, the education system is years, if not decades, behind the health sector, which has successfully implemented national health accounts that track total health resources in over 190 countries.<sup>32</sup>

**First Step: Scale up national education accounts.** The development of national education accounts (NEAs) would greatly enhance our knowledge at the country level of who pays for education (public sector, private sector, ODA) and how these resources are being used. Thus far, national education accounts have been piloted in just a handful of countries, including Morocco, El Salvador and Turkey by partnerships between national governments, international organizations, and funders such as USAID and the

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World Bank. NEAs establish a framework for conducting a technical analysis of an education system's resource use, giving policymakers, funders, and those in charge of delivering education services the basic information that can help improve performance.<sup>33</sup> There is a great need to scale up these efforts in order to improve our knowledge on how much countries spend on education (both public and private resources), how the money is used and what are the ultimate outcomes of such resource use. Taking lessons learned from the World Health Organization in scaling up national health accounts, the World Bank, in partnership with the UNESCO Institute for Statistics, is well-positioned to take the global lead on working with national governments to collect the necessary data to build individual national education accounts.<sup>34</sup>

**Recommendation 3: Support the development of national assessment systems.** In order to link education spending with learning outcomes in a reliable manner, countries will need national assessment systems that can monitor student learning levels, identify gaps in knowledge acquisition and skill development, and facilitate the implementation of changes to national curricula, teacher practice and other educational inputs. The specifications of a country's assessment system will be driven by its own goals for assessing learning, whether it is a means of ensuring political accountability of the improvement of the whole education system or to inform teachers and communities about individual student performance. Moreover, each system will reflect not only its own technical capacity but also the culture around assessment and the more general political context of a country, reinforcing the need for each individual country to be supported in developing its own national assessment system. As the Working Group on Assessment and Standards of PREAL (a joint program of the Inter-American Dialogue in Washington, D.C. and the Corporate for Development Research in Santiago, which focuses on education quality and equity in Latin America) and the USAID-managed *EQUIP2: Educational Policy, Systems Development, and Management* project have shown, the development of such a system is a complex task that must align its measure of competencies with the national curriculum, use assessment instruments that are validated both technically and socially, take linguistic and cultural considerations into account, train assessors, and report results in a meaningful way that aligns with the goals of the assessment.<sup>35</sup> For countries that either do not have a national assessment system or are hampered by inadequate systems, there are two first steps to devising a meaningful system that assesses critical learning stages.

#### **First Steps:**

**A. Leverage the learning that begins at birth.** If the goal of education is knowledge acquisition and skills development and not just increasing the number of years spent sitting in a classroom, then we must first have a better understanding of what knowledge and skills comprise a quality education. A broader conception of education includes both cognitive and non-cognitive skills, as demonstrated in the empirical work of Hanushek and Wößmann (2007) and Heckman et al. (2009), among others. This more holistic approach to education must also recognize that learning starts at birth and continues throughout one's lifetime, encompassing formal and non-formal institutions of early childhood, primary, secondary, vocational and technical, tertiary and adult learning.

The argument for focusing on early learning is strikingly straightforward. Early life experiences have significant impacts that persist well into adulthood. Knowledge and skills acquired in the early years create the foundation upon which new knowledge and more complex skills can be built; skills beget skills. UNICEF reports that at least 70 countries have early child development programs in some form. However, coverage is generally low, especially among the poor. Furthermore, there is a significant lack of empirical evidence on program effectiveness, thereby hamstringing efforts to assess the impact of different approaches on child development over time.<sup>36</sup> A disproportionate amount of the focus on the early years is measured by the ability to survive to age 5, much less is systematically known about the development of children during these early years. When the Education for All Goals addressed early childhood development objectives, it failed to include a quantifiable target against which progress would be measured. Thus, without a clear way to measure the impact of concentrated efforts in the early years, international attention has been scarce, fragmented and largely ineffective.

