LEADERSHIFT 2020

REINVENTING OUR SCHOOLS FOR EXTRAORDINARY AND UNCERTAIN TIMES

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Brian's Dedication

This book is dedicated to my parents, Wendy and John, who taught me to behave, love, forgive, and appreciate the invaluable gift of education; to my family, who appreciate, tolerate and motivate me to persevere, despite the frustrating, disappointing and disheartening moments; and to my many colleagues and partners in education who have walked this extraordinary and uncertain path with me throughout the decades. Keep the faith…don't ever give up.

Glenn's Dedication

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Nicky's Dedication

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SECTION 6

The Attributes Of The Modern Learner

> Revolutions destroy the perfect and then they enable the impossible.
> Seth Godin

We hear comments all the time from politicians and industry representatives about the importance of individualism, autonomy, and initiative. We admire creativity, ingenuity, and resourcefulness. We praise the self-made individual, the independent thinker, the school dropouts who make good. We know that capitalizing on individual skills and differences is essential for successful adaptation to disruptive change. But in the same breath, education continues to cling to a curriculum from another century that's designed to standardize learning. It's a system that marginalizes and diminishes those who do not buy into the traditional ways of doing things.

What we have done is taken this Industrial Age mindset behind the design of the traditional classroom and traditional learning and carried it forward into the 21st century. The current Industrial Age model for teaching, learning, and assessment works well if what you need is 25% of students with skills and 75% who are unskilled and simply expected to follow instructions. The problem is that this is not the reality of today's world and workplace.

NEW SKILL SETS FOR MODERN TIMES

Our position is that we need to start concentrating on cultivating in all of our students the essential skills, knowledge, and habits of mind necessary to survive and thrive in the modern world. We must do this, and we must do this now. The gap between the learning that our students currently do, and what's required to survive in the modern world grows more extensive and more profound every day. To put it bluntly, if we continue down our current path, we will be educating both our youth and our nation into unemployment—or—underemployment.

Continuing to operate on educational assumptions that were developed more than 100 years ago is an absolute recipe for disaster for our students, our world, and our economy. Today, we have a system that churns out students who might be able to excel in standardized exams, but who are poorly equipped to take on the jobs and world of the future. As a result, unemployment and underemployment have become pervasive (Smith & Anderson, 2014).

Our students are graduating into the modern world equipped with skills that are targeted for a different time. Many of them are entering the 21st-century economy with 20th-century skills.

As David Warlick (2006) once stated, "No generation of students in history has been so thoroughly prepared for the 20th century as the current generation" (para. 16).

It has been over 10 years since Warlick (2006) offered this bold claim and, unfortunately, it remains to resonate.

E-RESOURCE 6:
The Future of Jobs Report
(World Economic Forum, 2018) http://bit.ly/wef_jobs2018

Consider these key findings highlighted in the World Economic Forum's (2018), "The Future of Jobs Report 2018," describing concerns of the growing trend of skills instability across the global workforce:

- **Growing skills instability:** Given the wave of new technologies and trends disrupting business models and the changing division of labour between workers and machines transforming current job profiles, the vast majority of employers surveyed for this report expect that, by 2022, the skills required to perform most jobs will have shifted significantly. Global average skills stability—the proportion of core skills required to perform a job that will remain the same—is expected to be about 58%, meaning an average shift of 42% in required workforce skills over the 2018–2022 period. (p. viii)
- **A reskilling imperative:** By 2022, no less than 54% of all employees will require significant re- and upskilling. Of these, about 35% are expected to require additional training of up to six months, nine percent will require reskilling lasting 6 to 12 months, while 10% will require additional skills training of more than a year. Skills continuing to grow in prominence by 2022 include analytical thinking and innovation as well as active learning and learning strategies. Sharply increasing importance of skills such as technology design and programming highlights the growing demand for various forms of technology competency identified by employers surveyed for this report. Proficiency in new technologies is only one part of the 2022 skills equation, however, as "human" skills such as creativity, originality and initiative, critical thinking, persuasion and negotiation will likewise retain or increase their value, as will attention to detail, resilience, flexibility and complex problem-solving. Emotional intelligence, leadership and social influence as well as service orientation also see an outsized increase in demand relative to their current prominence. (p. ix)

