



Michael & Susan Dell
FOUNDATION

A FRAMEWORK FOR PROGRAM ASSESSMENTS

December 2014





Foreword

Janet Mountain

Executive Director, Michael & Susan Dell Foundation

When we founded the Michael & Susan Dell Foundation in 1999, we decided to focus on efforts to improve education and children's health in Central Texas, where we live. Today, our reach is both broader and more specific. We still focus on childhood education and health, but we work almost exclusively in urban environments. We're also global, with offices in Austin, New Delhi, and Cape Town.

India was the first place we began working outside the US. We opened our India office in 2006, when the country was undergoing massive change. Families were moving to cities by the hundreds of thousands. New businesses and business sectors were beginning to flourish. For an impact-oriented philanthropy, the opportunity to drive measurable progress for millions of children and families – to help change their lives in positive ways – was both irresistible and daunting.

We know this goal is too big for us to accomplish alone. It's bigger than any single organization – educational, governmental, or other – can achieve. But we believe that many players, working in parallel, can and will meet that goal. We also believe that the biggest journeys begin with small, measured steps. That's why we committed ourselves from the start to assessing each of our investments in India with an eye on understanding, clearly and in detail, what worked and what didn't to improve children's learning. This approach enables the sort of data-driven decision making that is at the heart of our approach to philanthropy.

In our India education portfolio, this has meant figuring out how to assess the impact of each program, to look closely at results, and to adjust course based on what we learn. It has meant measuring and quantifying program outcomes in very specific ways. And it has meant actively managing programs toward even better outcomes. Did a given after-school intervention help students measurably improve their reading fluency? Can we dive into the data to understand which interventions have an impact, and which are expendable? Does it show that programs provide better support to teachers trying to manage classrooms overcrowded with students at highly variable skill levels? Can the data be used to redesign a program so that it reaches



more kids at the same cost and with the same high-quality impact? These are among the questions that the right data helps us address.

We've learned again and again and in all the fields we've worked in that you can't manage (much less improve upon) what you can't accurately measure. No one can. So, for the last seven years, our India team has worked to devise a reliable measurement system that helps us better manage our work. This paper provides anyone interested or invested in the Indian education field with an overview of that effort. It clearly explains how we've gone about the work, and the care we've taken to create a framework that provides high-quality actionable insights. We hope it also explains both why such a framework matters and how it can enable transformation within the classroom, throughout schools, and across cities and even states. We invite you to read the paper, explore its insights, and join us in the effort to ensure that all schools in India can put data to work to ensure higher quality learning for every student in every classroom.

INTRODUCTION

Introduction

In India, the foundation's investments span several areas of practice, including education. We strive to always articulate a specific measure of success. It must be tangible and measurable, and we must copiously invest in measurement and assessment. We can then be assured that our collective resources intended to better education are focused on the most critical activities.

There currently are a multitude of surveys on learning outcomes in general. However, several of the assessments don't apply rigorous standards, while others don't use a replicable set of tools. Further, the data collected in these studies and resulting analyses are often not comprehensive or actionable. Some of the results lack objective maps of subject competencies among children; others lack insights to help teachers improve classroom practices.

The challenges of the pre-existing evaluation practices in India's schools, coupled with the foundation's commitment to clearly articulating and remaining focused on defined goals, prompted us to make measurement and evaluation integral elements of our

education portfolio.

We partnered with assessment experts who assumed responsibility for test design, data collection, test administration and analysis. Over the years, our collaboration with these vendors has evolved in nature and scope. Initially, we began incorporating an assessment component within each intervention we funded. Then, after achieving our initial objective of collecting data to measure grant outcomes, we established new goals: to refine our understanding of what constitutes 'good' data and how it can be best applied to deliver relevant, actionable results.

By 2010, we adopted a more streamlined approach wherein all philanthropic grants or investments were evaluated using a common assessment framework irrespective of the nature of the intervention. However, there was no established national standard to which we could refer. Therefore, our framework provided a much needed geographic and program-agnostic comparability and scalability, yet it was still limited in its ability to help us set aspirational learning outcome goals.

For the past two years, we've been collaborating with our assessment partners to establish a benchmark against which the performance of any student, school or region can be mapped. The scale leverages a nationwide, representative sample of learning competencies prevalent across different school systems. And yet our

commitment to evolving and implementing rigorous learning assessment frameworks has never been an end in itself: our primary goal is to use the data and insights to improve learning outcomes.

Our work in education assessments—and the beneficial work being done by others in the field—will be most useful if communicated to the broader education community in India. Our assessment partners have prepared reports and conducted workshops to share their findings and explain how our investees can best bring about change in the classroom to enhance academic outcomes.



