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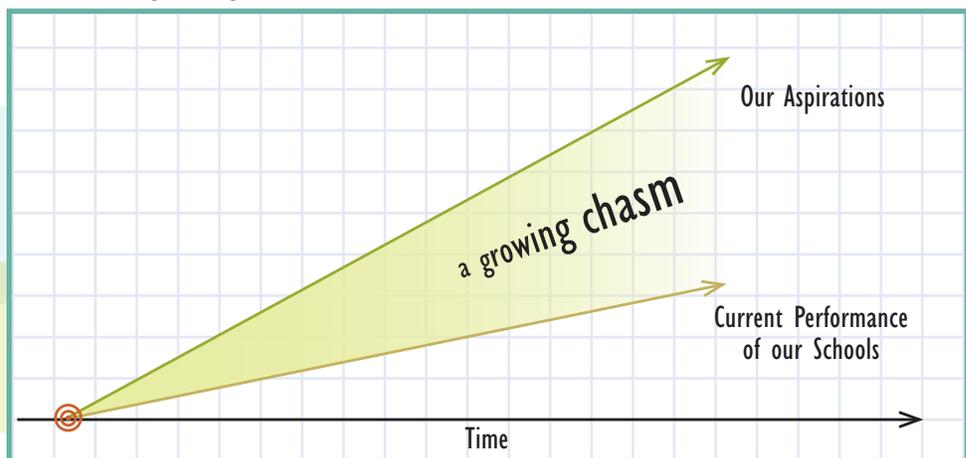
Redressing Inequities: An Aspiration in Search of a Method

*Anthony S. Bryk, President,
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This is now my fourth opportunity to join with you in opening the Carnegie Foundation's Summit on Improvement in Education. I know that many in the audience today are new to the Summit this year—welcome! Others have been engaged for some time and are returning to share their work with us and help us all learn from each other. I would like to thank you for the leadership you are bringing to our community.

I want to start today by revisiting some ideas from past sessions to establish some common ground for my remarks today. I return to a personal observation: over time, our schools have been gradually getting better; the problem is that our aspirations for what we want schools to accomplish are increasing at a faster rate (see [Figure 1](#)). A chasm has been growing for

Figure 1: A growing chasm



As improvement guru W. Edwards Deming said, “Education is a field characterized by miracle goals without methods.”

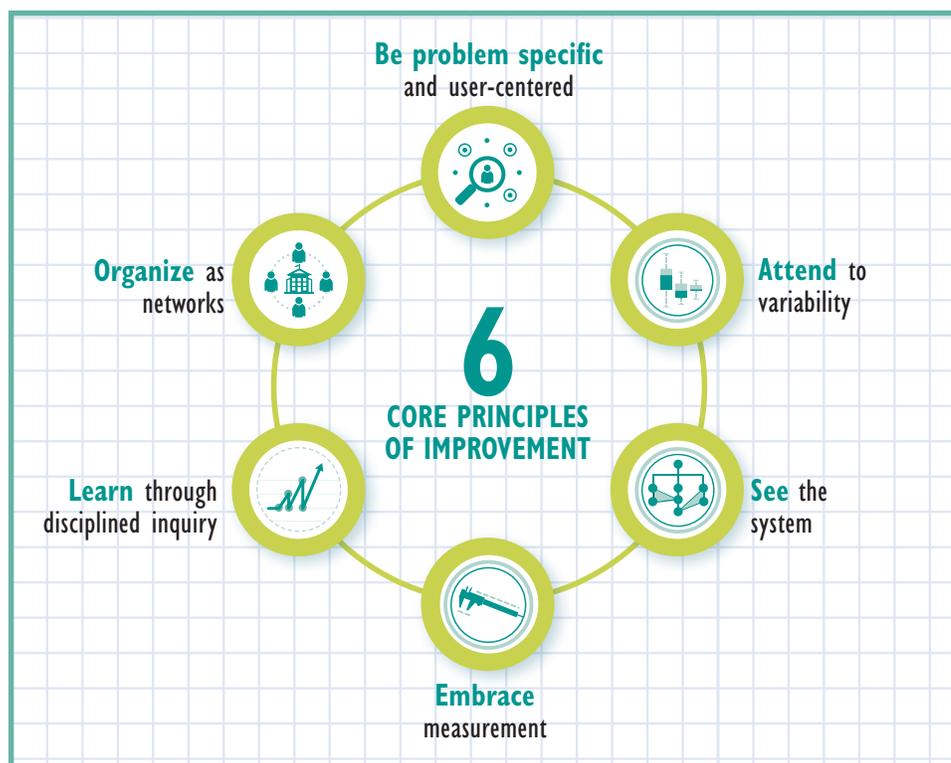
some time between these two, and this gap is largest for our most disadvantaged students in our most disadvantaged communities. This has now formed as one of the great social justice issues of our time.

W. Edwards Deming, the improvement guru whose ideas have inspired productive change across many different industries and sectors, said about education that we are a field characterized by “miracle goals without methods.”¹ He said this in 1991 as policy leaders touted Goals 2000; it is equally true looking back now on No Child Left Behind, and remains so as we move into an era of the Common Core, 21st century skills, personalization or whatever other reforms may eventually come forward.

Closing that chasm means taking on Deming’s challenge. We need new ways of thinking and working in the world that guide our efforts to continue to improve and accelerate our learning at getting better.

This is where improvement science, carried out through networked communities, takes root (see Figure 2). It starts with investigating the specific problems we need to solve. This means seeing how our educational systems actually create the unsatisfactory outcomes we observe. At the core of improvement research are the rapid iterative cycles of testing possible change ideas against data, revising, retesting, and refining. And then to tackle the larger, more complex and persistent problems we confront,

Figure 2:
6 core principles of improvement



¹ National Educational Service, “Shaping America’s Future III: A National Forum on Transforming our System of Educating Youth, with W. Edwards Deming” (transcript of the forum, Bloomington, IN, 1992).

we join together in improvement networks. While our individual capacities may be modest, working together we can achieve much more.