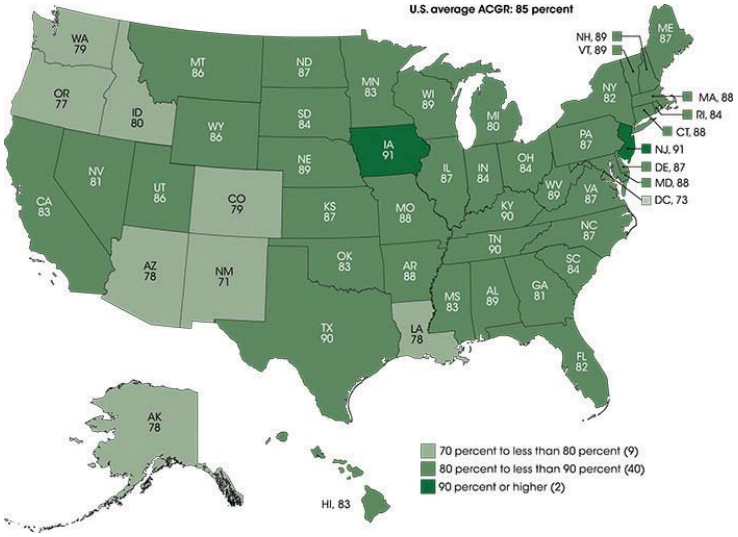
SHORT-LIFE VERSUS LONG-LIFE SKILLS

Historically, the focus of schools has primarily been on short-life skills. These are the skills related to the memorization of specific content or learning how to use discrete procedures. Today, we live in an educational world that's driven by content standards, learning objectives, curriculum, texts, and pacing guides. We have a worksheet culture—we have high-stakes, standardized tests, benchmark exams, and tests that drive instruction. All of these are

short-life skills. These are skills that quickly cease to be relevant, mainly when you live in an age of disruptive innovation and hyperinformation.

Today, in both life and the workplace, there's far more demand for long-life skills. Long-life skills are the modern learning skills that are valid now and will remain valid 50 years from now when the students we have today are retiring from their careers. Long-life skills have no expiration date. Long-life skills will be as useful 30 years from now as they are today.

We will more carefully examine modern learning skills in Sections 9 and 10 of this chapter.



(U.S. Department of Education, Office of Elementary and Secondary Education as cited in NCES, 2019, Fig. 1)

It's our observation that many students today have disengaged from school and have either dropped out physically or mentally. According to the National Center for Education Statistics (NCES, 2019), "in school year 2016–17, the adjusted cohort graduation rate (ACGR) for public high school students was 85%, the highest it has been since the rate was first measured in 2010–11. Asian/Pacific Islander students had the highest ACGR (91%), followed by White (89%), Hispanic (80%), Black (78%), and American Indian/Alaska Native (72%) students " (para. 1).

Although the numbers have improved slightly in the past 10 years, in the US and Canada, there are still places where 10, 20, 30, or as many as 50% of students drop out before they complete high school—and for some people, that's alright. Even if those aren't your kids

that are dropping out, it's not okay. If we ran a business and 10, 20, 30 or as many as 50% of our products were defective, we wouldn't stay in business very long.

