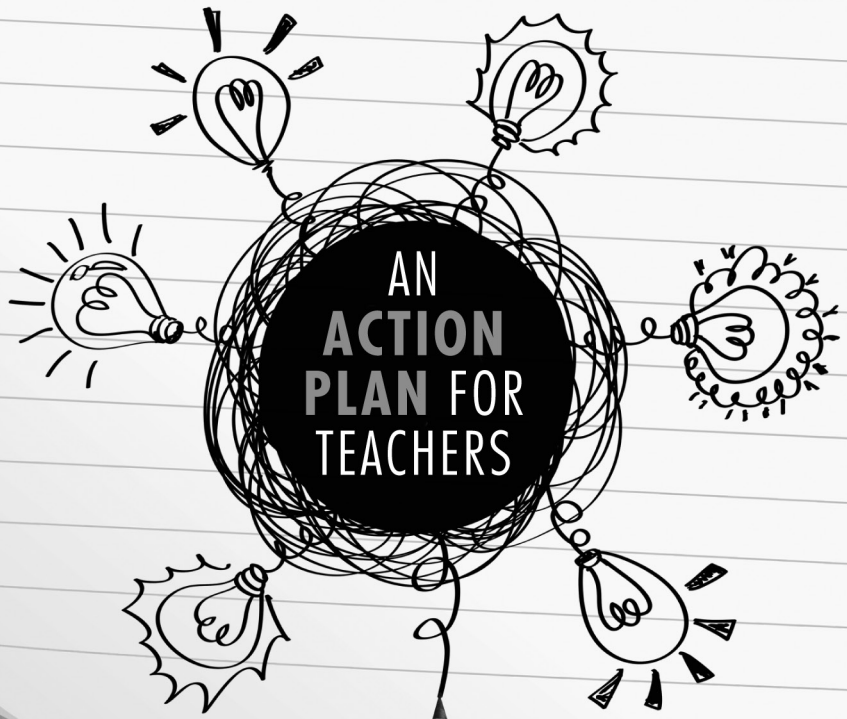
GRETCHEN MORGAN

Foreword by Yong Zhao

innovative educators

AN ACTION PLAN FOR TEACHERS



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Foreword

We are well aware that our children will live in a world drastically different from the world we inhabited in the past and the one we inhabit at present. We are also well aware that today's education is inadequate for preparing our children to live successfully and happily in this new world. But when it comes to what needs to be done, opinions vary.

The dominant view, as reflected in the major reform efforts undertaken in the United States over the past few decades, is that we need to continue to do what we have been doing, just do it better: design better curriculum and establish higher standards for all students (centrally prescribe what each and every child should learn, as exemplified by the Common Core State Standards); prepare better, harder-working teachers and school leaders (establish tougher accountability measures for teachers and principals, as exemplified by No Child Left Behind and Race to the Top); create better assessments and make data-driven decisions (deliver and manage uniform standardized testing via modern technologies, as exemplified by mandating common assessments and pushing for Big Data).

However, this view is fundamentally flawed and results in futile, even counterproductive actions that waste precious resources and squander opportunities. The fixes, no matter how successful, simply reinforce an outdated paradigm; we need a new paradigm that can equip our children with an entirely different set of skills, perspectives, capabilities, and understandings. Doing the wrong thing "right" will not bring the desired outcomes.

The biggest flaw of the dominant view is its failure to recognize that the inadequacy of today's education lies in its design. The paradigm that governs today's schooling was designed for a different society, one that required similar basic cognitive skills and knowledge for routine assembly-line jobs in geographically and culturally isolated communities. All the proposed fixes can only make traditional schooling more effective in producing outdated skills that are of little value in the new society.

Changes brought about over the past few decades by globalization and technology have created a new world in which we consume more personalized, psychological, and spiritual products and services. The skills we need require critical thinking, teamwork, problem solving, creativity, analytic reasoning, and communication (in Daniel Pink's iteration: design, story, symphony, empathy, play, and meaning). We also need to be able

to live, interact, and work with people across national and cultural borders. Furthermore, to compete with machines, we must have well-developed "noncognitive" skills that are uniquely human: grit, hope, perseverance, open-mindedness, social adeptness, and emotional intelligence.

The new education has to value individual differences, celebrate diversity, and follow children's passion and interest. It should proceed from the belief that all children have the potential to become great in their own way. It needs to change from fixing children's deficits as measured against preconceived standards to supporting their individual strengths. It needs to become personalized, not nationally or globally standardized.

In this refreshing book Gretchen Morgan speaks out for the new education. She offers compelling evidence showing why the traditional "factory" schools cannot adequately prepare students for the new society. More important, as a former principal, Gretchen understands schools and schooling extremely well. Her extensive experiences in the trenches and acute analytical skills led her to the insight that the factory school breeds a culture that has little chance of encouraging innovation:

> In the last hundred years of refining and reforming factory school, we have become incredibly good at teaching our children to be passive. Factory school has also been pretty effective at encouraging teachers to adopt passive dispositions. This is where the ineffective idea of fidelity has its roots. If the archetype of the American teacher was built on the archetype of the American factory worker, then it was built to implement ideas rather than create them. It was also built to operate with a sense of distrust in management. This results in a culture of compliance and oversight rather than empowerment and innovation.

To change the culture, to move away from schooling's factory disposition, we must have innovative teachers. Gretchen has faith, lots of it, in teachers as the driving force for bringing about the new education we need:

- Teachers need responsible ways to innovate in service of helping all students become proactive learners, professionals, and community members.
- Teachers can both convert existing practices and invent new ways of teaching in an effort to help individual students realize their unique potential.
- Teachers are creative, dedicated, and crafty professionals who can quickly try, fail, succeed, learn, and collectively work together to redesign the way we do school.

Her faith is coupled with suggestions that can help teachers become innovative in their practice, suggestions rooted in her own experiences leading innovations in schools and in current research about innovative teaching, not wishful prescriptions or personal reflections. These suggestions are accessibly—and beautifully—presented as a series of conversations with teachers. I know you will enjoy these conversations as much as I have.

Yong Zhao

Presidential Chair and Director of the Institute for Global and Online Education, College of Education, University of Oregon
Author of *World Class Learners: Educating Creative and Entrepreneurial Students*

Acknowledgments

I think the best reason to write a book is that doing so may inspire and help others to do great stuff. But I have discovered that one of the best selfish parts of writing this book is that it gives me an opportunity to publicly thank really fantastic people. I am the product of an amazing community of thinkers, doers, champions, ancestors, and friends. I cannot overstate how blessed I have been each day of my life by the powerful people who surround me.