In previous Summit addresses, I have highlighted how groups working in these ways have improved high school graduation rates in predominantly minority and low-income school districts. I have described how the Statway® and Quantway® networked improvement communities, initiated by the Carnegie Foundation, have broken open new pathways for community college students who previously languished in developmental math courses, never acquiring the necessary college math credits to move on. These networked improvement communities have now more than doubled the success rates for these students, in half the time.

In this year's Summit program, you will have an opportunity to learn about and to meet improvement leaders working on reducing chronic absenteeism in high schools, putting many more low-income and minority students on track for going to college, and strengthening children's oral language and literacy development so as to start school strong. You will also have an opportunity to talk with others who are now working on improving the preparation of STEM teachers, closing disparities in math outcomes in middle grades and high school, and strengthening family engagement to better support student success.

I am excited by the many good examples of improvement work now occurring all across our field. Many educators are making the improvement principles come alive and are vitalizing the core values and mindsets that characterize the improvement paradigm.

THE THEME FOR TODAY'S TALK

I want to focus my remarks today explicitly on the issue of how our field can better address longstanding patterns of inequity in educational outcomes. Now, "inequity" is a potent term. It holds different meanings for different people. In the context of my talk today, I am focusing on places where the outcomes we observe often follow in predictable ways based on the family a child might be born into or the community in which that child might live.

So, it is about disparities that are often associated with race and poverty. But I also mean inequity more broadly to include any place where our educational institutions systematically foreclose opportunities to some children—where predictable failures occur year after year after year.

Now, the inspiration for this talk originated with an extraordinary group of young people. They came to the Foundation upon completing their undergraduate degrees to participate in a two-year post baccalaureate fellowship program that embeds them within various Foundation teams. They call themselves “post-bacs.”

While at the Foundation, they are also broadly exploring the field of education—how and why we educate as we do. They have self-organized as a learning community, seeking to understand better the disparities that exist in educational outcomes and how implicit and explicit forms of bias operate to create these disparities. They are talking about this in their own study group, and it is pulsing through their Slack channel.

Questions that have bubbled up in their conversations have created context for my talk today. They have asked, “What is of real value in improvement research and networked improvement communities in terms of the personal commitments we hold dear to advance social justice? How does it help us make real progress on the educational inequities we care about?”

In responding, I want to begin with a bit of personal history. Most of my professional life I have had the privilege of working in elite research universities. When I first arrived at the University of Chicago in 1985, most faculty paid little direct attention to the disadvantaged communities surrounding them. There was a sense that “we do serious scholarship; addressing local community concerns isn’t what we do.” Exceptions existed here or there, but the general ethos was clear.

So, here I was now, sitting in a great university surrounded by what former secretary of education, Bill Bennett, had called “the worst public school system in America.” Academic success rates in the 20 percent range; high school dropout rates hovering close to 50 percent. A district, 90 percent low income and 90 percent minority. I believed—I had to believe—there was something meaningful that we could contribute.

And so we began the work of the Center for School Improvement and the Consortium on Chicago School Research. The challenge: “How might we forge relationships with local school communities in a new way of working together that might respectfully bring to bear the distinctive resources of a world class university around improving educational outcomes?”

There was no clear path back then as to how to do any of this. In the mid-1980s, it was very hard to find a research university anywhere that was seriously engaged with any major urban public school system. The idea of “research-practice” partnerships simply didn’t exist.

Making this come alive was not easy work. It challenged in ways that no graduate program prepares one for. It forces you to confront the limits of what you know and to learn how to engage respectfully with others quite different than yourself.

Our Chicago group cohered around one overarching belief: good research could and should stand in a more productive relationship to improving educational practice.

20 years later, this same driving belief brought me to the Carnegie Foundation. We made a strategic decision in 2008 to focus our first efforts in community colleges. Community colleges are the largest sub-sector within higher education. Their enrollments draw disproportionately from low income and minority students and students who are first in their families to attend college. And here, too, student success rates were dismal. In our Chicago work we were trying to help more students complete high school and hopefully move on to post-secondary. Well, for those high school students who were successful, community college was a likely next stop.

But suddenly a new roadblock to success came into view. Typically, 70 percent or more of students enrolling in community colleges are assigned to developmental math courses and 80 percent of those students never get out. Absent college math credits, they are unable to transfer to a four-year institution or qualify for many occupational training programs. This was the place where opportunity for a better life came to die.

This was truly a problem worth working on.

So my first answer to our post-bac fellows is to empower the first improvement principle. Identify a specific inequity and go try to solve it.

This seemingly simple idea has profound implications for those engaged in applied educational research, for how educational practitioners go about their local improvement efforts and for how policy initiatives aim to support this.

I simply state the following as a proposition now and hope to convince you of its merits as I proceed. Key to reducing disparities in educational outcomes is a shift, a shift from a program focus (we need to add something new, some new idea or service) to a problem-solving focus (we target a specific disparity in outcomes and we keep iterating through improvement research cycles until we achieve our aim).

Now, being user-centered plays a critical role here. In retrospect, perhaps we could have found a better term for this second aspect of the first improvement principle. Our design school colleagues might prefer, for example,



Reducing disparities in educational outcomes requires a shift from a program focus to a problem-solving focus.

“human centered.” Regardless of term, the key idea remains: as you focus in on trying to address an educational inequity, bring the voices of the people who are most directly impacted into the conversation. Seek to understand the dynamics of this disparity through the eyes, mindsets, and emotions of all involved.

As Danielle Allen tells us in her book *Our Declaration: A Reading the Declaration of Independence as a Defense of Equality*, respect for the voice of others is the most basic expression of the concept of equality.²

Early on in my Chicago days, I attended a number of board of education meetings, trying to just learn more about the school system. Back then, any member of the public had the right to request two minutes to speak at a board of education meeting. More often than not, however, most of the board members either absented themselves or were otherwise occupied during this portion of these meetings. So, you had the right to speak, but not necessarily to be heard.

