

Supplement to Innovation Showcase information poster titled “Learning from and Communicating About Our Work in International Education,” February 2020

Annotated bibliography of scientific-stature publications produced by RTI’s International Education Division with internal research and development funding, by year, 2016–2019

More information

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RTI authors (at time of writing) in **boldface**

2016

Gove, A., & Black, M. M. (2016). Measurement of early childhood development and learning under the Sustainable Development Goals. *Journal of Human Development and Capabilities*, 17(4), 599–605. <https://doi.org/10.1080/19452829.2016.1243520> (Full access by purchase only)

Abstract: Children’s early development serves as the foundation for later health, learning and well-being. The inclusion of early childhood development (ECD) in the Sustainable Development Goals implies that countries must report on the percentage of children under 5 years of age who are “developmentally on track.” This note briefly reflects on the history of global ECD goals and their measurement and outlines the challenge ahead: creating a workable strategy for ECD measurement that balances the need for national relevance with globally comparable data. The global variation in the timing and nature of early childhood skills acquisition presents an important opportunity as countries set their own standards for what it means to be developmentally on track. Country-driven measurement and standard setting, derived from measurement approaches that meet international expectations for quality, can have an important influence on policy and practice. Countries can measure the development of their youngest citizens in a way that is most relevant and useful to them, so that they may use those data to ensure that all children have the opportunity to fulfill their potential.

Gove, A. K., & Dubeck, M. M. (2016). Assess reading early to inform instruction, improve quality and realize possibilities. In *Annual Review for Comparative and International Education 2016 (International Perspectives on Education and Society, Vol. 30, pp. 81–88)*. Bingley, United Kingdom: Emerald Group Publishing. DOI: <https://doi.org/10.1108/S1479-367920160000030007> (Full access by purchase only)

Abstract: This chapter describes the influence of reading assessments at the child level on the focus on quality education in low-resourced contexts. Over the past decade, child-level assessment data have contributed to modifications in classroom instruction, teacher support, community engagement, and language policy. These data have led to the refinement of additional child-level and classroom-based assessments to inform and reflect context. Ultimately, the initial questions about child-level learning have facilitated successive improvements in understanding and bettering the results. This chapter suggests a prospective direction that the international education community should take to continue improving child outcomes.

Pflepsen, A., Gove, A., Warrick, R. D., Yusuf, M. B., & Bello, B. I. (2016). Real life lessons in literacy assessment: The case of the Early Grade Reading Assessment in Nigeria. In *Annual Review of Comparative and International Education 2016 (International Perspectives on Education and Society, Vol. 30*, pp. 129–145). Bingley, UK: Emerald Group Publishing. DOI: <https://doi.org/10.1108/S1479-36792016000030011> (Full access by purchase only)

Abstract: In November 2016, the Early Grade Reading Assessment (EGRA) reached a milestone 10 years since it was first developed as a tool to measure and report on student acquisition of foundational literacy skills, particularly in low and middle income countries. Since then, a number of observations have been raised with respect to the appropriateness of the tool for diverse contexts, the process of instrument adaptation, data collection logistics and their potential to affect the quality of the results, and the utility of the assessment in leading to literacy improvement. These issues are not often discussed in formal reports and published articles. In this commentary, the authors address these observations by reviewing the theoretical underpinnings and purpose of the EGRA, providing guidance on key aspects of EGRA design and implementation, and sharing their experience using EGRA in northern Nigeria for multiple data collections. This chapter is based on the direct involvement of the authors in several EGRA exercises conducted in Nigeria, from instrument conception to administration to results analysis.

Dubeck, M. M., Gove, A., & Alexander, K. (2016). School-based assessments: What and how to assess reading. In *Understanding What Works in Oral Reading Assessments* (pp. 41–57). Montreal: United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics (UIS). Available at http://uis.unesco.org/sites/default/files/documents/understanding-what-works-in-oral-reading-assessments-2016-en_2.pdf (Open access)

Abstract: The UNESCO Institute for Statistics (UIS) led a collaborative project to formulate recommendations to guide practitioners when selecting, conducting and using oral reading assessments. The aim is to highlight basic principles that should be applied in the different stages of oral reading assessments—from planning and design to implementation and use of the resulting data. The recommendations are drawn from a collection of articles, which can be found online in the ebook, *Understanding What Works in Oral Reading Assessments*.