First, to Mom and Dad. I have never had a winning lottery ticket, or won a raffle, and the only Bingo prize I have ever taken home was a weird little rug depicting a scene of lions lounging on a hot day, but that has never bothered me because I believe it is a tradeoff for the big lottery win of being given to the two of you. Now that I am a parent myself, it is clear to me just how hard the two of you worked to teach me to try, to care, to believe, to learn, and to do important and helpful things. Thanks.

To Stephen, or as you are more commonly known, Sweetie Morgan. You are one of the few people who really knows how much writing this book both scared me and meant to me. Thanks for the encouragement, the time to write, the spontaneous foot rubs, and the timely delivery of so many extra hot soy chai beverages. Besides being a wonderful father and teacher, you are an amazing husband who often notices before I do that I am out of whack and offers me just the right support before I know I need it. You are simply wonderful. I love you like crazy.

To Henry and Sylvie—you two are amazing. Thanks for knowing just when to crawl in and sever the connection between my lap and my laptop, putting an end to my writing and initiating much-needed cuddles. I learn from the two of you every day. You are both blessed with wonderful little minds and strong hearts. The very best part of my life is watching you grow and learning more and more about who you are and who you will be. Love you more than anything.

To the teachers featured in this book, Heather, Sonia, Paul, and Liza. And to the other teachers I interviewed, but whose content didn't end up in the final book: Scott, Bethanne, and Chad. To all of you, thanks for sharing your thinking and asking great questions. But mostly, thanks for the work you do for the kids in your care. I have had moments in each of your rooms when you did something so beautiful and clever that all I could do was stop, watch, and smile.

Thanks to Sam Bennett for taking me out for sushi and getting me into this mess, and equal thanks to Margaret LaRaia for riding along through the couple years it took to organize my messy mind and produce this thing.

Thanks also to those of you both brave and kind enough to read this and talk to me about this while it was still a complicated mess and helped me sort it out—thanks to Jen, Furman, Sam, Colleen, and Ken.

Thanks to Yong Zhao. Reading *World Class Learners* inspired me to keep writing. You helped me see the broader context in which my thinking made sense. Thank you for your global perspective, for introducing me to entrepreneurial indicators, and for the lovely foreword you wrote for this book. I feel I should also personally thank you for the idea that our school system should aspire to keep kids from wanting to graduate and live in their parents' basement. I always credit you when I share that simple measure of systemic success or failure with friends at dinner parties.

Thanks to the long list of my dear colleagues from TC, RMSEL, EL Schools, Venture Prep, and the Colorado Department of Education . . . you taught me how to collaborate. You taught me how to make my actions and words intentionally mirror my beliefs about kids. You challenged my limitations and expected me to always grow and do better. We have done absolutely crazy amazing things together in service of lighting up the kids in our classrooms. Thanks for inquiring, integrating, writing, sailing, building, facilitating, designing, starting, stopping, and trying so many fantastic things together. I hope you can each recognize the bits I learned from you and tried to put to good use in the pages that follow.

And to those of you who were my students, big thanks for helping me build a loud, inventive, messy, fast-paced, creative, and collaborative classroom. You remain some of my most powerful teachers.

Who knew that a girl who is 80 percent head, 15 percent stomach, and 5 percent heart would be so gushy?

g.

Credits continued from page ii:

Figure 1.1: Partnership for 21st Century Skills, The Conference Board, Corporate Voices for Working Families, and Society for Human Resource Management (2006). *Are They Really Ready to Work?* Washington DC: Partnership for 21st Century Skills. Reprinted by permission.

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Figure 8.1: Design Edu Feedback Protocol from www.designedulab.org/resources.html and Design Edu statement of purpose from www.designedulab.org. Copyright © 2013. Used by permission of Design Edu Lab.

1 Introduction

Being Proactive Is More Important Now Than Ever

Hi there. We don't know each other, but I hope we are about to have some great conversations. Before we begin, I want you to know what I am hoping to do and why I wrote this book. (Please don't turn the page. This isn't personal blather important for me to write down but irrelevant to you as a reader; that stuff was part of the acknowledgments.) To increase the chances that you and I are able to communicate effectively in this somewhat limited medium, I am trying to be clear about my goals and intentions so you can use that information as you read what follows. I normally rely on flailing my hands around and making cartoon faces to convey meaning. Unable to do that here, I'm going with clarity of intention.

Redefining the Relationship Between Fidelity and Innovation

In many ways writing this book allows me to revisit a failure from my time as a principal. I was trying to guide the school by taking a clear, shared approach to instruction because my colleagues and I believed that consistency in the learning environment was good for students (I still believe this). At the same time, I wanted our school to continue to innovate. Without a process to support innovation, however, ideas came in fits and starts and weren't explored in an organized way. It was left to me to become a kind of dictator who decided whether we should or shouldn't do something different. This experience taught me two things:

1. I don't want to be a dictator. I don't like the wardrobe, the required demeanor, or the idea that one person should be the decider.
2. Without some process inviting people to innovate we would always have a destructive dynamic between rogue actors and rule followers on our staff.

We were struggling with the commonly held false dichotomy that fidelity and innovation don't mix. I offer the counter idea that mixing innovation and fidelity is required if schools are to serve students effectively over time. Organized and intentional innovation

is essential in determining what everyone should start or stop implementing with fidelity in a school that evolves in response to changes in society.

Currently, we use the idea of fidelity to measure the degree to which we are implementing something as it was originally intended, to be able to determine whether it works in a new setting. For example, when a new reading program is adopted, there are often people paid to travel from room to room around the district observing to see whether this new approach is being implemented with fidelity. In this case, we are supposed to have fidelity to rote and inflexible implementation of a program or tool.

This vision of fidelity is in direct conflict with innovation. It assumes that innovation does and should happen outside the school and be brought inside the school to be implemented. This kind of fidelity of implementation is intended to ensure consistency for students and contain the risk of having bad teachers. I would argue that this approach is actually not very good at limiting the negative impact of bad teachers, but it is very good at limiting the positive impact of good teachers.