Being user-centered means truly listening; it doesn't necessarily mean endorsing every idea you might hear, but it does mean in some form or other taking these voices into account. Listening is at the core of improvement. I draw your attention to tomorrow's plenary by Becky Margiotta and Joe McCannon and how they spent extended time doing precisely this as their first step in an improvement initiative that has now positively impacted the lives of over 100,000 homeless people.

Moving on to a second response to our post-bacs about how improvement science carried out through NICs directly addresses inequities in educational outcomes: It is all about focusing on variation in performance to discern the **predictable failures** that we see year after year after year in our educational systems.

Now this language about variation in performance may sometimes confuse, so let me try to elaborate a bit. Research, policy and practice all tend to focus on “averages,” so much so that we can easily lose sight of what this perspective obscures. For example, in a randomized controlled trial, researchers estimate the average difference in outcomes between some program group and a control group. We take this average difference as evidence that a program “works.” But to be a bit more precise it is actually evidence that a program *can* work. By this I mean, assuming the study is well done and a positive effect was found, then the program presumably had to work somewhere for some students in order for this average difference to emerge, but we don't know for which kinds of students nor in what kinds

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² Danielle Allen, *Our Declaration: A Reading of the Declaration of Independence in Defense of Equality* (New York: Liveright, 2014).

There is no average child or average school context.

of contexts. This means I don't know whether it will work for me under my circumstances, and that is really what I want to know.

My point is that this so-called "program effect" is just an average, but there is no average child or average school context. Let me illustrate with findings from recent research on a first grade literacy intervention program called Reading Recovery. The results from a recent I3 field trial are quite impressive. Standard effect sizes as large as 0.7 are reported depending on the specific outcome measured (see Figure 3). This is literally an order of magnitude bigger than many so-called effective programs. But, still, what does this mean for *you*—your particular district, your school or your particular students?

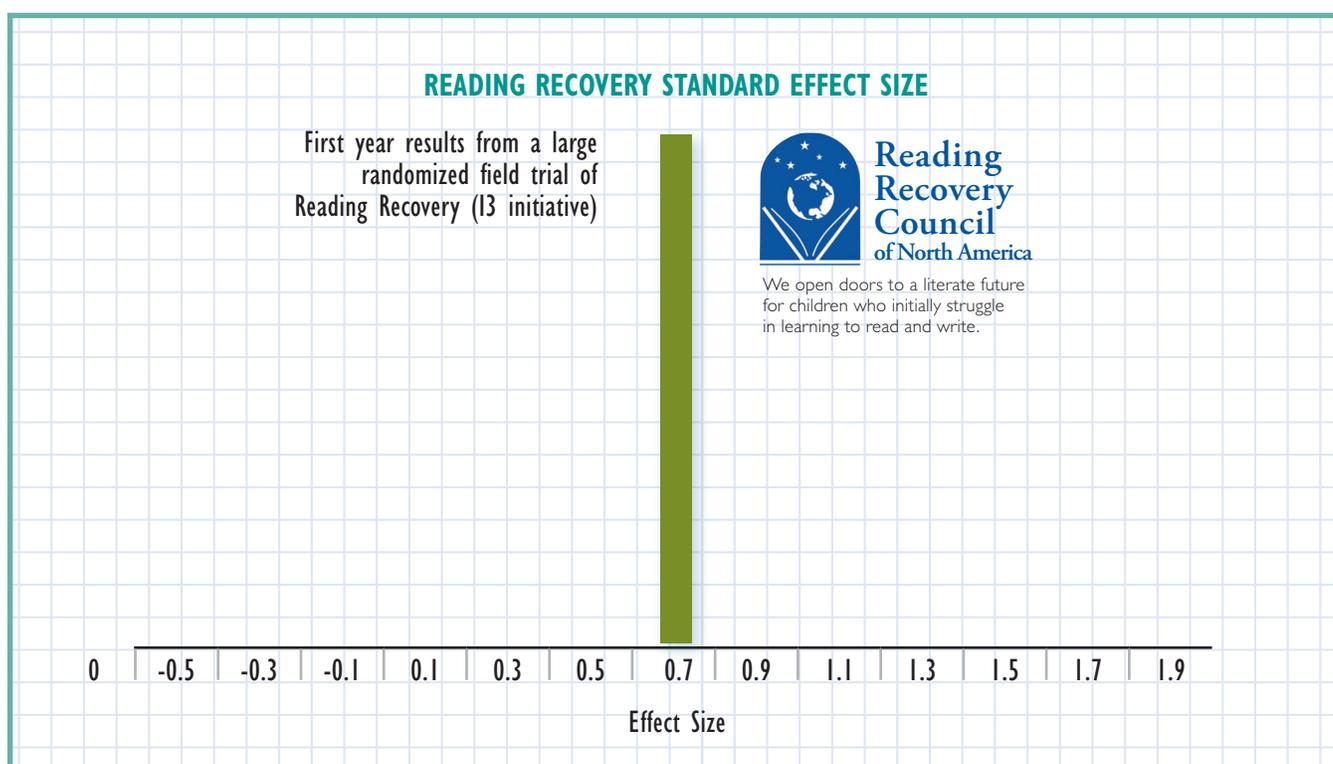


Figure 3:
Reading Recovery standard effect size

To their credit, Reading Recovery actually looked at variability in program effects across school sites (see Figure 4). Even with a very well detailed and supported program, as is Reading Recovery, wide variability was found. In some places, Reading Recovery worked exceptionally well, but in other places, it did not work at all.

And as we think about educational interventions more generally, who do you think is most likely to be down in the lower tail of that distribution? What kinds of schools? What kinds of students? More likely than not we will find that they are our most disadvantaged students in our most disadvantaged schools.