Pouzevara, S., Pflepsen, A., Nordstrum, L., King, S., & Gove, A. (2016). Measures of quality through classroom observation for the Sustainable Development Goals: Lessons from low- and middle-income countries. Background paper prepared for the 2016 Global Education Monitoring Report, Education for people and planet: Creating sustainable futures for all. Paris: UNESCO. Available at <https://unesdoc.unesco.org/ark:/48223/pf0000245841> (Open access)

Abstract: With the adoption of the United Nations General Assembly's Sustainable Development Goals (SDGs), global education agencies are grappling with how quality can and should be measured for global reporting purposes. Several factors at the education system, school, and classroom levels shape education quality, including the limited information available at the global level about what is happening in the classroom. Such information can only come through observation-based measures that record teacher practices, either through routine monitoring conducted by system actors or through surveys. Classroom observation is used extensively in not only teacher education and professional development, but also in evaluation studies. However, there are fewer cases where classroom observations are used for system monitoring purposes—particularly in low-and middle-income countries. This paper reviews what has been learned from observation instruments in low-and middle-income countries and what opportunities(i.e., scope) there are to systematize these countries to that they can monitor quality at both the school and system levels.

2017

Gove, A. (2017). What we are learning about early education in sub-Saharan Africa. *Journal of Research on Educational Effectiveness*, 10(3), 530–534. DOI: <https://doi.org/10.1080/19345747.2017.1335091> (Full access by purchase only)

Commentary (excerpt): This issue includes three articles that expand the published research base on the effectiveness of early education in the sub-Saharan Africa countries of Zambia, Kenya, and the Democratic Republic of Congo (DRC). The findings come at a critical time because the promises made under the recently adopted United Nations Sustainable Development Goals (UNESCO, 2015) have added urgency to the call for expansion of early childhood education (goal 4.2.1) and improvement of learning outcomes in early primary (goal 4.1.1(a)) (Black et al., 2017; Raikes, Devercelli, & Kutaka, 2015). Although primary school enrollment rates in sub-Saharan Africa have nearly caught up to those of other, wealthier regions (UNESCO Institute for Statistics, 2017), learning outcomes remain quite low. In at least a dozen countries in the region, more than half and in some cases as many as 90% of children in the early grades are unable to read a single word of text, even after 2 full years of schooling (Gove et al., 2015). One possible pathway for improving primary outcomes in these countries is expansion of preschool participation, given that high-quality early childhood experiences should help children be better prepared for early primary education. This path has the potential for making primary education more efficient in the bargain, through reduced repetition (Crouch & Merseth, 2017). This expectation, together with the accumulating evidence on the estimated returns to preschool in the region (roughly US\$33 for every US\$1 invested, according to Psacharopoulos, 2014), means that even policymakers in highly resource-constrained countries are examining early childhood care and education (ECCE).

Each of the three papers employs rigorous methods to better understand the impact of classroom-based programs, in either preprimary or primary schools, designed to improve participants' outcomes in reading, mathematics, and socio-emotional development. Although the study methods and instructional approaches will likely be familiar to the JREE reader, the contexts in which the studies have been conducted may not. A search of the JREE archives generated no other articles situated in the topic countries (or any other low- or middle-income countries [LMICs], for that matter). So what does the JREE reader gain from these studies? As noted in this Journal's inaugural issue: "[A]rticles published in JREE should advance our knowledge of factors important for educational success and/or improve our ability to conduct further disciplined studies of pressing educational problems" (Foorman & Hedges, 2008). These studies meet both of those criteria while also considering the policy puzzle of how best to deliver high-quality, cost-effective programming in resource-scarce contexts.

Moore, A. M., Gove, A., & Tietjen, K. (2017). Great expectations: A framework for assessing and understanding key factors affecting student learning of foundational reading skills. *New Directions for Child and Adolescent Development*, 2017(155), 13–30. DOI: <https://doi.org/10.1002/cad.20192> (Full access by purchase only)

Abstract: This article addresses the evolution of the underlying theories of change in global education reform efforts between 1990 and 2015, informed by the shift in focus from access to quality and learning. We review recent data regarding how different types of donor interventions (i.e., structural or pedagogical) have contributed to improved reading outcomes and compare effect sizes over a series of intervention studies conducted from 2003 to 2015. Against this background, we present a framework for understanding how the intensity, frequency, and fidelity of the interventions as well as the enabling environments of reform affect the magnitude and rates at which reading and learning outcomes can be expected to improve. In this [article], we present the context for the articles that follow, identifying the program design characteristics and types of interventions that increase the likelihood of successful expansion of the interventions commonly referred to as "scaling-up," the ability to sustain interventions, and the value (cost effectiveness) of reading programs in low- and middle-income countries.