However, a growing body of evidence has helped to make the case for increased attention to the provision and subsequently the monitoring and evaluation of early childhood development activities.<sup>37</sup> Relatively simple and affordable assessment instruments of development for children under age 5 do exist. One promising example is the Early Development Instrument (EDI), a quick assessment tool that teachers can use to measure the readiness of 4 and 5-year-olds to learn in school across five domains: physical health and well-being, social competence, emotional maturity, language and cognitive development, and general knowledge and communication skills. The EDI can also be implemented at the community level. There is EDI data from 14 countries thus far, including high, middle and low-income countries. The EDI identifies the percentage vulnerable in each developmental domain in each country. High levels of language and cognitive development vulnerability were evident in the Philippines (almost 80 percent) and Indonesia (over 70 percent) and high levels of physical development vulnerability in Mozambique (45 percent) and the Philippines (over 60 percent). Measuring the status of early child development at the population level within a country has shown to engage the public's interest and hold policymakers accountable for the resources devoted to their youngest citizens.<sup>38</sup>

Since learning begins at birth, the development of cognitive and non-cognitive skills during the first years of life should be the corner-stone of a country's learning assessment strategy. As we shift our focus from child survival to child development, countries should be encouraged to assess the progress of its children during the early years. As the lead multilateral agency tasked with the needs of children from zero to 8 years old and an active presence in 190 countries, UNICEF is best positioned to take the lead in scaling up the efforts in this area.

**B. Scale up early reading assessments in primary education.** Once children have been deemed ready to learn in a school setting, there is no guarantee they will succeed. Monitoring and evaluation of teaching and learning throughout the early primary grades is essential to ensuring an upwards trajectory. Although early literacy is not the only skill that children must develop in the first few years of formal schooling, it is absolutely necessary to ensure success throughout their education and beyond. Regular, systematic and appropriate use of simple assessments of basic cognitive functions in the early grades

can provide simple diagnostic analysis of individual and classroom progress that teachers can use to improve their practice. Rapid reading assessments, such as the Early Grade Reading Assessment (EGRA) developed by RTI International with support from USAID and the World Bank, are a promising method for tracking student learning outcomes in a meaningful and usable way. For example, *EGRA Plus: Liberia* instructed teachers on how to assess student performance on a regular basis and then issue student and classroom report cards to parents and communities about performance. With that information, the parent-teacher associations led discussions on student performance and progress with parents. Trained teachers and administrators were able to discuss the classroom reading assessment results, give parents tips on providing complementary support at home and inform the community about the school's efforts to help children learn.<sup>39</sup>

Functional literacy is fundamental to acquiring advanced skills and reading assessments in early primary should become routine. They should be mandatory in all efforts to further increase enrollment. Reading assessments should and can be rapidly scaled up in countries where enrollment is already high. Various initiatives in this area have already been undertaken, including Pratham's ASER in India, Uwezo in Kenya, Uganda and Tanzania, and EGRA in almost 50 countries. The major education donors<sup>40</sup> should continue to support efforts to improve the research base under these tools so as to make sure that such tools are designed and applied in a rigorous and locally-relevant way while being scaled up. Coordinated support would be a showing of global leadership in moving the focus of the education sector from enrollment to learning. The major education donors should come together to support the development of national assessment systems that begin monitoring school readiness and basic literacy skills development in order to place the success of learners at the center of education policies.

## CONCLUSION

These three recommendations are only the first steps to ensuring quality education in developing countries, but they are fundamental. As national assessment systems and national education accounts are scaled up in a way that meets individual country needs, additional initiatives such as assessing early grade math skills and knowledge acquired in post-secondary education can also be phased in and scaled up. As education is a life-long process, initiatives to monitor the levels of learning and assess the quality of education, should be part of a country's long-term comprehensive strategy to improve its education system. Given financial constraints and the current assessment capacity in many countries, choices have to be made in terms of where to focus attention and resources. Young children are absorbing the most new information throughout their early years into the first years of primary school. The earlier quality teaching and learning practices are implemented, the more likely a child will follow a high, upward trajectory of knowledge and skill acquisition. The return on investment in ensuring quality education is highest when students' learning trajectories can be most influenced. Providing children with a quality education, and identifying and correcting practices early when things stray off course, should be the first strategy for increasing student achievement.

## ENDNOTES

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