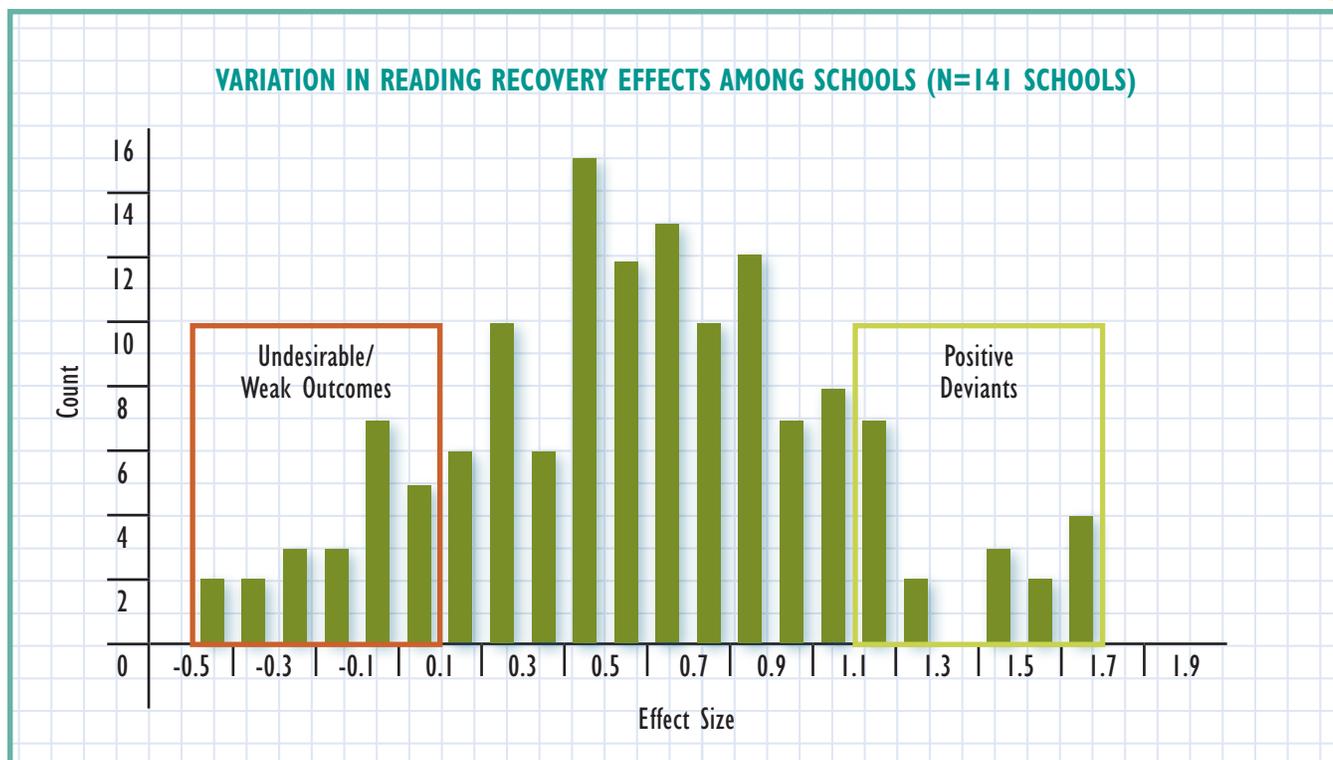


Figure 4:
Variation in Reading Recovery effects among schools

Variation in performance is the problem to solve.

So implementing new programs, even those supported by rigorous evidence, does not assure that we will actually resolve the systematic inequities we aim to address.

Variation in performance is indeed the problem to solve.

Now, this is a place where some of the language that surrounds evidence-based programs can easily mislead. The “standard effect size” associated with each program is just an arithmetic operation that researchers use to compare results across different programs. In a way, it is an average of averages. To the ordinary person, a “standard” effect size might suggest that this is what you should expect to get in your setting; but it does not mean that.

In a similar fashion, when we talk about a program having “strong evidence,” this might suggest to you that there is some extra assurance that the standard effect will occur for you.; but, this is not true either.

And then there is this language about “fidelity of implementation.” It is now routine in these big expensive field trials to measure this. These measures typically focus on what the program designers view as the key elements in their intervention—the training of staff, use of correct materials, specific processes to be followed, and so on. The contention is that if each school just implemented the program as envisioned by its designers, great

outcomes would be assured. By the way, they did measure implementation fidelity in the Reading Recovery study and it did vary some across sites. But most interesting, it did not account for the wide variability in effects we just saw.

I want to emphasize that variability in program effects is not unique to educational interventions. Rather, it is a natural consequence of the task and organizational complexity that we routinely see today across diverse fields of work.

A similar account has been offered, for example, by Atul Gawande in the context of care for children with cystic fibrosis. All of the specialized treatment centers across the country for this disease share the same research base, staff receive the same rigorous professional training, and all follow the same evidence-based treatment protocols. Yet, wide variability in outcomes is still observed. So, the treatment centers implement with fidelity, but nonetheless, variable results ensued.

We now have a vast body of evidence, some of it dating back 40 plus years, about variation in program effects as a function of who takes up and actually uses so-called “effective interventions.” Starting with *Sesame Street* in the early 1970s—we learned that those who watched more gained more. But the low-income children that *Sesame Street* most aspired to help, tended to watch less. Disparities of this sort have appeared across many different interventions. Those whom we most want to benefit from new programs are often least likely to do so.

Yet we never stop and really ask, “Why does this happen? What might we do differently?” Rather than thinking about this as a core design problem to attack, tacitly we adopt a blaming-the-victim stance. Somehow it is about the parents, the community, the children, or maybe the teachers.

So, why are these predictable program failures seemingly hiding in plain sight? Well, I would argue that it is in part about the standards we use for what constitutes strong evidence of program effects.

All of the intricacies of research design (and what have now become increasingly complex data analysis methods), is about coming up with the most defensible estimate for that average difference between a program group and a control group. This definition of a program’s effect takes center stage and can easily take up 90 percent of the effort in these evaluation studies. The problem about variability in effects, and how different individuals and contexts access and use a program, tends to get relegated to somewhere near the back of the final reports, often surrounded by text to the effect of, “Hmm... This is a place for further study.”

If we truly care about addressing inequities in educational outcomes, then we should be haunted by our predictable failures.

My point is that if we truly care about addressing inequities in educational outcomes, then we should be haunted by these **predictable failures**. We need to pull them from the periphery to the center of our improvement efforts.