So instead, I am suggesting that we need to think of innovation as the responsibility of teachers. We need teachers to be proactive problem solvers, continually analyzing the effectiveness of current strategies and innovating to meet the rapidly changing task of educating our children in the twenty-first century. However, we also need to organize the practice of innovating so it isn't just something that individual teachers do for their individual learning and for the benefit of the thirty students in their classroom. We need to organize our efforts so that we can collectively, and based on sound practices, determine what should be implemented with fidelity across part or all of the school in service of all students getting access to our collective best practice.

To help equip educators for this conversation, let's examine where the idea of American public education started and what it has become.

How the History of Public Education Informs Our Present

Public education became a national phenomenon in 1918 when all states at last had mandatory attendance laws requiring and providing at least an elementary education (Watson 2008). At that time our predecessors established the basic structures and systems of the American schoolhouse. They built it by mimicking common aspects of adult life at the time. This seemed like a good idea. Our public school system began at the height of the industrial revolution, and the factory was the new engine of the economy and in many ways the culture. There were large numbers of immigrant children in urban centers, and schools were asked to prepare them for jobs in the "new" economy (Roundtable, Inc. 2001).

The story of the American schoolhouse through the rest of the twentieth century is a blurred series of pendulum swings, periods of fifteen to twenty years in which progressive ideas gained momentum followed by fifteen to twenty years that emphasized tracking

and basic skills. Somewhat surprisingly, very little has changed in the way schools are organized, led, and managed. With some interesting exceptions, most schools have been run like factories. Both students and teachers work within rigid systems designed to sort and classify, and schools are still primarily managed through compliance.

Factory School = Factory Disposition = Passive Disposition

Whether students are deeply engaged or totally disengaged in school, we do a pretty good job of teaching them to take on a factory disposition. Even if students find themselves at odds with the way things work—when we ask them to pretend they don't have access to knowledge on their smart phones or try to convince them that writing revisions by hand is a great use of their time—they learn that being quiet and waiting is a pretty good way to make it through. Our system takes kids with a range of passive or proactive dispositions and teaches them all to "get in line." American schools exert a lot of energy teaching students:

- How to raise their hand and be called on before they speak
- How to follow procedures when bells ring or lights are turned off-and-on
- That when they do what they are asked, they get candy (or stickers or extra recess)
- How to hold their questions until there is a break in the lecture
- Not talk to another student if you need help but to raise your hand and wait for the teacher.

In the last hundred years of refining and reforming factory school, we have become incredibly good at teaching our children to be passive. Factory school has also been pretty effective at encouraging teachers to adopt passive dispositions. This is where the ineffective idea of fidelity has its roots. If the archetype of the American teacher was built on the archetype of the American factory worker, then it was built to implement ideas, rather than create them. It was also built to operate with a sense of distrust in management. This results in a culture of compliance and oversight, rather than empowerment and innovation.

In recent years, driven by a well-intentioned equity agenda and wanting to make up for the years of learning that students didn't get while they were not engaged or instruction wasn't effective, schools across the country are trying to maximize the academic-skill-building potential of every minute of every day. To gain efficiency, some of these schools have taken compliance to an extreme. Clearly, efficient use of time is important, and wasting kids' time is irresponsible. But is giving students small opportunities to manage their own time or behavior in less constrained and explained environments a waste of time? More to the point, how will children ever learn to manage time, prioritize, or demonstrate initiative when every minute of the day is so tightly controlled?

This is not to endorse swinging the pendulum all the way to days filled with two-hour unstructured "work time" but rather to request that we balance compliance with social norms and efficiency with the explicit development of a proactive disposition. Reading gains or not, in too many American schools, we teach our children to behave in a way that produces diligent but passive people, which ultimately may make them unemployable as twenty-first-century professionals.

In the last twenty-five years, a desire to ensure both equity and global competiveness has resulted in significant changes in policy regarding student assessment and school accountability. Those policies effectively changed the mission of public education from measuring and sorting students to measuring students and then attempting to provide varied means of support so that all students leave the schoolhouse with the same basic competencies. As a nation we have committed to not leaving any child behind, and in doing so we have redefined equity in the context of the American schoolhouse.

When we began standardized testing, it revealed dramatic inequities in achievement. Educators and policymakers could no longer say that American education was providing equal opportunity just by offering free access to a school in every community. As a result, the focus has shifted to making sure every school in every community provides a *quality* education to all of the children it serves. We have committed to all students achieving common standards, gaining the same set of skills and knowledge. We have made a concerted effort to address these inequities and have made some progress toward closing performance gaps:

- The NAEP assessment began in the 1970s and is given to a sample of students ages nine, thirteen, and seventeen throughout the country every two to four years. If you compare scores from the early 1970s and 2012, in most areas overall scores are going up and the gaps in performance that exist between ethnic groups are slowly narrowing (National Center for Education Statistics 2013).
- The gap in the dropout rate between high-income and low-income families narrowed between 1970 and 2011, particularly during the past two decades, when the gap narrowed from 21 percentage points in 1990 to 11 percentage points in 2011 (Aud et al. 2013a).

However, the data also indicate that we are still some distance from closing achievement gaps:

- We continue to see significant gaps in high school graduation rates. In 2010, the white-black gap in high school graduation rates was 17 percentage points and the white-Hispanic gap was 12 percentage points (Aud et al. 2013a).

- The gap between college graduation rates of minority and white first-time, full-time degree seekers has basically been flat, with a slight overall increase from the cohort who entered college in 1996 to the cohort who entered in 2006 (Snyder and Dillow 2012).

While we have certainly made some progress with leading indicators like K–12 literacy and math performance, the college graduation rate indicates that these gains in a narrow set of academic measures are not increasing postsecondary success. Additionally, these hard-earned test results have come at a cost. As we drove hard for equality in our system, we decided that helping all students develop the same set of knowledge and skills was so important that other types of learning could be ignored. This belief has resulted in a number of tradeoffs. Art, music, and fitness programs have been cut in favor of additional literacy or math instruction. In my home state, Colorado, many elementary schools stopped teaching social studies a decade ago because it wasn't tested. Missing out on social studies, art, music, or fitness is cause for concern.

However, these tradeoffs also need to be examined in another context. As education reform focused on the implementation of better standards and assessments, societal, economic, and labor arenas were experiencing dramatic change responding to, and capitalizing on, the blazing speed of technological innovation.

We had no idea twenty-five years ago that YouTube and Facebook would empower social revolutions or imperil naïve adolescents. Unlike teachers in the early twentieth century, we don't know what jobs to prepare children for; many of the jobs that will exist ten or twenty years from now haven't yet been imagined. Who knew in the '90s that being a social media manager would be a high-paying job today? And even with regard to jobs that are likely to continue, being a doctor for example, we cannot imagine *how* people will be doing those jobs. Doctors twenty years ago had no idea they would routinely be able to use tools like three-dimensional imaging or genetic testing to diagnose patients.