Gove, A., Korda Poole, M., & Piper, B. (2017). Designing for scale: Reflections on rolling out reading improvement in Kenya and Liberia. *New Directions for Child and Adolescent Development*, 2017(155), 77–95. DOI: <https://doi.org/10.1002/cad.20195> (Full access by purchase only)

Abstract: Since 2008, the Ministries of Education in Liberia and Kenya have undertaken transitions from small-scale pilot programs to improve reading outcomes among primary learners to the large-scale implementation of reading interventions. The effects of the pilots on learning outcomes were significant, but questions remained regarding whether such large gains could be sustained at scale. In this article, the authors dissect the Liberian and Kenyan experiences with implementing large-scale reading programs, documenting the critical components and conditions of the program designs that affected the likelihood of successfully transitioning from pilot to scale. They also review the design, deployment, and effectiveness of each pilot program and the scale, design, duration, enabling conditions, and initial effectiveness results of the scaled programs in each country. The implications of these results for the design of both pilot and large-scale reading programs are discussed in light of the experiences of both the Liberian and Kenyan programs.

Gove, A., Brombacher, A., & Ward-Brent, M. (2017). Sparking a reading revolution: Results of early literacy interventions in Egypt and Jordan. *New Directions for Child and Adolescent Development*, 2017(155), 97–115. DOI: <https://doi.org/10.1002/cad.20194> (Full access by purchase only)

Abstract: This article examines the effects of two early grade reading interventions in two Arabic-speaking contexts (Egypt and Jordan), developed in partnership with ministries of education. The interventions relied on similar research bases for improving reading instruction in Arabic. In Egypt, the results of a 166-school pilot led to the national scale-up of the Early Grade Reading Program for more than 4 million children in grades 1–3. Informed by Egypt's experience, a demonstration effort in 43 schools led to a national rollout in Jordan's 2,651 public primary schools and the creation of a remediation program. We reflect on the conditions that influenced the pilot and scale-up outcomes given the commitments made to "inclusive and equitable quality education and lifelong learning opportunities for all" under the United Nations Sustainable Development Goals.

Gove, A., Mora, A., & McCardle, P. (Eds.) (2017). Progress toward a literate world: Early reading interventions in low- and middle-income countries. *New Directions for Child and Adolescent Development*, 2017(155) [full issue]. Available at <https://www.wiley.com/en-us/Progress+toward+a+Literate+World%3A+Early+Reading+Interventions+in+Low+and+Middle+Income+Countries%3A+New+Directions+for+Child+and+Adolescent+Development%2C+Number+155+-p-9781119408628> (Full access by purchase only)

Abstract: In order to work toward eradicating extreme poverty and hunger, the United Nations Millennium Development Goals significantly include universal primary education, gender equality, and empowering women. Effective early literacy instruction plays a critical role in achieving these goals.

From around the globe, this issue presents evidence-based, culturally sensitive and cost-effective practices in reading instruction and intervention in the early grades. Not only will this issue heighten awareness of the challenges faced but it will provide valuable information to help guide and improve diverse global education programs and research, especially in developing regions and for children living in poverty or disadvantage in all nations.

Presenting several experiences from small- and large-scale reading improvement programs, it:

- Focuses on low- and middle-income countries,
- Describes challenges in implementing, studying, and scaling them up,
- Informs expectations on how quickly and easily reading performance can change, and
- Provides results and evidence of effectiveness.

Black, M. M., Gove, A. K., & Merseth, K. A. (2017). Platforms to reach children in early childhood. In *Disease Control Priorities, 3rd ed. (vol. 8), Child and Adolescent Development* (Chapter 19, pp. 253–268). Washington, DC: The World Bank Group. Available at http://dcp-3.org/sites/default/files/chapters/DCP3%20CAHD_Ch%2019.pdf (Open access)

Abstract: This chapter reports on platforms that promote early child development. The economics of early child development programs and packages are covered in chapter 24 in this volume (Horton and Black 2017). Early child development research, programs, and policies have advanced significantly in low- and middle-income countries (LMICs) during the past two decades (Black, Walker, and others 2016), spearheaded by three prominent advances.