This takes me to my third major response to our post-bacs: We need to “see the system” that creates these predictable failures.

As our plenary speaker Peter Senge has taught us about organizations generally: “What primarily determines the level of performance is the design of a system, not simply the will, native skill, or attitude of the people who work in that system.” Unfortunately, Senge also tells us that “by the very nature of systems, each of us only sees a part of the system. The problem is, the part we see is very compelling to each of us.”³

Our inability to see “all of the parts” and the connections among them—to see how the system actually operates—often results in perverse effects that no one intends. And to the specific point of my talk today, not infrequently these perverse effects accrue to the most disadvantaged among us.

As a field, we are constantly pursuing some new program, some new idea. We keep adding to our list of “parts,” but we rarely stop to ask, how are educators supposed to make all of this come together reliably every day for every teacher and student across the varied school and community contexts in which they work?

My thinking on this matter has been strongly influenced by our work over the past year with educators, both here in California and in Tennessee, who are initiating new networked improvement communities. Two of these new networks are focusing in on the same problem—the large number of students who have not become proficient readers by the end of third grade. The predictive futures for these students are dismal—in terms of higher dropout rates, lower wages, future substance abuse, and possible incarceration.

These new Carnegie partnerships have drawn me back to some of my earlier work in Chicago on this same problem. The challenges these two new networks are confronting have caused me to reflect on what I might call **system sources** of the predictable failures we see. So while the examples I will be talking about are all in the context of early literacy development, the four system sources that I describe next are quite general. There is a very good chance that one or more of these will arise as major problems to solve in addressing predictable failures in most other education areas as well.

³ Peter Senge, *The Fifth Discipline: The Art & Practice of The Learning Organization* (New York: Doubleday, 1990).

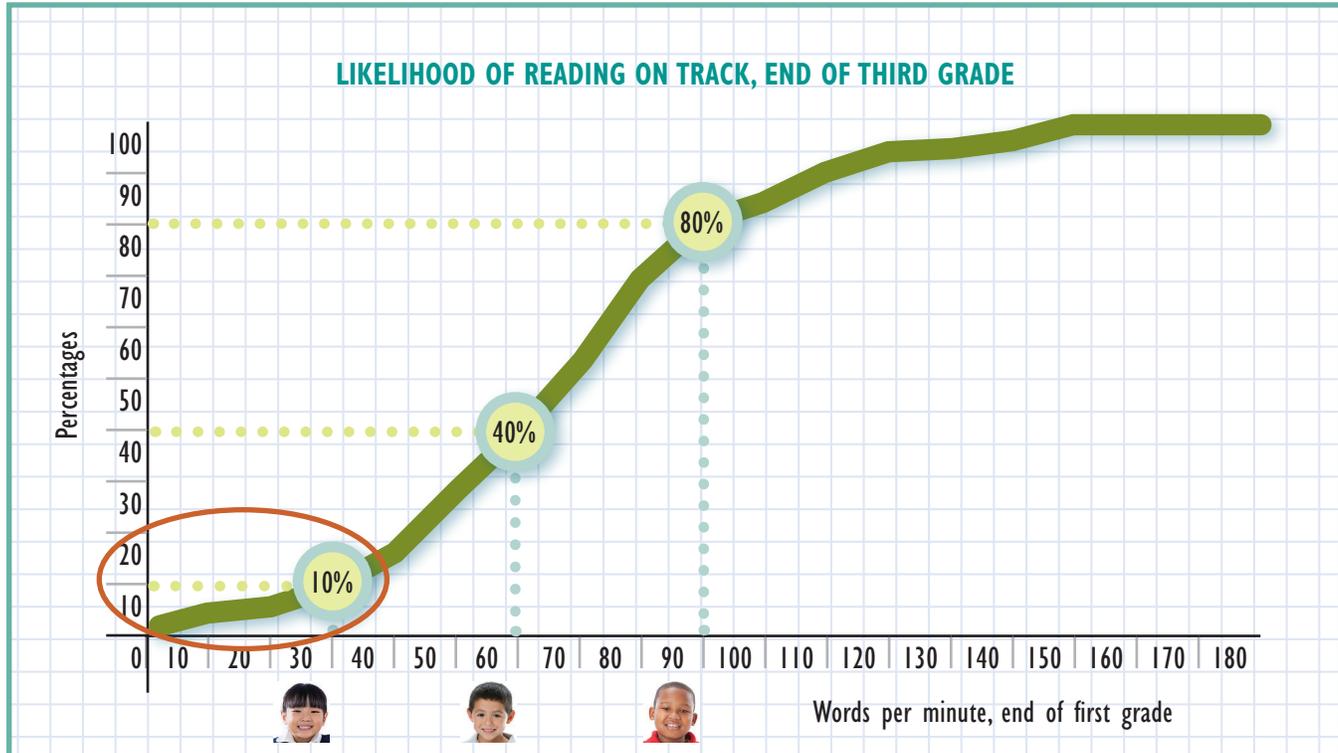
COMMON SYSTEM SOURCES OF PREDICTABLE FAILURES

I. Not seeing problems and addressing them as they are actually emerging

Figure 5 displays the likelihood of a child being a proficient reader at the end of third grade. It is a prediction based on a child's fluency in word reading (the number of words read per minute) at the end of first grade. We know that less than 1 in 10 children who look like this (see red ellipse) at the end of first grade will become proficient readers by third grade; less than 1 in 10. Inequities in outcomes are clearly visible here, and yet, we just keep passing these students along in the hope that somewhere along the way something good will subsequently happen. We have a miracle goal—all children proficient readers by the end of third grade—but seemingly no method to achieve it other than perhaps exhorting both children and teachers to work harder.

Likewise, research findings also document a strong link between vocabulary development, as early as age 3, and subsequent success in reading comprehension. So here, too, we are looking at distinctive developmental profiles and, in essence, we are staring at more predictable failures.

Figure 5:
Likelihood of reading on track, end of third grade
Courtesy of the Center for Early Reading at Amplify, Inc.



Upstream problems eventually become downstream failures. Improvers hike upstream and fix them there before they become much harder to solve.