The first chapter of this paper, The Common Assessments Framework, traces the framework's evolution; provides evidence of its distinction as a high-quality assessment; and describes the assessment, including technical details of tests such as their design and administration. The second chapter, Towards a Common Scale of Learning, examines the genesis of the benchmarking study, then describes it and outlines its broad objectives. The third chapter, Analysis and Action, takes a closer look at two parts of the assimilation and dissemination process once data pertaining to learning levels has been collected: 1) how it is received and managed; 2) how assessment vendors help program staff—both from the foundation and investee organisations—to understand

and interpret the evidence gathered by providing detailed reports and relevant recommendations. The final chapter, Case Studies, takes a look at three well-known education non-governmental organizations (NGOs) and describes how each has used the practice of assessment to refine, improve and systematise learning improvements, thus resulting in great progress in children's learning levels.

Our foundation's hope is that this paper provides anyone interested in the Indian education field with an overview of our work in evolving and applying a robust, assessment framework to children's learning and that it can be a tool for those interested in replicating our approach.

THE COMMON ASSESSMENTS FRAMEWORK

The Common Assessments Framework

How Did It Evolve

Since its inception, the foundation has believed that scalable, measurable outcomes bring about systemic change. At the outset of each investment, we're clear about the need to assess and quantify our program progress and outcomes. To do this well and without bias, we rely on third-party vendors to complete rigorous assessments.

In 2006, when we started our education interventions in India, we required each of our investees to partner with independent, third-party assessment experts in order to accomplish the following:

1. Provide absolute levels of age and grade-appropriate competencies and relative improvements in student learning levels, as compared to the National Curriculum Framework
2. Provide actionable feedback to improve the impact of programs
3. Make such assessments attractive and affordable for partner organizations

Our team understood that there wasn't an easy, standardised way for our education programs to measure their effectiveness at the time. The measurement tools that did exist—studies or surveys in the public domain—primarily offered broad generalizations about the state of pedagogical outcomes in government schools versus private elite schools or proficiency in basic literacy and numeracy.

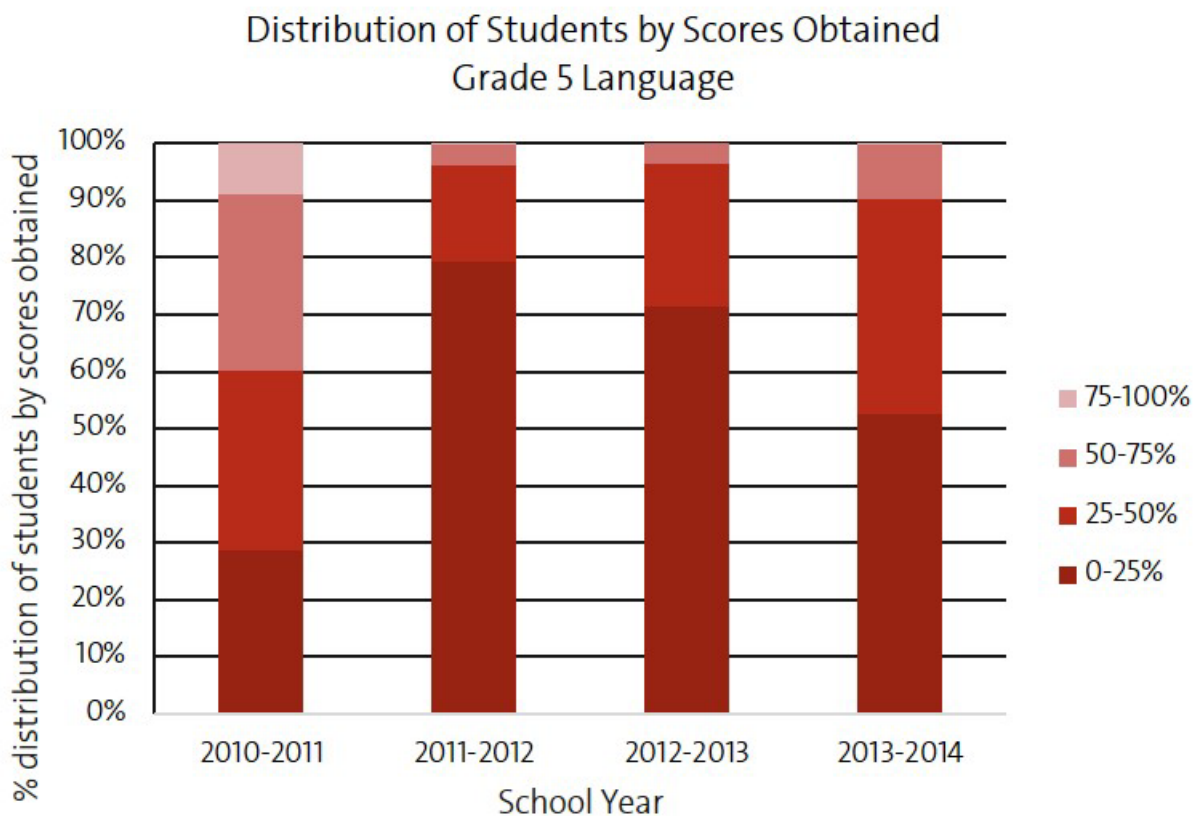
We knew that unless assessments provided specific data and analysis divided by subject competencies, teachers could not establish learning achievement goals for students or bring about meaningful change in classrooms.