The first advance is the recognition that the foundations of adult health and well-being are based on prenatal and early-life genetic-environmental interactions that affect brain development. This recognition has created a strong emphasis on strategies to ensure that young children reach their developmental potential (Shonkoff and others 2012).

The second advance is the urgent call for strategies to promote early child development, following estimates that more than 200 million children younger than age five years in LMICs are at risk of not reaching their developmental potential (Grantham-McGregor and others 2007), largely due to nutritional deficiencies and a lack of responsive caregiving. Recent estimates report that although the prevalence of at-risk children has declined, more than 43 percent of children in LMICs are at risk for poor development (Lu, Black, and Richter 2016). Initiatives during the first 1,000 days of life—the period from conception through age 24 months, when nutritional requirements are high and brain development is rapid—have focused attention on the need to ensure that children receive the interventions necessary to achieve their developmental potential.

Finally, global economic growth in the 1990s and the success of the Millennium Development Goals in reducing poverty and stunting and in increasing child survival have brought optimism to efforts to promote child health and development. The evidence that interventions early in life are effective in promoting early child development (Engle and others 2007; Engle and others 2011; Nores and Barnett 2010) supports the implementation of such programs at scale.

Gove, A., Brunette, T., Bulat, J., Carrol, B., Henny, C., Macon, W., Nderu, E., & Sitabkhan, Y. (2017). Assessing the impact of early learning programs in Africa. *New Directions for Child and Adolescent Development, 2017*(158), 25–41. DOI: <https://doi.org/10.1002/cad.20224> (Open access)

Abstract: Nearly 3 decades after the first of a series of global commitments to high-quality education for all, many countries in Africa strive to keep their promise to ensure that all children learn. Rapid expansion of enrollments in the 1990s was not matched with concomitant increases in per-pupil funding, preparation and hiring of teachers, or development and distribution of teaching and learning materials. In response to these challenges, many governments and their donor counterparts, including the U.S. Agency for International Development (USAID), increased efforts to improve learning outcomes. This paper presents an overview of the RTI International approach to learning improvement, followed by brief case studies on the implementation design and results of donor-supported education programs in six African countries: Ethiopia, Kenya, Liberia, Malawi, Tanzania, and Uganda. In each case, RTI, a U.S.-based nonprofit research institute, partnered with ministries of education to develop and implement research-based education improvement programs tailored to each country context. Though each program design is localized to meet country- and region-specific needs, the case studies indicate substantial overlap in the need for improvements in the quality and availability of teaching and learning materials, professional development and coaching for teachers, local language use in the classroom, better use of instructional time, and application of assessment results to monitor learning and inform implementation. The article concludes with a brief discussion section highlighting key lessons learned and a summary of the evidence of impact of the programs.

2018

Bundy, D. A. P., de Silva, N., Horton, S., Patton, G. C., Schultz, L., Jamison, D. T., & Disease Control Priorities-3 Child and Adolescent Health and Development Authors Group, of which **A. Gove** was a contributor. 2018. Investment in child and adolescent health and development: Key messages from *Disease Control Priorities*, 3rd Edition. *The Lancet*, 391(10121), 687–699. Available at <https://www.sciencedirect.com/science/article/pii/S0140673617324170?via%3Dihub> (Open access)

Abstract: The realisation of human potential for development requires age-specific investment throughout the 8000 days of childhood and adolescence. Focus on the first 1000 days is an essential but insufficient investment. Intervention is also required in three later phases: the middle childhood growth and consolidation phase (5–9 years), when infection and malnutrition constrain growth, and mortality is higher than previously recognised; the adolescent growth spurt (10–14 years), when substantial changes place commensurate demands on good diet and health; and the adolescent phase of growth and consolidation (15–19 years), when new responses are needed to support brain maturation, intense social engagement, and emotional control. Two cost-efficient packages, one delivered through schools and one focusing on later adolescence, would provide phase-specific support across the life cycle, securing the gains of investment in the first 1000 days, enabling substantial catch-up from early growth failure, and leveraging improved learning from concomitant education investments.