Still another example: the well documented summer slide effect where students' literacy learning tends to regress during the summer, with the greatest loss typically occurring for the most disadvantaged students. We have extensive research on this topic dating back over 40 years. We know that disparities in outcomes grow right here and yet we don't seem to see this as a high leverage problem to solve.

We know that we can lose students at various places along the way. But rather than trying to address these literacy issues as they first emerge, we wait for failure and then we try to remediate, often over and over again, with, at best, modest success. These upstream problems that I have been talking about eventually become our downstream failures. Improvement research directs us to hike up stream, see where problems might be first emerging and go fix them there before they change in character, expand in size, demoralize those involved, and, consequently, become much harder to solve.

2. Hand-off problems

This second system source of failures hit me right between the eyes early in our work in Chicago. I might visit a classroom and notice a student or two who seemed like they might really benefit from some extra help. But at least back then, if these students weren't behavioral problems in class, there was a good chance that no referral for additional support would actually happen.

Or, they might be referred which means their names went on a list somewhere, but the service provider might not quite get to them. Or, they might have access, say, to an after-school program for tutoring support, but for a variety of reasons they might not be able to attend. Or, if they did participate in the extended day program, instruction there might not align well with what their classroom teachers were actually doing. At each step in this sequence of processes, students most in need of help were falling through the cracks.

So, even if these schools had valuable programs in place, predictable failures persisted because the service systems were just not tuned to reliably advance the progress of every child.

This is another subtle manifestation of the programs logic that drives practice. We see needs, and we put programs in place, but are the students most in need actually getting services and are these services doing any good? And for whom and whom not? It is not until you ask these questions, as the members in the California and Tennessee networks are now doing, that you are driven back to root causes to figure out where the service systems are breaking down and causing us to lose so many students.

3. Uncoordinated external guidance

The third system source of predictable failures derives from the multiple forces shaping our public education systems that generate extensive guidance for what schools are supposed to do. Each actor in this play, again tends to see only a part of the system, but the part that each sees is very compelling. So each generates guidance consistent with their particular view of the problem to solve. No one, however, owns the collection of guidance actually accruing down on the “job floor.” But, it is this collection that often produces effects that no one intends. Here is a simple example, again in the context of primary grades literacy learning.

On one front beginning about fifteen years ago, reading researchers told us that more attention was needed to teaching systematic phonics. Accompanying this press, the federally funded Reading First program encouraged districts to introduce new reading assessments in K-2 that focused primarily on students’ acquisition of discrete phonics skills.

About the same time, other policy actors pressing for greater accountability for student outcomes, exhorted educators to become “data driven.” “Red-yellow-green” data reports emerged to monitor the progress of individual students, classrooms, and schools. Teachers were directed to regularly review these data and revise their lessons accordingly.

Well, what do you think happens to classroom instruction if the only data reports you provide teachers are about discrete phonics skills and then you encourage them to use the data to change their practice? You guessed it, instruction tends to narrow to the teaching of discrete skills, and attention to the broader experiences necessary for developing children’s reading and writing competencies atrophies.

And this process of sending more uncoordinated guidance down to schools continues. Today, the Common Core tells educators to increase students’ eyes on text. And while doing this, they should also pay more attention to differentiating instruction for every child. Both are good research-based ideas, but exactly how is all of this supposed to work?

How are educators to join these various forms of guidance, old and new, into a coherent instructional system that can actually be executed reliably by most teachers? This is the kind of systems question, in this instance about the robustness of the instructional system, that tends not to get addressed.

So my point: the sources of guidance for teaching and learning keeps expanding; our aspirations for quality instruction keeps rising, and, the task

Sustainable, reliable quality comes from improving systems, not the heroism of individuals—especially in our most disadvantaged schools.

and organizational complexity associated with making all of this work keeps growing exponentially.

Yes, some heroic teachers will somehow figure out on their own how to make all of this work. We will tout them and maybe give them an award. But if achieving quality in teaching depends on individual heroic action of this sort, then quality will forever be in short supply.

And this is especially so when we focus in on our most disadvantaged schools. These places tend to have more programs and new initiatives and consequently more varied actors pressing on them as to what they should do. The capacity of these schools to absorb and integrate all of this guidance is modest, and they are already heavily taxed by the extraordinary student and family needs that walk through the schoolhouse doors every day. So, these are contexts primed for predictable failure.

4. Unintended effects of evidence-based programs and policies

So this brings me to a fourth system source of predictable failures: how our highly specialized research knowledge may derail a problem-solving ethic. I have already hinted at this a bit in my last example.

As participants in the Tennessee Early Literacy Network were trying to understand better the specific problems they needed to address, one person puzzled out loud, “We are implementing Response to Intervention (RTI), which we know has a research base. We have also purchased programs for levels 2 and 3 of RTI that came from a research based list.”

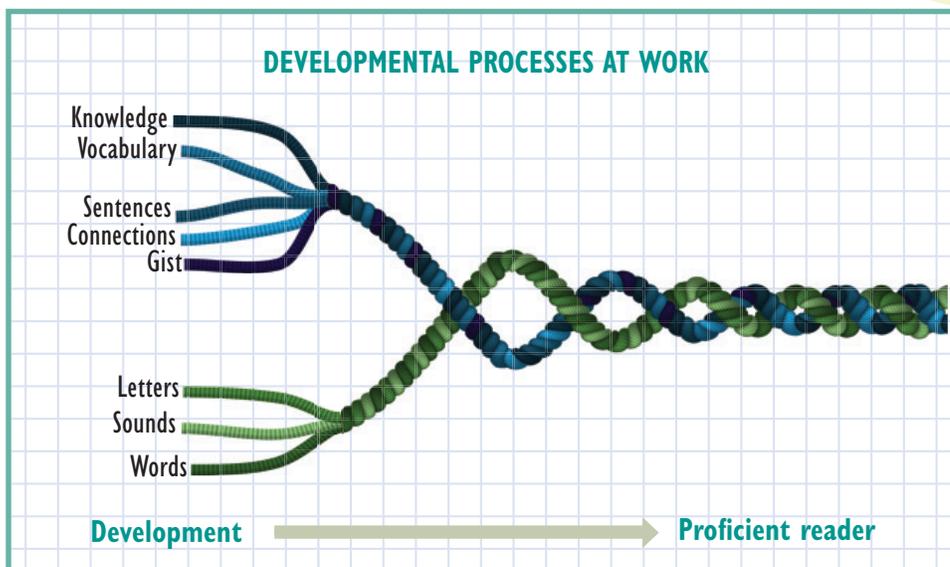
Likewise she said, “And a few years ago, we introduced research-based universal screeners and progress monitoring assessments. So, we are doing all of these things that are supposed to improve outcomes, but they are not. Why?” Now that is a really good question.