The number of fields in which basic skills and a high school diploma alone make a person a powerful contributor are dwindling. This is happening for two reasons: There are fewer manufacturing jobs, and there are large numbers of college graduates (48 percent in 2013) competing for jobs that do not require a college degree (Vedder, Denhart, and Robe 2013). And on the contrary, being able to access and synthesize learning from the Internet and knowing how to utilize the Internet's powerful communication potential can make an employee a real asset.

In a recent interview in the *New York Times*, Tony Wagner, an education professor at Harvard, said, "Because knowledge is available on every Internet-connected device, what you know matters far less than what you can do with what you know. The capacity to

innovate—the ability to solve problems creatively or bring new possibilities to life—and skills like critical thinking, communication, and collaboration are far more important than academic knowledge. . . . Young people who are intrinsically motivated—curious, persistent, and willing to take risks—will learn new knowledge and skills continuously. They will be able to find new opportunities or create their own—a disposition that will be increasingly important as many traditional careers disappear" (Friedman 2013). Wagner is describing a proactive disposition, something our schools, built to mimic factories, were not built to foster.

If you or someone you're trying to convince needs more outside data, consider the Conference Board's 2006 survey of 431 employers, from across different fields and who hire people with varying levels of education, about the skills they believed were most important for new hires to be successful in their industry. The following graph shows in order of least to most important (top to bottom) what those employers said. Let's see how their findings compare to the themes you identified from talking to people across other industries (see Figure 1.1).

The bottom line is that, independent of the industry our students want to join, all students now need capacity beyond basic skills. Students need to grow up to be creative, socially responsible, critical-thinking, problem-solving, collaborative, and hard-working professionals.

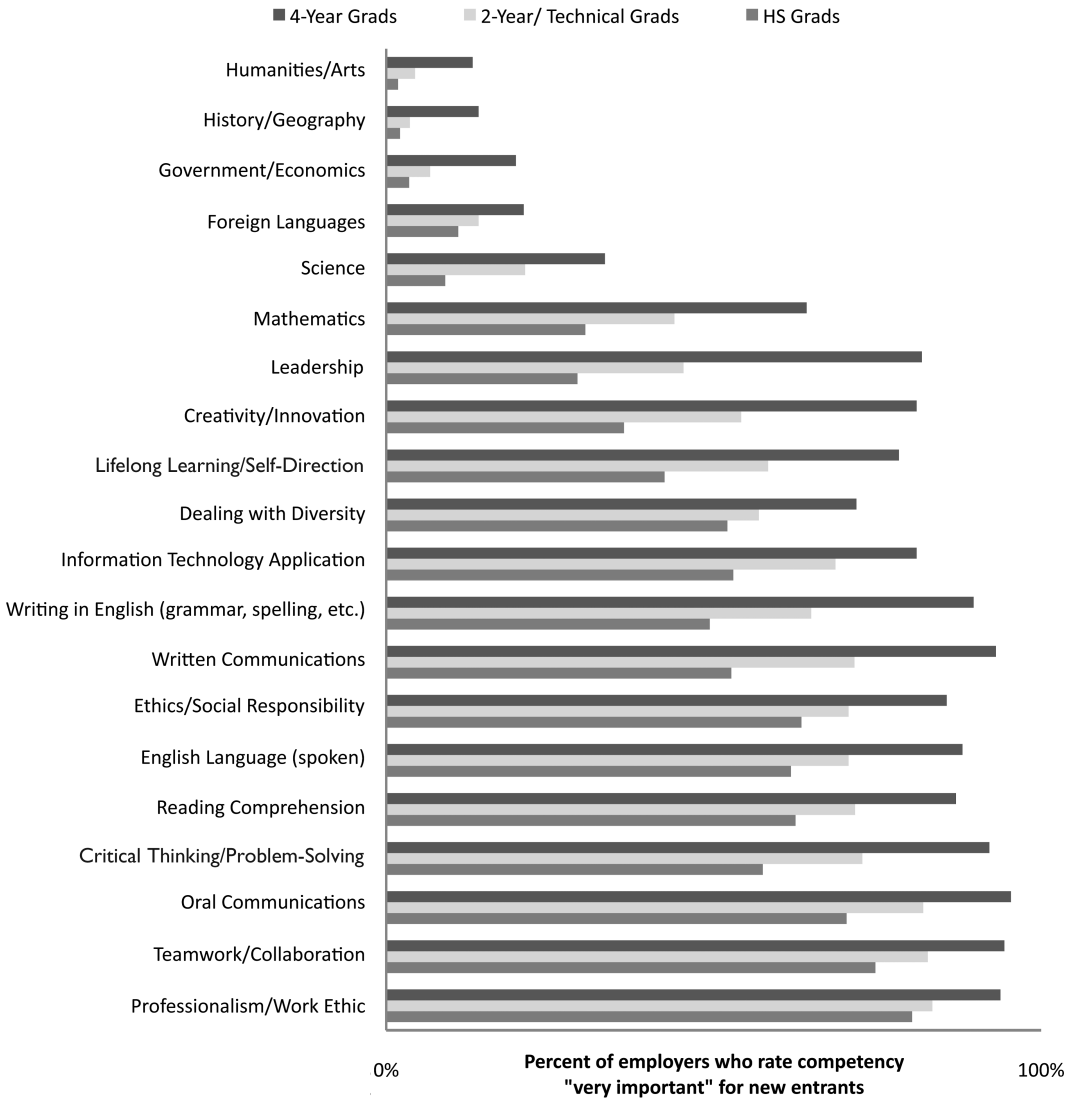
The Balance of Fidelity and Innovation in Practice

Reform hasn't fallen short as the result of a lack of effort; the problem has been direction. Exerting tremendous effort, keeping noses to the grindstone, has made it difficult to notice that the context around public education was changing. We've been reforming to address social inequity within the context of the past, not the present or the future. To keep up with the speed of change, we need to renovate the American schoolhouse so that it meets today's needs. This doesn't mean creating an ugly hodgepodge of additions—given how much we have already tried to jam into and add to our existing structure, which no longer has time for social studies or art, it isn't feasible to adopt new programs and introduce a "proactive class." There literally isn't time in the day or year. Instead, we have to think about strengthening and reviving the basic design, so that it meets today's context. That doesn't mean that our reform efforts have been a failure. The redefinition of equity would not have been possible without clear standards and recent reform efforts. And it is essential that we carry that commitment to serving each student well with us as we take these next steps.