Gove, A., Dombrowski, E., King, S. J., Pressley, J., & Weatherholt, T. (2018). Persistence and fadeout of preschool participation effects on early reading skills in low- and middle-income countries. *Global Education Review*, 5(2), 85–109. Available at <https://ger.mercy.edu/index.php/ger/article/view/398> (Open access)

Abstract: The adoption of the Sustainable Development Goals (SDGs) in September 2015 marked a new milestone for early childhood education, care, and development. For the first time in the framework of global goals, preschool education was described as integral to children's school readiness. Yet with few exceptions, much of the research on the impact of preschool has stemmed from high-income countries. Even fewer studies have examined preschool participation and later learning across multiple countries. This article helps fill this gap by connecting preschool participation to early primary reading outcomes, as measured by the Early Grade Reading Assessment. Drawing on a unique data set using student-level learning assessments from 16 countries, we use preprimary participation to explain primary school reading skills, including letter knowledge and oral reading fluency. We also model the influence of key demographic variables on these outcomes, including home language and classroom language of instruction (LOI). For a subset of six countries with exceptionally rich data, we examine national-level policy and practice to better understand what might explain the persistence or fadeout of the effect of preschool. Policy makers and practitioners alike will find these results useful in making cases for improving preschool experiences for children in low- and middle-income countries in the next decade of SDG-related efforts.

Hounkpodoté, H., Koršňáková, P., Hastedt, D., Ward, M., Wendlassida Miningou, É., Vivekanandan, R., **Crouch, L., Gove, A.**, et al. (2018). Learning evidence for Indicator 4.1.1. In *SDG 4 Data Digest 2018: Data to nurture learning* (UIS/2018/ED/SD/9 ed., pp. 50–97). Montreal: UNESCO. Available at <http://uis.unesco.org/sites/default/files/documents/sdg4-data-digest-data-nurture-learning-2018-en.pdf> (Open access)

Abstract: According to new estimates from the UNESCO Institute for Statistics (UIS), more than 617 million children and adolescents are not be able to read or handle mathematics proficiently. About two-thirds of these children and youth are in school, some of them dropping out before reaching the last grade of the cycle (UIS, 2017g). This highlights the critical need to improve the quality of education while expanding access to ensure that no one is left behind.

Not only is the learning crisis alarming from a national, social and economic perspective, but it also threatens the ability of individuals to climb out of poverty through better income-earning opportunities. Greater skills not also raise

their potential income, but well-educated individuals are also more likely to make better decisions – such as vaccinating their children – and educated mothers are more likely to send their own children to school. The learning crisis is, simply, a massive waste of talent and human potential. For this reason, many of the global goals depend on the achievement of Sustainable Development Goal 4 (SDG 4), which demands an inclusive and equitable quality education and the promotion of “lifelong learning opportunities for all”.

UIS data suggest that the numbers are rooted in three common problems. First, a lack of access, with children who are out of school having little or no chance of reaching a minimum level of proficiency; second, failure to keep every child on track and proceeding through the system on time and retaining them in school; and third, the issue of the quality of education and what is happening within the classroom itself.

2019

Robledo, A., & Gove, A. K. (2019). *What works in early reading materials*. RTI Press Publication No. OP-0058-1902, Knowledge and Practice in International Development No. 2. Research Triangle Park, NC: RTI Press. DOI: <https://doi.org/10.3768/rtipress.2018.op.0058.1902> (Open access)

Abstract: Access to books is key to learning to read and sustaining a love of reading. Yet many low- and middle-income countries struggle to provide their students with reading materials of sufficient quality and quantity. Since 2008, RTI International has provided technical assistance in early reading assessment and instruction to ministries of education in dozens of low- and middle-income countries. The central objective of many of these programs has been to improve learning outcomes—in particular, reading—for students in the early grades of primary school. Under these programs, RTI has partnered with ministry staff to produce and distribute evidence-based instructional materials at a regional or national scale, in quantities that increase the likelihood that children will have ample opportunities to practice reading skills, and at a cost that can be sustained in the long term by the education system. In this paper, we seek to capture the practices RTI has developed and refined over the last decade, particularly in response to the challenges inherent in contexts with high linguistic diversity and low operational capacity for producing and distributing instructional materials. These practices constitute our approach to developing and producing instructional materials for early grade literacy. We also touch upon effective planning for printing and distribution procurement, but we do not consider the printing and distribution processes in depth in this paper. We expect this volume will be useful for donors, policymakers, and practitioners interested in improving access to cost-effective, high-quality teaching and learning materials for the early grades.

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