To comprehend this problem, we need to take a step back to understand a bit about what is going on in the mind of learners as they progress over time toward becoming a proficient reader. Here is a representation of this (see [Figure 6](#)).

This is a simplification in that it does not include the role of oral language development at home, the reading/writing connection, nor listening and speaking skills. But it is a useful heuristic in that it does direct our attention to the fact that multiple strands must interweave tightly together over time in order for a student to become a proficient reader.

Now, as new research findings emerge, educators are encouraged, in essence, to pull on one or a few of these strands related to these

Figure 6:
Developmental process at work Courtesy of the Center for Early Reading at Amplify, Inc. Adapted from Scarborough, 2001.⁴



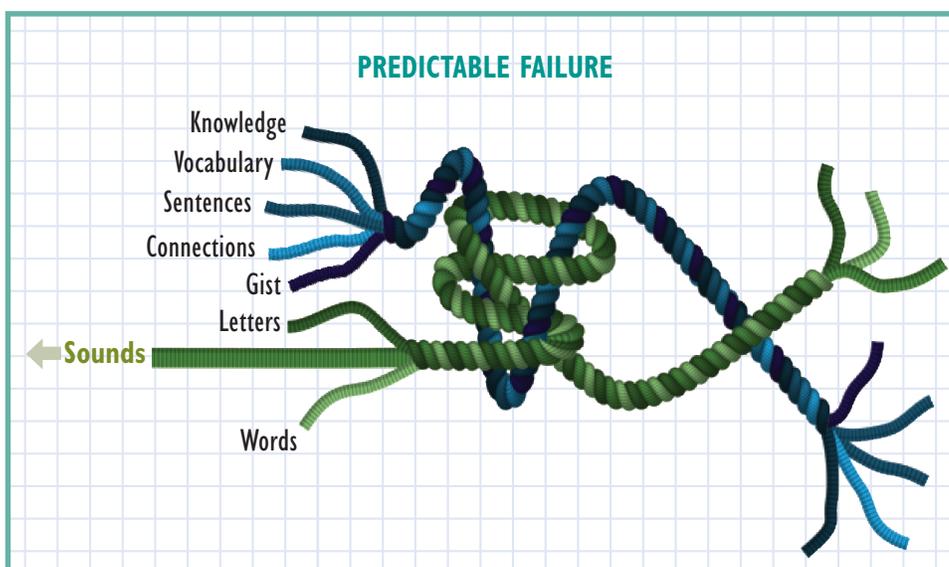
“new findings.” In the literacy example I just mentioned, all of the pull was down in the phonics skills domain (the green strands). But, if we pull hard on some strands and leave the rest relatively loose, the nice, tightly intertwined cord does not form.

Instead, students’ development begins to look something more like **Figure 7**. We distort the learning processes, some strands atrophy and never interweave properly with the others. The desired outcome—becoming a proficient reader—does not emerge.

So, this is how the academic specialization that characterizes high quality research today sometimes works against practical problem solving. While the research evidence produced may be conceptually and technically strong, it is also highly compartmentalized and discrete. But the problems educators seek to solve are not compartmentalized nor discrete.

Research evidence is highly compartmentalized and discrete. But the problems educators seek to solve are neither compartmentalized nor discrete.

Figure 7:
Predictable failure due to distorted learning processes



⁴ Scarborough, H., “Connecting Early Language and Literacy to Later Reading (Dis)Abilities: Evidence, Theory, and Practice.” In S. B. Neumann and D. Dickinson (Eds). *Handbook of Early Literacy* (New York: Guilford Press, 2001).

We have lots of good research occurring all across the education field today, developing new “ideas” and better “program parts.” But these resources really only matter to the extent that these can be integrated effectively on the ground every day, in every classroom, for every individual child.

In a program-centered world, that organizes both what researchers study and what schools and districts implement, these issues tend to go under-addressed. And here again, it is those students whose success depends most on our good efforts that are most likely to be disadvantaged by our working in these ways.

THE RESEARCH PRACTICE CONNECTION: GOING DEEPER

So let’s dig a bit deeper on the connection between research and practice. For too long, educators have been largely cast as passive recipients, waiting for the next new policy or program to be passed down from above. Over time, not surprisingly, many educators have adopted the mindset of “just tell me what to do.”

Organizations, however, do not continuously improve unless the people directly engaged in the work also actively engage in improving how their work actually gets done.

To close the chasm between society’s growing aspiration for our schools and what schools can routinely accomplish, we need to do two things.

First, we need to support the development of practicing educators to advance their agency as improvement researchers. This entails a paradigm shift—a very different way for educators to think and act in their professional worlds.

Second, and in a complementary fashion, academic scholars, technologists, instructional designers and others need to join fully with practicing educators in these improvement efforts rather than primarily studying educational practice from the side.

When I began my work in Chicago in 1985, to borrow a phrase from my former Harvard colleague, Sara Lawrence Lightfoot, research and practice were worlds apart. Over the past 30 years a lot has changed. Research-practice partnerships are now growing in number. Practitioners are identifying issues they care about, and researchers see opportunities here to launch projects that are of personal interest to them.