Even if it were practical, adding on classes to learn how to be proactive wouldn't be an effective way to teach students to adopt a proactive disposition. We didn't have a "factory class" to teach our students to become passive factory employees; we

Figure 1.1 Results from 2006 Conference Board Survey of 431 Employers

This graphic representation created by the Center for Public Education to summarize findings in the original Conference Board report. http://www.centerforpubliceducation.org/Learn-About/21st-Century/Defining-a-21st-Century-Education-Full-Report-PDF.pdf, page 47



Partnership for 21st Century Skills, The Conference Board, Corporate Voices for Working Families, and Society for Human Resource Management (2006). *Are They Really Ready to Work?* Washington, DC. Categories are ranked according to the average of the three bars.

designed school to mimic the factory. There is so much power in routines, language, expectations, and ritual. These are our best tools to teach students what kinds of behavior are desirable. To realign school to the twenty-first century, we need to be willing to reimagine completely the look, feel, and structure of the American schoolhouse. Reimagining doesn't mean that we need to discard everything. Like a good home renovator, we can design new things while also finding new uses for the old, beautiful, and familiar things.

We need to use both conversion and invention to redesign all aspects of school, from management practices to culture to instruction to routines to curriculum to technology use, so that they mimic the current and emerging society and economy. We also need to redesign our schoolhouse to be flexible—to mimic the quickly evolving vision of adult life. We need to imagine something less like factory school and more like Google school. Many other educators have used comparisons with Google to inspire conversations about the future of school. I like them as a case-study because Google grew up in the twenty-first century and has one of the most future-looking approaches to business. We should look as far forward as possible. Google has changed the way leaders interact with contributors, the way work is organized, what it means to specialize, and how to value creation and innovation while still getting things done.

Consider Google's hiring practices. In an interview with the *New York Times* Laszlo Bock, senior vice president of people operations, described what they've learned from carefully mining data about job applicants' characteristics and their resulting performance.

- In some teams at Google, 14 percent of people don't have a college degree.
- GPA and test scores are not good predictors of job performance at Google.

If students' ability to do well in school is not a predictor of their ability to work well at Google, then our school system doesn't have priorities aligned to the emerging modern economy.

- The head of people operations at Google thinks that people who succeed in college are conditioned to behave in a way that inhibits their potential to do well at Google.

Students need to be comfortable undertaking legitimate inquiry. Teaching real inquiry is challenging but not because kids aren't naturally curious or are unwilling to persist in the face of ambiguity. Teaching inquiry is difficult because we have taught students, K–12 and postsecondary, that their job as learners is to build and demonstrate a body of fixed knowledge and discrete skills. We could go a long way toward building people who like "figuring out stuff" if we just teach students that knowledge and skills are important

not in themselves but because we need them to analyze, reason, and synthesize, which is the real work of a learner.

Avinash Kaushik worked for Google as a digital marketing contractor for eleven months. In an entry on his blog, *Occam's Razor*, he listed ten things he learned about Google during his time there. Here's number five:

> **Empowerment (the big small company)**
> If you are good at something, have passion to do it, then you'll get empowered to go do it. I know that sounds basic. It is not.
>
> You could be just out of college and if you want to then you'll get to solve some of the most complex challenges you would ever find. At other companies you'll get put into a hierarchy with layers and controls where for the first four years you might learn where all the files are.
>
> I am being a bit dramatic, but not all that much. In my second week there I was walking over to lunch with a young man and he was describing his work to me. He had been at Google for less than a year, straight from college, and had completely rewritten some of the most challenging "code" during the last few months and his work had yielded dramatic results for Google.
>
> He is good at what he does but I was simply struck by how a company this size would allow someone so young and "untested" the task of solving such a complex challenge. And how awesome must it feel to know that you did that!
>
> That's what I mean by empowerment. (Kaushik 2008)

Proactive people in the twenty-first-century workforce aren't limited by hierarchy; they can use their skills and drive to do good work and create interesting opportunities. Innovative educators can take this same stance. When practicing responsible innovation, teachers can make interesting connections and create interesting opportunities for their students, colleagues, and community.

Instead of Fidelity to Programs or Historic Models, Let's Try Belief in People

I wrote this book because I believe in the capability of individuals, and I am worried that the way we currently define the role of teacher, the role of student, and the idea of fidelity is squashing large amounts of that capability. These beliefs underlie the construct of teaching and learning that follows throughout this book.

I want to more fully describe those beliefs here, so we can use them to evaluate ideas throughout the book. Part of being responsible innovators is having a clear rationale for what we do; any rationale for teaching needs to be grounded in what we believe to be

true about students. As you read, I invite you to determine how close or far you are from these beliefs and to use alignment with your beliefs as a sort of test to determine when it is time to convert or invent practice in service of doing something better with your students.

Beliefs Teachers Should Share

I wavered a bit on the word choice of this heading. Is "Beliefs Teachers Should Share" too bossy? First, I'm pretty confident that most people reading this book agree. But more importantly, these beliefs are the one thing I feel comfortable being bossy about. There are some objective things we can and should agree upon.

Belief One: All children, no matter where or when they are born, deserve the opportunity to fulfill their potential. While differentiated supports to achieve common outcomes have been the heart of the equity agenda in the last twenty years, equity now means everyone having an equal shot at maximizing their potential. It is essential that we hold onto this belief about equity as we redesign the American schoolhouse.

The result of this belief is that we take on the responsibility to teach all students to be **proactive learners** *who investigate, synthesize, build fluency, analyze connections, self-assess, know themselves well, and consider a range of perspectives.*

When I was a school leader, I worked with our staff to explore this belief. We talked about whether we believed different characteristics of successful adults were innate or learned. We examined, for example, whether each of us were born with, or developed, self-discipline. The general consensus at the end of the activity was that while it was certainly easier for some of us to learn self-discipline than others, we were all able to identify how we *learned* to behave that way. We had all learned self-discipline and other behaviors of successful people basically the same way we learned academic things. It came down to some combination of the following for each of us:

- People modeled self-discipline for us.
- People labeled it when they saw us demonstrate self-discipline.
- Someone expected us to have self-discipline.
- Someone gave us advice and opportunities to practice self-discipline.
- Someone gave us quality feedback about the degree to which we were demonstrating self-discipline.
- There was significant accountability for demonstrating self-discipline.

