



**International Center for
Leadership in Education**

RIGOROUS LEARNING FOR ALL STUDENTS

INNOVATING FOR IMPACT

WHITEPAPER SERIES

Preparing Our Students for Their Futures: HOW We Change and Innovate Instruction, Part II

PAPER FIVE

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This is the fifth and final paper in our series on effective innovation, the kind of innovation that moves everyone in education—from administrators to students to the community—out of the twentieth-century paradigm of a focus on teaching to a focus on learning. Innovation that empowers every last person in the system. Innovation that helps us break free from the regulatory rigidity that has been holding us back from real change for decades.

In the first installment of this series, [*Innovation: The Key to the Nation's Most Rapidly Improving Schools*](#), I outlined nine interrelated areas that must evolve to make room for future-focused innovation in our districts and schools:



In the second installment of this series, [*Preparing Our Students for Their Futures: WHY Innovative Practices are Needed*](#), I explained why the need to innovate in our schools is so urgent. Technology is transforming our world and changing the career landscape. The businesses that are successful in the 21st century are those that let technology transform them. The people who thrive in these companies are lifelong learners—adaptable and capable of developing new skills when technology changes their job description. Similarly, schools must let technology transform them, so that they can mirror the environments that students will encounter as they set out to build self-sufficient, successful careers.

In the third installment, [*Preparing Our Students for Their Futures: WHAT Needs to Change for Innovative Instruction*](#), I detailed what needs to be innovated so that our schools become centers of future-focused learning: 1) instructional practices, 2) how we organize instruction, and 3) what we teach. What sets apart the nation's most rapidly improving schools is, relatively speaking, how little attention they give to determining what they teach. To them, how students learn and how they learn to apply information is far more important. These innovative schools ask themselves first which instructional practices will connect with today's digitally savvy students. They ask which instructional organization structures will best mirror the real, technology-driven, and rapidly changing working world. And only then do they move onto what students learn. Grooming sophisticated, lifelong learners who can take action with knowledge is what matters most to the nation's most innovative and rapidly improving schools.

In the fourth installment, [*HOW We Change and Innovate Instruction, Part I*](#), I discussed how to change. Changing requires a top to bottom review of your entire approach to instruction, starting with instructional practices and instructional organization.

I mentioned that we were going to follow the footsteps of the nation's most rapidly improving schools. This meant we were going to innovate our instructional practices first. Then we were going to innovate our instructional organization to fit our innovated practices. Only then do we move onto innovating what we teach.

By now, I'm sure you can see the power of leaving what we teach for last. In doing so, we are forced out of the old way of doing things. By reversing how we're used to approaching all things instruction, we have no choice but to change our mindsets from fixed to growth. And innovation by definition requires a growth mindset.

More to the point, if we start first with discussing the content we'll teach, we'll be starting from the old 20th-century model, where content was king. Today, teaching students how to *do* is king. How much can really change if content continues to be the only thing driving our decisions?

Now that we've broken our thinking out of the old 20th-century box, let's discuss how we can innovate content for 21st-century learning.

Start—and End—with Data

It's not enough to collect data. We must gather data that can help us implement changes in real-time. The highest performing schools know that summative data does nothing more than tell us what happened after the fact. Instead, they rely on regular and actionable formative data.

There are two types of actionable, formative assessments we at ICLE use often because their results are so clear and reveal specifically where change is needed.

WE™ Surveys: Last year, we administered WE™ Surveys to 540,000 students and their 33,000 teachers. Their purpose is to show how similarly or not students and teachers view classroom experiences. They give a snapshot view of how successfully educators are delivering rigorous and relevant learning. The surveys include statements that aim to understand viewpoints on how relevant the learning is. For example, aggregate data shows that 92 percent of teachers believe

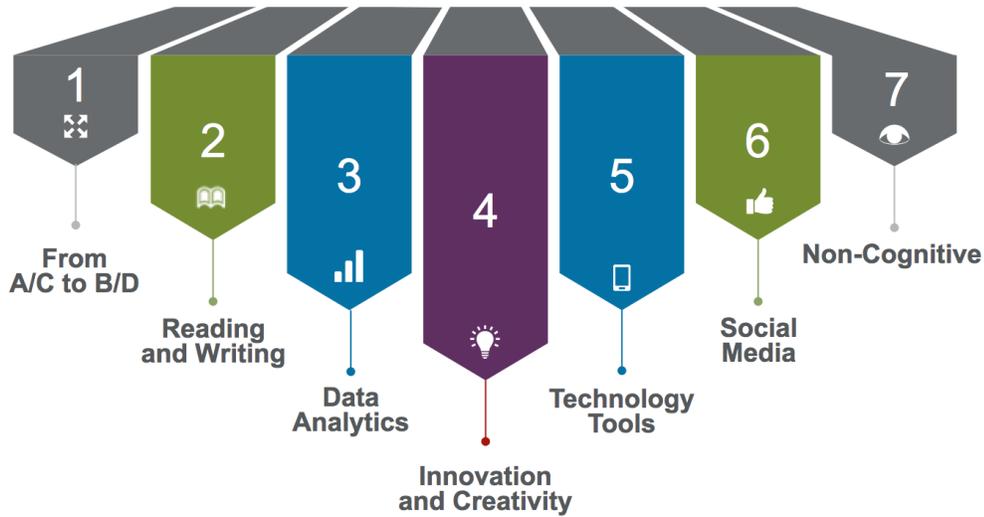
that “Students can apply what I am teaching to their everyday lives” while only 58 percent of students agree. When school-specific results are shared, they almost always stun educators. We return the survey results without judgment and simply suggest that educators have candid conversations with their students about any discrepancies. Doing so helps contribute to a culture of empowerment. Students feel empowered because their views are respected and heard. Educators feel empowered because they have evidence about where they can improve and can then create strategic plans to that end—before the surveys are administered a second time later in the school year.