So, researchers and practitioners are increasingly engaging with one another, but they are also doing so in ways that tend to sustain and reinforce their

We need a dynamism of actors and actions where teachers and researchers fuse together their diverse sources of expertise in relentless pursuit of problem solving. We need a kaleidoscope, not a mosaic.

traditional professional identities. The current state of affairs is akin to joining their various sources of expertise as a mosaic. Productive work is now occurring at the boundaries, but the distinct and separate identities of the participants remain. To be clear, I applaud the places and people who have taken up these partnerships. Now, I want to encourage all involved to go to the next step.

To really address the predictable failures that I have been talking about this afternoon, we need to move beyond this mosaic to something more akin to a kaleidoscope. We need a dynamism of actors and action, where participants fuse together their diverse sources of expertise in relentless pursuit of problem solving. Depending on the most immediate issue in view, some forms of this expertise may move to foreground, others recede back a bit. And this dynamic keeps reforming as the improvement team keeps pressing forward toward its aim.

It is the focus on shared problem solving, the fusing together of diverse sources of expertise, that creates and sustains the common ground for productive action. It is what moves us beyond the particular parts that each of us may individually care about into the collective action needed to actually solve a problem.

So, **it is about problem solving, rather than projects.**

To accomplish this, we will need to expand what counts as scholarship in our schools of education. Ed school faculty need to engage deeply with practicing educators in problem-centered improvement networks, and they need to engage their students in learning to use the tools, methods and principles of improvement research.

And, this has significant implications for educational leadership programs as well. These programs have generally not prepared educators to lead systematic improvement efforts in their organizations and to coach and teach others to do the same.

I am happy to report that innovation has begun on this front. There are a number of faculty in this room today who are now moving this teaching and improvement research agenda into their home institutions. I encourage you to reach out and talk to them, learn what they are doing, and encourage them. There is a movement that needs your support.

IT IS ABOUT POWER

Imagine, I have been talking now for 40 minutes about addressing social inequities in education and I have made only passing reference to this term.

As I noted earlier, most of my professional life has been spent in and around elite research universities. The high-valued work in these places is developing new ideas. The academy prides itself on learning things to inform how others go about doing things.

So, more by default than conscious reflection, both educational researchers and practitioners have accepted an institutional order where some specialize in learning and the vast majority of others go about doing.

The work of improvement science carried out through networked communities challenges this normative stance and the power relationships embedded within it. And, ultimately, this is why we chose to endorse the term *improvement science*.

Present conditions in our nation's capital notwithstanding, those who hold a claim to the term *science* hold power in their interactions with those who do not. I believe that practicing educators need to take up their place as participants in a scientific community rather than continuing to look in from the outside.

Now, we know from focus group research conducted by the Frameworks Institute, who are offering a session at the Summit this year, that some educators feel uneasy about extending the term *science* to their work. Educators' humanistic impulses are strong and they worry whether this might be just another imposition of some bureaucratic logic on what is a deeply human and social enterprise. I want to speak directly to this concern as I draw toward a close.

The tools and methods of improvement science are just instruments; they can be used to advance many different ends. It is what we do with them that infuses meaning and affords potential for creating value.

Part of what has inspired us at the Carnegie Foundation to embrace the logic of improvement science is having had the opportunity to observe up close some of what has been accomplished in improving quality in healthcare.

The extraordinary men and women who have led the improvement charge in healthcare have challenged their profession. For example, doctors used to say about hospital-induced infections that, "Well, complications happen." They now acknowledge, "We kill people. We are responsible for causing unconscionable levels of death and disability. We must change this."

Healthcare improvement leaders also took social contexts such as the surgical theater, where power was highly stratified by gender and race, and

Practicing educators need to take up their place as participants in a scientific community rather than continuing to look in from the outside.



they gave voice to all involved in order to advance better care for every person they served.

They used improvement methods and focused laser-like in attacking disparities in healthcare outcomes associated with poverty. So they are using the instruments of a scientific practice to advance social justice on multiple fronts. I believe that we can do the same in education.

Almost a century ago, John Dewey, in his essay *The Public and Its Problems*, directed our attention to an inherent tension between technical expertise and democratic governance. He asked whether it was consistent with our democratic ideals that a relatively small group of technical and political elites do all the thinking and the vast majority of the rest of us just wait to be told what the answer is. Dewey thought not, and neither do I.

By virtue of where the social institution of schooling sits—part way between concerns of families, local communities, and larger societal purposes, including a vital economy and a civil democratic society—schooling is and always will be a politically contested space. Public education is ground zero for Dewey's *The Public and Its Problems*.

Dewey argued that improving the quality of decision making in a democratic society depends on the social intelligence of its people. It matters little if some of us “know the answer,” if all of us are not afforded the opportunities to learn, to inquire, to challenge, and to actively engage in public problem solving.

This same democratic spirit, and the key role that it plays in advancing educational equity, is central to the work of this year's closing plenary speaker, Jeff Duncan-Andrade.

In closing, I have sought to describe new ways of thinking and acting on educational inequities in ways that might actually help us transform Deming's lament about miracle goals and no methods into practical and effective action.

Weaving my various arguments together, it all starts by focusing on predictable failures—explicitly identifying disparities as the problem to solve. Next, we investigate the root causes of these failures as understood in the lived experiences of all involved. Along this journey, we are systems thinkers, exploring how some of the things we take for granted in our work may act to sustain the disparities that trouble us so greatly.

And then we join together in a very different way. We activate a kaleidoscope of inquiry and action. We enliven a broad collegueship of expertise, working side by side together on problems we genuinely care about solving.



*Anthony S. Bryk
delivering his keynote
address, March 2017*

While each of our individual contributions may be modest, collectively we hold extraordinary power to accelerate learning to improve.

Again, I am delighted to see all of you here with us for Summit 2017. I am very excited about this year's program and do hope you enjoy the next couple of days exploring and learning together how we can get better at getting better.

THANK YOU

S. S. Bryk
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Carnegie Foundation for the Advancement of Teaching is committed to developing networks of ideas, individuals, and institutions to advance teaching and learning. We join together scholars, practitioners, and designers in new ways to solve problems of educational practice. Toward this end, we work to integrate the discipline of improvement science into education with the goal of building the field's capacity to improve.

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