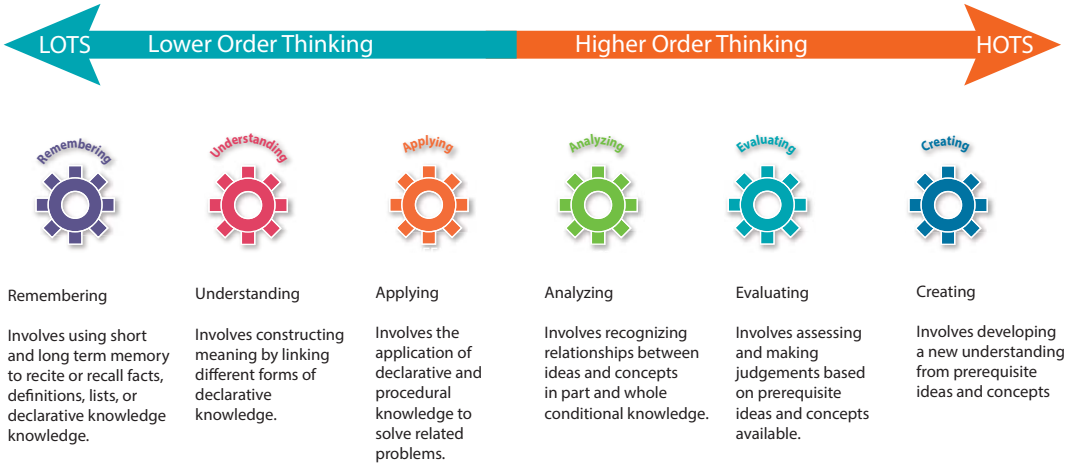
And let us be very clear—our students are not just dropping out of high school. High dropout rates also apply to the students we see as our successes—the ones who go on to enter universities. In fact, in some cases, dropout rates from post-secondary institutions are as bad, if not worse, than dropout rates from high schools. Nearly 20% of our first-time, full-time degree-seeking undergraduate students who enrolled in four-year degree-granting institutions in fall 2016, left school before completing their degrees. Even worse, nearly 40% of their counterparts at two-year degree-granting institutions left school before completing their degrees (NCES, 2019).

And, those who do earn their degrees are taking longer. According to NCES (2019), the six-year graduation rate (150% graduation rate) in 2016 was 60% for first-time, full-time undergraduate students who began their pursuit of a bachelor's degree at a four-year degree-granting institution in fall 2010. Less than half (41%) of these students received their degree within four years. What's wrong with this picture?

SECTION 9

Leading The Shift: What Are The New Basics?

> The skills that our students will need to thrive in our 21st century global economy are vastly different than that of the Industrial Age—an age for which our schools were built.
>
> Brian P. Chinni

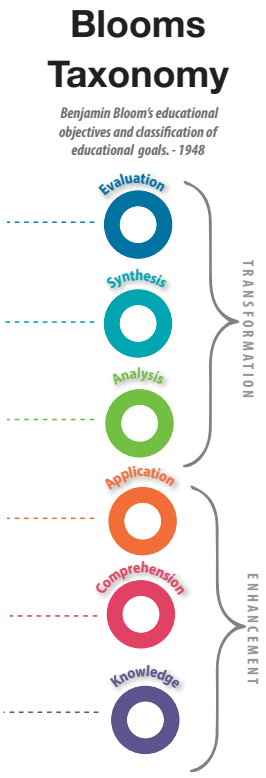


We often wonder about the talents we would have possessed had we been schooled differently. What do we mean by differently? Perhaps it's best to describe differently by, first, examining what we believe to be the essential competencies that we need to thrive in life and work in modern times. Helping students prepare for living, working, and learning in the contemporary world is the most significant challenge. A globalized economy, emerging technologies, a changing workforce, and the new digital lifestyle have created a sense of urgency for the need to develop the "new basics"—essential skills, knowledge, and habits of

mind required for all students to succeed. Collectively, these abilities have been described as "21st-century skills," "HOTS" (higher order thinking skills), the "21st-century fluencies," the "new basics," and "modern learning skills." For this resource, we will refer to them as modern learning skills.

The domains of learning are organized into the cognitive domain (knowledge), psychomotor domain (skills) and affective domain (attitudes). These categorizations are explained through the Taxonomy of Learning Domains developed by:

- Benjamin Bloom (Cognitive Domain) (1956)
- Lorin Anderson and David Krathwohl (Affective Domain) (2000)
- Anita Harrow (Psychomotor Domain) (1972)



WHAT ARE MODERN LEARNING SKILLS?

There are any number of definitions for modern learning. In this section, we attempt to summarize examples developed by organizations from around the world that are identified as essential skills for modern learning.