There are education organizations that are not accustomed to measuring their interventions or outcomes in a rigorous way. Even when reliable data is made available, the lack of infrastructure or capacity in terms of understanding makes it challenging to fully understand the results and is a barrier to positive progress.

In Action Example

Figure -1 below demonstrates that summary statistics can drive powerful change in a very short time. This 2010 example shows an after-school coaching program that was targeted for the bottom quartile of the class. However, data showed that the class composition at the start of the year was heavily skewed towards high performing students. In a targeted program this was a big operational issue. Simple operational measures like diagnostic tests at the beginning of the year have helped them improve their student selection over the years.

FIGURE-1





What Defines and Distinguishes High-Quality Assessments?

High quality education assessments are distinguished by their ability to navigate their way across a series of thematic, academic and psychometric challenges.

RELEVANCE: The ability to ascertain whether the data or analysis is considered important by experts in the area

ADEQUACY OF QUESTIONS: The availability of an adequate mix of questions to cover the material and proficiencies being measured

INTERPRETATION OF RESULTS: The availability of methods that ensure scores are interpreted in a fashion that can deliver accurate measurement of ability

VALIDITY ACROSS LANGUAGES: The use of terms and words used in tests that can be impartially and equally translated across languages to ensure no group(s) is at an advantage over one or more other groups

Vendors address the above challenges, which all relate to the validity of a test, by:

1. Testing what is *in the curriculum* so no child is ever tested on material that she or he has not been taught/been expected to have been taught
2. Applying a mechanism of multiple reviews and approvals by experts to ensure every question adequately spans the proficiency it is testing
3. Pre-testing the assessment tool with a sample of schools and speaking to students to observe their responses to questions

CASE STUDIES

- Conducting in-house assessments of grade 3 Math and Language in all schools other than those previously assessed by the vendor, Educational Initiatives, to provide every headmaster with data to use.
- Providing assessment results to the headmasters to help them accept and then take responsibility for the changes necessary.
- Designating a six-week period as the focus period for learning level improvement to drive attention to student learning.
- Changing the focus of workshops from being reflective and thematic to more proactive and interactive to improve learning levels.
- Demonstrating the importance of regular and rigorous assessment and designing tools, including activity banks, to help headmasters record skill based inputs.

The actions taken above led to improved results during end-line testing. The improvement in learning levels relative to the control group jumped 17 percentage points in Language and 27 percentage points in Math in the academic year 2013-14. As a result, KEF has since then made regular and continuous assessments an integral component of its school leadership programs. Its theory of change that had begun with a primary focus of empowering headmasters transitioned to making improvements in student learning levels through empowered school leaders.

Naandi

As part of its organisational focus on child education, Naandi operates an education intervention program, Ensuring Children Learn (ECL), which provides after-school remedial education to children attending government schools in Hyderabad.

An ongoing partnership between the foundation and Naandi aims to impact learning outcomes of 7,000 children in 150 schools of Hyderabad with a target of scoring marks that are 40% higher than that of the control group, 30% higher than marks scored at baseline, and with a minimum of 60% absolute marks in the end-line test.

Naandi initiated an evaluation of children's learning levels nearly as soon as it introduced its program and has

witnessed the completion of the 11th phase of assessments in 2013-14. The assessments, which have always been carried out by independent third party vendors, have shown time and again that children attending Naandi's program score significantly higher in Mathematics and Language (Telugu & Urdu) compared to other children in similar schools.

For instance, results for control group schools in Math (in Urdu medium) in grade 3 showed an average score of 39.8%

as compared to 70.4% scored by children receiving Naandi's remedial program in government schools in the end-line 2013 assessment cycle. At many levels, Naandi's success in running its remedial education program is illustrative of an intervention that has *improved because it is being measured*. Regular and continuous assessments have resulted in the following improvements.