- We were rewarded for demonstrating self-discipline.
- We were in a situation where self-discipline was of dire importance, so to avoid sinking, we figured it out.

In every teacher-hiring process I have ever been a part of, I have asked people directly about their belief that all children can learn, and how that belief plays out in their classroom on a daily basis. Most applicants describe things they do to offer additional chances, feedback, and additional support to students as they strive to learn a math skill or write a quality essay. Very few people express a belief that they can provide some explicit instruction, feedback, and support to teach a lazy or unorganized kid how to be productive or keep their stuff together.

What Does Proactive Learning Look Like?

My eight-year-old son is deeply fascinated with birds, especially raptors. This fascination has led our entire family to be proactive learners. We have a desperate need, whenever we are outside, to identify every bird we see. Bird identification is a sophisticated application of both knowledge and skills. In our early stages as "birders" we tried to be good at identifying despite our shallow knowledge base and lack of detailed observation skills. Not surprisingly, we were not good at identifying birds. We might have, upon spotting a brown bird, suggested that we were seeing: a kestrel, a prairie falcon, or a barn swallow.

See Figure 1.2 (photos inserted at approximate scale) to understand how lame our bird identification skills were.

Thankfully, we disagreed frequently enough about what we each thought we were seeing that it was easy for each of us to acknowledge that at least some of us didn't know what we were talking about.

Figure 1.2 Kestrel, Barn Swallow, Prairie Falcon

This awareness caused us to feel a real need to build some knowledge and practice some skills. Since our humble beginnings, we have gone to a local nature center, and events held by raptor rescue organizations, to listen to lectures from experts. We have read no fewer than forty books and studied bird identification cards for birds in our region. We have practiced watching birds closely, so we know now that good birders use more than color to identify birds. Wing shape, type of flight, size and shape of tail feathers, head shape, relative size, and speed can all be used to help identify the bird. With more knowledge and greater skill, we have become respectable birders.

Our family has done just what children need to learn to do. We discovered a curiosity, and in trying to pursue that curiosity, we identified that we didn't know much and weren't very good at it. We then accessed information from a broad range of sources. As we gathered information, we paid close attention to patterns and effective strategies, and we independently learned and applied new information.

To go a bit deeper into the idea of a proactive learner—I want you to come back in time to when I was in elementary school. I wish I was about to tell you that my elementary school years were a great example of what we *can* do to help students learn how to be proactive learners. Sadly, it will be the counterexample.

What follows is a comparison of my experience in elementary school and what I hope my children will experience now. I want to be very clear that I do not assume that we have all had the same experiences or received all of these messages as children when we were in school. I do suspect, however, that we have something in common in our experience and that some of those commonalities, some of the underpinnings of factory school and the factory disposition we were taught in school, no longer align with the realities of adult life.

	What I learned in my K–12 experience in the 20th century	What I hope my kids will experience as students in the 21st century (as far as we can tell)
What are the shared societal values related to education, opportunity, and how work is done?	• Everyone should have an equal opportunity. • College is the pathway to professional work and career advancement. • Roles at work are sorted into blue collar and white collar. • Hierarchy and experience are deeply valued.	• Individuals are different from one another and have unique talents. • Being entrepreneurial is as important, if not more, than college as a pathway to career advancement. • There is a growing creative class of employee; their collars vary in color. • Good ideas are deeply valued and invited from people at all levels of an organization.

What skills do students need to develop to be competent adults in that society?	• Ability to follow directions • Willingness to follow rigid schedules • Ability to memorize information and multi-step processes • Understand hierarchy: be polite/ patient and wait for someone to notice your good work, and you will receive opportunities • Desire to do your best and work hard	• Ability to formulate, organize, and communicate your original ideas • Ability to manage your time • Ability to independently evaluate, learn, synthesize, and use new information • Willingness to speak up and promote your ideas and advocate for yourself • Desire to do your best combined with a desire to work both hard and smart

To help illustrate what I believe is the key difference, I created lists below of all of the verbs I used to describe my experience (on the left) and what our students need now (on the right).

The column describing my elementary school experience includes the following verbs:		**The column describing the emerging vision of the 21st century includes the following verbs:**	
• Follow	• Wait	• Formulate	• Use
• Memorize	• Receive	• Organize	• Speak Up
• Understand	• Do	• Communicate	• Promote
• Be	• Work Hard	• Manage	• Do
		• Learn	• Work Hard and Smart
		• Synthesize	

If you close your eyes and imagine a student doing all the things in the left column, what do you see? I see a six-year-old me, happy and quiet and sitting in my desk with nothing in my hands. I see me watching the teacher closely, and I see me nodding my head a lot. I see me alone at my desk with a workbook and pencil trying to do my best and work my fastest, looking up to see if anyone else finishes before me. I see me nonchalantly smearing thin layers of Elmer's white glue on my left palm to make fake skin to keep from getting in trouble for talking as I waited for everyone to finish their workbook page so we could get our next directions. The verbs in this list are passive, and, with the exception of working hard, this image of me as a student is also *passive*.

Now close your eyes and imagine a student doing the things in the twenty-first-century column. Imagine a student formulating, speaking up, and promoting. Are they sitting down? Are they quiet? Are they focused exclusively on the teacher? Do they have time to perfect the process of using Elmer's white glue to create fake skin? I don't think so.

I think they are on the edge of their seat and leaning over their table full of work. I think they are talking to other students and listening to other students. I think they are writing things down and trying to put their ideas together into words and pictures so they can figure something out. I think they are frequently both curious and frustrated. I think they see their teacher as an advisor and call upon them frequently to bounce ideas off of or get help with something that isn't making sense. The verbs in this list are active, and this student is *proactively learning*.

Beliefs Teachers Should Share

Belief Two: People learn behaviors and ways of thinking and being through persistent clarity of expectation, modeling, practice, and feedback. As described in the introduction, we didn't have "factory class" and we shouldn't have "professional class" or "twenty-first-century class." It is both impractical and ineffective.

The result of this belief is that we redesign the most basic and core characteristics of how we do school so that we use our routines and expectations to foster in all students a disposition of being **proactive professionals** *who adapt, produce, organize, capitalize on connections, learn from failure, manage risk, communicate, promote ideas, and collaborate.*

In his book *World Class Learners*, Yong Zhao refers to a range of entrepreneurial behaviors and a range of entrepreneurs. One such category of new entrepreneurs is called intrapreneurs (Zhao 2012). These are people who behave in entrepreneurial ways as they work inside companies owned and run by other people. I think this is a good way to think about proactive professionals.