For example, the University of Melbourne's Assessment and Teaching of 21st Century Skills (AT21SC) consortium describes modern learning skills using the following categories:

- Ways of Thinking: creativity and innovation, critical thinking, problem solving, decision making, and learning to learn (metacognition)
- Ways of Working: communication and teamwork
- Tools for Working: general knowledge and information communication technology
- Living in the World: citizenship, life and career, and personal and social responsibility, including cultural awareness and competence (Saavedra, A. R., and Opfer, V. D., 2012).

E-RESOURCE 8:
The Nine I's of Modern Learning (Jukes et al., 2018)
http://bit.ly/sb21_9is

THE GLOBAL ACHIEVEMENT GAP

In their 2015 book, *Most Likely to Succeed*, authors Tony Wagner and Ted Dintersmith identified seven essential skills that students require to be adequately prepared for modern life, work, and citizenship. They were:

1. Critical thinking and problem-solving
2. Collaboration and leadership
3. Agility and adaptability
4. Initiative and entrepreneurialism
5. Effective oral and written communication
6. Accessing and analyzing information
7. Curiosity and imagination

THE ASIA SOCIETY

The Asia Society (http://asiasociety.org/), a global non-profit organization and a leading force in forging closer ties between Asia and the West through arts, education, policy, and business outreach, specifies global competence as the core capacity students need for the 21st century and defines it as "the capacity and disposition to understand and act on issues of global significance" (Asia Society, n.d.).

According to the Asia Society (n.d.), globally competent students do the following:

1. Investigate the world beyond their immediate environment.
2. Recognize perspectives: others' and their own.
3. Communicate ideas effectively with diverse audiences.
4. Take action to improve conditions.

E-VIDEO 7:
What is Global Competence? (Asia Society, n.d.)
http://bit.ly/asiasoc_globalcomp

These and other definitions of modern learning are cross-disciplinary and reflect the new skills needed to live in complex and ever-changing modern times. The challenge is that most curricula—and, therefore, classrooms—do not adequately address many of the skills identified above. Regardless of which of these skill sets mentioned above you prefer to embrace, they all typically comprise similar sorts of complex thinking, learning, and communication skills, all of which are much more challenging to teach and learn than the more popular traditional skill sets that emphasize memorization and rote learning. However we may choose to describe them, they are essential for modern learning.

The critical point to understand is that regardless of what definition you use to describe modern learning, the essential skills are not taught as separate subjects or in isolation from the curriculum. Learning works best when it's attached horizontally (learning connected to something that we're currently working on) as opposed to learning that's connected vertically (learning attached to something that we will potentially need or use in the future). Though both horizontal and vertical learning are essential, it's important to consciously understand which type of information is being introduced so that we can be realistic about the amount of retention that must take place.

Research has repeatedly shown that effective learners relate existing knowledge to new information. Architect and graphic designer Richard Saul Wurman called this "Velcro learning" (1989, p.132). He suggested that information without context, interest, and relevance was like using only one side of a piece of Velcro—it doesn't stick. However, when relevant connections are made between experience and new information, long-term learning sticks.

This doesn't prevent us from valuing or focusing on both types of information simultaneously, as it's essential to balance what we need to know now with what we may need to know in the future. As learners, we must understand that the effort required to retain horizontal versus vertical information demands a different level of focus and commitment.

SECTION 10

How Do We Have It All?

> Lead me, follow me, or get out of my way.
> General George Patton

How do we both address the short-term goals of preparing students for the tests while at the same time addressing the long-term goals of preparing them for life? How do we address the need for our students to learn the traditional content as well as the essential skills for modern learning? To thrive in a rapidly evolving, technology-mediated world, students must not only possess strong skills in areas such as language arts, mathematics, and science, but they must also be adept at skills such as critical thinking, problem-solving, persistence, collaboration, and curiosity. For this discussion, we will use the World Education Forum (WEF-USA) skills and categories to best capture what we believe to be the "new basics": the essential competencies for life and work in modern times.

In 2015, to uncover the skills that meet the needs of the marketplace, the World Economic Forum USA published their *New Vision for Education* report.