- Naandi understood where children were when they entered a new state, district or school program. This helped relevant teams plan and pitch their teaching and learning materials, as well as classroom management in specific ways.
- The student performance strengths and weaknesses of children at each grade level became evident, helping teams adapt their pedagogical materials and teacher training programs.
- On many occasions, Naandi found a correlation between a group of children's weaknesses in a key competency and the teachers' level of comprehension in the same. For example, if children showed weaknesses in understanding fractions and decimals, their teachers demonstrated the same. This helped Naandi plan more efficient teacher training sessions on these competencies at their fortnightly training sessions and its inclusion in teacher guidelines and manuals.
- Regular assessments also helped Naandi understand and plan the number of sessions a child needed in order to learn a competency or concept. As a result, the number of worksheets for the child and the number of lesson plans for the teacher were designed and decided according to the findings of the assessments.

At another level, the regular supply of rigorous data from continuous assessments also became useful to spur greater efficiencies internally by tying the performance of Naandi's team to the performance of the children with whom they were working. This helped increase a sense of ownership and responsibility in the team, which improved commitment to the program's core objective: enhancing children's grade-appropriate learning proficiencies.



Bodh

Bodh has been working in Rajasthan for more than 20 years to help improve the teaching and learning processes in government schools.

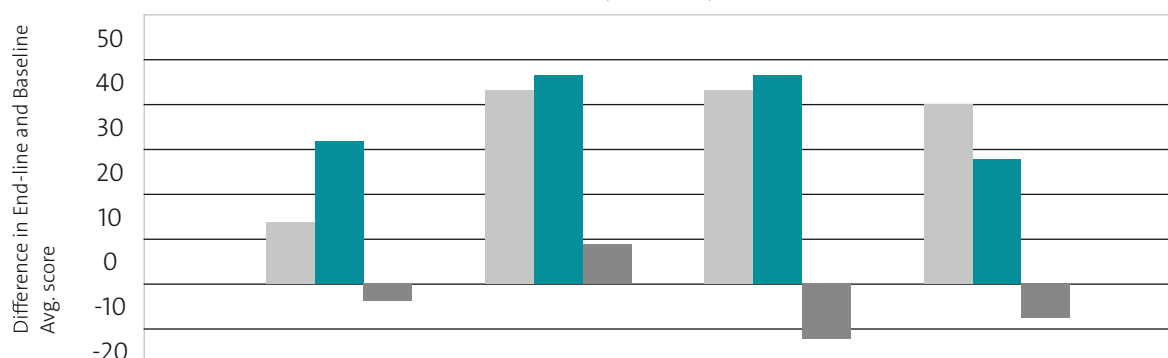
Bodh had used assessments from day one of their program, and it had made a significant difference. In 2010, the Government of Rajasthan invited Bodh to be the technical partner for a pilot project to change the assessment system of the state. Bodh agreed but advocated for the inclusion of pedagogic and curricular reforms as main components of the project, saying that solely making changes in the way children are assessed would not be enough to improve learning outcomes. The state agreed. It undertook an integrated adoption of the National Curriculum Framework-2005, textbooks from the NCERT, Bodh's suggested pedagogy, and Bodh's Continuous and Comprehensive Evaluation(CCE) program for testing in 60 mainstream schools in Alwar and Jaipur.

Bodh provided the following support:

1. All content development of assessment formats, teacher training manuals and source books
2. Annual six-day teacher training, as well as monthly enrichment workshops in subjects
3. One Bodh resource person per school for daily mentoring and advising

The program delivered strong impact. The chart below shows the 2010-11 impact data (difference in end-line and baseline scores in Math and Language in grades 3 and 5) of Bodhshalas and CCE pilot schools (government schools) in comparison to the control group.

Difference in End-line and Baseline Average Scores
(2010-11)



■ Bodhshalas	15	42	23	40
■ CCE Pilot schools	31	44	23	27
■ Control group	-5	8	-12	-7

In 2011-12, the end-line results again showed strong performance with high learning levels at or above the score of 60 in Bodhshalas, and 50 or above in pilot schools.

After witnessing the success of the pilot, the state decided to scale the program to the entire state in 2012 using its own resources. Bodh trained a team of 100 government-selected trainers who further trained teachers of about 3000 schools (covering all the districts of Rajasthan).





About the Michael & Susan Dell Foundation

Inspired by their passion for children and by a shared desire to improve the lives of children living in urban poverty, Michael and Susan Dell established their US-based foundation in 1999.

The central mission of the Michael & Susan Dell Foundation is transforming the lives of children living in urban poverty through better education, health and family economic stability. In 2006, the foundation opened a satellite office in India. The scale of need among India's children, coupled with the country's unique combination of economic and urban growth, made it a natural hub for furthering the foundation's mission.

As of 2014, the Dell family foundation had committed more than INR 745 million crores (\$130 million USD) toward the effort to drive measurable social progress for India's children.