Proactive professionals look for connections and opportunities. They are willing to try things when they have some of the skills they need, trusting themselves to build the rest as they go. Proactive professionals speak up and promote ideas. Knowing that not all of their ideas will be great, they are still willing to put good ideas out there to see where they can go. Proactive professionals know their strengths and are good at identifying the strengths of others. They use that self-knowledge and awareness of others to engage in strong, effective collaboration.

It is worth noting that many people also apply their proactive professional capacity to personal or societal endeavors. Maybe despite the fact that a person is a runner and has never been a swimmer, he decides to try to become a triathlete. Or maybe not knowing really how a person goes about it, she organizes her community to build a bike park, gather food for a local food bank, or plant trees. Being a proactive professional is required for a person to do good and important things with the knowledge and skills he or she gains as a proactive learner.

Beliefs Teachers Should Share

Belief Three: Our democratic society needs to produce many more self-sufficient, contributing, and civic-minded adults than those who need support. Thomas Jefferson said in the 1700s that our democracy requires well-educated and engaged citizens. In these difficult economic times, we can also see this in a very practical manner. We need to have many, many more taxpayers than people who cannot afford to eat, and we need to have compassion and feel some responsibility for our neighbors who are hungry.

The result of this belief is that we take responsibility for teaching all students to be **proactive community members** *who think in global, local, and systemic ways, anticipate implications of decisions, and ultimately make decisions that are good for them, their neighbors, and the broader community.*

Being a proactive community member is important all along the scale, from local to global community.

Think about what it means to be a proactive community member in your neighborhood. What qualities do your best neighbors have? In their local community, proactive people think about how their decisions impact their neighbors. Should I throw trash on the ground? Should I look up when I walk to see if there is someone who may need help crossing the street? Should I plug my headphones in tight and avoid interacting with everyone around me? When an issue emerges in my community will I turn a blind eye, or will I get involved to help? When others in my neighborhood accomplish great things, will I celebrate their success or seek to break them down or feel sorry for myself?

Beyond our neighborhoods, how actively should we be involved in our cities, states, or nation? A proactive community member is aware of local, state, and national issues, considers and learns about different perspectives on those issues, and actively advocates for what they think is right through voting, proactive communication, and having their actions match their priorities.

The Earth Guardians are a great example of young people already playing the role of active community members (http://earthguardians.org/index.shtml). They became aware of a number of environmental issues. Despite their age (eight and eleven when I saw them speak and perform) and the overwhelming size of the issues they became aware of—they felt compelled to act. They created an organization that meets weekly to make plans to take on environmental situations in their community. They also tapped into their unique skills and gifts to identify their most effective strategies. For example, they have written and regularly perform a number of rap songs that demonstrate knowledge of the situation and are very persuasive with audiences. My favorite is, "What the Frack?"

These are the kinds of individuals who will be successful in the twenty-first century. They feel committed to their community, are hard-working, and have identified what they are passionate about and use that to direct their energy. These young people have already embraced their role as community leaders. If we foster that behavior in all children, many more of them will grow up to be active community participants and leaders, the kind of engaged citizens the design of our nation depends on.

Beliefs Teachers Should Share

Belief Four: Teachers are creative, clever, and dedicated professionals. I believe that when we remove the complexity and deep thinking from our work, when we try to adopt tips and tricks or write a "teacher proof" curriculum, we fall short of our potential to help each of our students maximize his or her unique capacity. The only way to honor and maximize the potential of individual students is to empower teachers to dig deep into their practice and redesign the way we do school.

This is why this book primarily speaks to, and features the voices of, teachers. I am operating on the belief that teachers need to come to exemplify proactive learning through responsible inquiry and innovation. Teachers need to model being proactive professionals, willing to take the risk of letting their colleagues into their practice. And finally, teachers need to embrace their role as proactive community members willing to implement innovative practices with collective fidelity to create school environments with the highest quality across classrooms.

The potential for students is maximized when teachers embrace these roles in service of students becoming proactive, capable, and happy adults interested in embracing learning as a lifelong endeavor.

Proactive students grow up to be proactive adults. Proactive people learn more, do more, produce more, contribute more, find and create greater opportunities for themselves. I want to pause for a moment and point out that beyond these personal, professional, and economic advantages, there are other benefits to learning how to be a proactive person. This benefit is equally important for both students and teachers. The following highly simplified construct is one I developed based on things I learned from legitimate researchers like Carol Dweck, the author of *Mindset* (2006), esteemed students involved with assessment–for–learning researchers Black and Wiliam, and Rick Stiggins and the other good people at Assessment Training Institute. Among other things, each of these researchers talk about the mindset a person develops toward learning and how that impacts his or her appetite for future learning. Based on their work, and my personal life experience, I have come to believe the following . . .

As they go through life, proactive people say to themselves:

- I know what I am good at, and I know what is difficult for me.
- I know how to recover and learn from mistakes.
- I know that when I try, I sometimes fail but always learn and sometimes succeed.
- I know that success feels good, because I have felt it before.
- I trust my judgment.
- I make choices on purpose and feel responsible for the positive and negative consequences of my choices.
- Some things are beyond my control, but I have a lot of choices and opportunities.

As they go through life, passive people say to themselves:

- I don't feel like I am really great at anything.
- I do anything I can to avoid making mistakes; they are crushing to me.
- I don't want to try my hardest because it makes failure even more painful. I would rather not try, so I expect the failure and can say I didn't really try.
- I don't think too much about what success feels like, because I am so worried about what it feels like to fail.
- I feel like everything just keeps happening to me.
- I don't think my choices matter because all these things beyond my control will get me in the end anyway.
- I don't think my choices or actions contributed to my situation because I have this other person or situation to blame or justify my choices.

In addition to proactive people being more likely to create opportunities for themselves in the twenty-first-century job market, in general, I believe proactive people have an easier time being happy. People are happier when they are living a life they helped to create, rather than one that feels like it is happening to them.

So, while proactive people may struggle and experience frustration as they try to work out things beyond their knowledge or experience, overall, a life lived in a proactive stance will have greater opportunity for both economic success and personal happiness.