E-RESOURCE 9:
New Vision for Education: Unlocking the Potential of Technology
(World Economic Forum, 2015) http://bit.ly/wef_newvision2015

They first conducted a meta-analysis of research about modern learning skills in primary and secondary education and then distilled the research into 16 skills in three broad categories:

1. Foundational Literacies

   Foundational literacies represent how students apply core skills to everyday tasks. These skills serve as the base upon which students need to build more advanced and equally important competencies and character qualities. This category includes not only the globally assessed skills of literacy and numeracy, but also scientific literacy, information communication technology (ICT) literacy, financial literacy, and cultural and civic literacy. Acquisition of these skills has been the traditional focus of education around the world. Historically, being able to understand written texts and quantitative relationships was sufficient for entry into the workforce. Now, these skills represent just the starting point on the path towards mastering 21st-century skills.

2. Competencies

   Competencies describe how students approach complex challenges. For example, critical thinking is the ability to identify, analyze, and evaluate situations, ideas, and information to formulate responses to problems. Creativity is the ability to imagine and devise innovative new ways of addressing issues, answering questions, or expressing meaning through the application, synthesis, or repurposing of knowledge. Communication and collaboration involve working in coordination with others to convey information or tackle problems. Competencies such as these are essential to the 21st-century workforce, where being able to critically evaluate and communicate knowledge, as well as work well with a team, has become the norm.

3. Character Qualities

   Character qualities describe how students approach their changing environment. Amid rapidly changing markets, character qualities such as persistence and adaptability ensure greater resilience and success in the face of obstacles. Curiosity and initiative serve as starting points for discovering new concepts and ideas. Leadership and social and cultural awareness involve effective interactions with others in socially, ethically, and culturally appropriate ways. (World Economic Forum, 2015, p. 2-3).

Graphically, the sixteen 21st century skills in three broad categories are represented this way:

	Skill	Definition
Foundational literacies	Literacy	Ability to read, understand and use written language
	Numeracy	Ability to use numbers and other symbols to understand and express quantitative relationships
	Scientific literacy	Ability to use scientific knowledge and principles to understand one's environment and test hypotheses
	ICT literacy	Ability to use and create technology-based content, including finding and sharing information, answering questions, interacting with other people and computer programming
	Financial literacy	Ability to understand and apply conceptual and numerical aspects of finance in practice
	Cultural and civic literacy	Ability to understand, appreciate, analyse and apply knowledge of the humanities
Competencies	Critical thinking/ problem-solving	Ability to identify, analyse and evaluate situations, ideas and information to formulate responses and solutions
	Creativity	Ability to imagine and devise new, innovative ways of addressing problems, answering questions or expressing meaning through the application, synthesis or repurposing of knowledge
	Communication	Ability to listen to, understand, convey and contextualize information through verbal, nonverbal, visual and written means
	Collaboration	Ability to work in a team towards a common goal, including the ability to prevent and manage conflict
Character qualities	Curiosity	Ability and desire to ask questions and to demonstrate open-mindedness and inquisitiveness
	Initiative	Ability and desire to proactively undertake a new task or goal
	Persistence/ grit	Ability to sustain interest and effort and to persevere to accomplish a task or goal
	Adaptability	Ability to change plans, methods, opinions or goals in light of new information
	Leadership	Ability to effectively direct, guide and inspire others to accomplish a common goal
	Social and cultural awareness	Ability to interact with other people in a socially, culturally and ethically appropriate way

E-VIDEO 8:
What Most Schools Don't Teach
(jumboload, 2013) http://bit.ly/jumboload_22713

Regardless of whether you use the University of Melbourne's Assessment and Teaching of 21st Century Skills (AT21CS) Consortium's skills and categories, Tony Wagner's seven essential skills, the Asia Society's capacities and dispositions for global competence, the WEF-USA's skills and categories, or some other list, the reality is that much has changed in our world since the days of Horace Mann and the one-room schoolhouse. Having examined what we define as essential modern learning skills and why they are critical for our students, our next chapter will explore the attributes of exemplary modern learning organizations to ensure that each of our students leave school equipped with the aforementioned modern learning skills.

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