How do we get kids there? Right now students come to factory school with varying degrees of proactive or passive behaviors, and we carefully and thoroughly teach them to be more and more passive. The logic follows that we could work with the same set of students, starting with the same range of dispositions, and instead carefully and thoroughly teach them to be *proactive*.

Believing that we can teach students to be proactive learners, professionals, and community members is a big deal. To use the practices discussed later in the book to build proactive people, I think a teacher must at least be able to imagine a circumstance in which a student might be able to learn to behave as a proactive learner, professional, and community member.

What Do We Do When People Don't Share Our Beliefs?

One of the things I have discovered since branching out from my own classroom is that people who work in other industries don't always value learning as a thing unto itself. They are disheartened when their children want to be literature majors in college or take time out from college to explore some corner of the world. Because to many people, education and learning are a means to an end, that end being economic independence. While I certainly want my children to grow up and live somewhere other than my basement,[1] I (and maybe a few of you) are a little offended by this perspective. I became an educator because I believe education is an essential investment in the quality of my community. I wanted to help individual children grow into unique and wonderful adults because that is the responsibility of humanity, not because the telecom industry told me to.

But despite my frustration on this topic, I think it is time to become a little less frustrated and a great deal more proactive, to spend a little less energy feeling good or bad about why others are willing to value or are eager to undermine public education—and strive instead to help more and more people find value in public education as a common good. It may feel especially challenging to engage in this effort now, when many teachers feel devalued and mistrusted in big things, like districtwide curriculums and daily pacing guides, and small things, like telling someone at a dinner party, "I'm a teacher," and hearing, "Oh. You must really love kids" (translation: "Lucky you, you get to play around all day").

Our peers in other professions don't know how complex teaching is. When we say teaching is a craft, people sometimes misunderstand. It isn't a craft in the sense that we start with colorful materials and use them to create something decorative. It is a craft in that it requires craftsmanship—continued reflection, study, attention, and intention—to be done well. Incidentally, it is probably equally true that we don't know how complex *their* jobs are. The difference is we don't assume we can understand their work because we didn't spend thirteen of the first eighteen years of our life experiencing it.

I will confess, there have been times when I have judged and ignored noneducators who expressed oversimplified and unappreciative views of teaching. I've nodded and

[1] Credit must be given to Yong Zhao for suggesting that we may want to measure the quality of our education system by determining what percent of students can and choose to live somewhere other than their parents' basement as young adults.

forced a smile and quickly found a reason to walk away feeling arrogant and smug. As the profession experiences intensified scrutiny, many of our most intentional and creative teachers retreat, whether fearfully or smugly, behind their closed classroom door. Some of the best teachers make a concerted effort to keep their good practice a secret because it strays from the daily pacing guide.

It's time to stop subverting the political processes that shape and direct public education and open our classroom doors. It's time to learn about the nature of work in other professions, listen and try to understand the perspectives of people who don't understand our profession, and help everyone outside our classroom see the importance and complexity of our craft.

A Community of Doers

There are some schools around the country that have figured out that factory management isn't working. Success Academy charter schools are one example (http://jobs.successacademies.org/). While there may be some differing views on these schools, especially in the political context of New York City, there is a key idea they have identified and strive to exemplify in the experiences of both students and teachers in their schools that is relevant to understanding twenty-first-century nonfactory school. Rather than prescribing exactly what students and teachers do, they describe their schools like this:

> Visit any of our schools and you'll feel the energy as soon as you walk through the doors. Instead of defining limits, we challenge scholars to approach each day like investigators, explorers, and sleuths—making discoveries that enrich their knowledge of the world.
>
> In fact, we challenge parents, teachers, leaders, and staff members to do the same. The result is a community of doers with deeply held principles by which we strive to adhere. These core beliefs embody our ACTION values, which stand for:
>
> Agency—We take ownership and responsibility for all we do.
> Curiosity—We are fueled by wonder and always ask "what if?"
> Try and Try—We know that success takes elbow grease.
> Integrity—We are honest, open, and transparent.
> Others—We look out for each other with respect and support.
> No Shortcuts—Excellent learning takes time and effort.

Try to imagine schools full of doers. As we go forward doing the good work of converting beautiful old glass doorknobs into coat racks and inventing new kinds of spaces to match new purposes, we need to think of ourselves this way. We, teachers and school leaders, need to take a proactive stance and become communities of doers.

Now is the time for us to tap into our own creativity and inventiveness and embrace our role as sophisticated professionals who are curious, persistent, savvy, and strategic. As proactive teachers, we will cleverly adapt good things from our current practice and take prudent risks as we invent new and better ways of engaging students in learning. We will use familiar practices in unfamiliar ways or convert existing practice to fit new goals as we redesign and renovate the American schoolhouse. As we metaphorically tear down walls to create new spaces and replace outdated wiring with sophisticated lighting systems, we will also look for new and effective uses for old hardwood flooring, structural beams, and glass doorknobs. We will experiment and invent in responsible ways. We will capitalize on our diverse experiences and skills and help one another overcome the fears that might hold us back.

The American teaching community is diverse. There are teachers who are dedicated to offering opportunities to underserved kids, who have dedicated their adult lives to impassioned teaching in high-expectations schools, who have contributed to the strong gains in reading and math performance in high-poverty areas all around the country. They have changed our understanding of equity, and their work is essential if education is to do what it should for individuals and society.

There are young educators, digital natives, who themselves benefited from (and perhaps made mistakes) using MOOCs and Facebook. They bring an understanding about becoming an adult professional in the twenty-first century that can and should inform all of us.

Others recognize all of this as a newer version of a belief they have always held—that teaching the whole child is the only way to build whole adults. They bring a deep understanding of the various kinds of learning and how to tap into the unique talents, interests, and experiences of each student.

Each of these teachers brings different capacities to the effort. Each of them may also feel different risks.

We need to understand and acknowledge the genuine risk many educators feel about redesigning our schools. If we let members of the broader community into our classrooms, they may respond with the same low level of understanding and high level of scrutiny we've experienced before. If we take on competencies beyond basic academic skills, we might lose sight of the unfinished and essential work of helping all kids develop academic skills. We may feel we know how to do school only one way and can't start over. We have to work together to overcome our fears, mitigate these risks, and learn to implement change.

Although they have access to the world's collective knowledge on their smart phones, today's children need guidance to learn how to make decisions about public and private information, how to distinguish quality information from gossip, and how to make decisions that are good for them and their neighbors. The current way we do school is not going to get them there.