Instructional Practices

Assessment: This comprehensive review, based on the Rigor/Relevance Framework®, focuses on determining levels of rigor, relevance, and learner engagement. In this process, observers spend time in classrooms watching primarily the students, not the teacher. If students are passive and the energy in the room is low, instruction is likely in Quadrants A/C. If students are active and the energy is high, instruction is likely in Quadrants B/D. The verbs used in the observation synopsis usually paint a clear picture, and teachers are provided with formative data that can inform needed instructional changes.

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Seven Interrelated Fundamental Shifts



Find relevant and actionable assessments that work for your school. Start with data to drive strategic change.

Teaching: Seven Interrelated Shifts

It's 2017. Most of the students in your classrooms have lived their entire lives in the 21st century. Let that soak in for a bit. They know only technology, only the Internet, only mobile devices. They simply are not learning in the same world in which we learned. And they simply will not be going to work in the world we first went to work in. Can teaching what we've always taught possibly still make sense?

What we teach needs a 21st-century update. If we stand any chance of preparing our students for successful careers in their futures, what we teach must shift in seven interrelated ways.

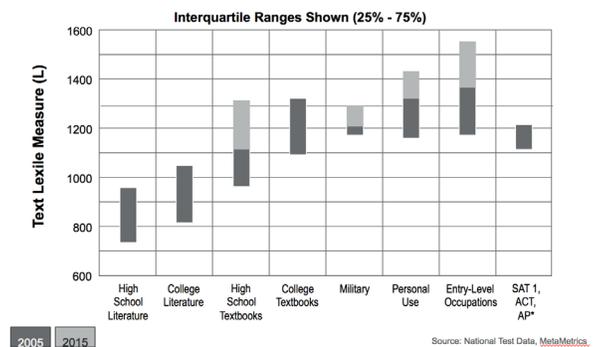
1. *From Quadrants A/D to Quadrants B/D.*

Hopefully why this shift is a non-negotiable is more than clear. Choose content and subjects that lend themselves to application, in both real-world predictable and unpredictable situations, so that students understand that what they're learning matters to their futures.

2. *Toward college AND career ready literacy.*

In 2015, the Successful Practices Network—a not-for-profit research organization that I chair—conducted a study to determine how the literacy requirements for 11th and 12th grade high school students compare to the text demands of a typical entry-level employee. We compared the results of that study to a similar study we had done ten years prior. In both studies, we used Lexile® Measures to identify average literacy skill ranges in various settings. In the following chart, the dark gray bars represent the 2005 data, and the light gray bars represent the 2015 data.

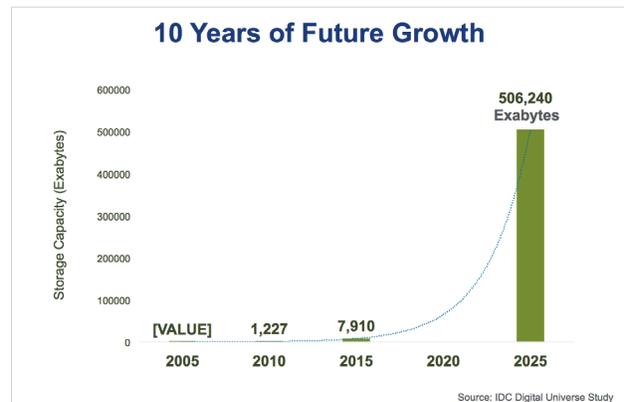
Reading Study Summary



What these two studies show is that a) the reading requirements for the military, entry-level work, and personal use are more rigorous than we are preparing our students for; and b) the gap between what our students need to be able to read in the workplace, military, and as citizens and what they're learning in our schools is growing at an alarming rate. The research found that the skills in students' post-graduation areas of responsibility have a greater focus on technical reading and writing than our schools are teaching. In large part, this disconnect is because our literacy lessons remain pinned to traditional English Language Arts curricula, which rely heavily on fiction. How often do we need to read fiction for our jobs these days?

Reading and writing remain **essential** to future-focused learning. Yet in the future, students will work in environments that rely on technical literacy skills. For students to gain these skills and achieve them at higher levels, literacy curricula must extend to include nonfiction and technical materials. In other words, it must be both college AND career ready. If we continue to emphasize literary works of fiction, we will continue to teach literacy as though we're teaching students to read only in school. For literacy also to be career ready, *all teachers must become literacy teachers.*

3. **Toward data analytics.** Reading comprehension, as we know, is as important as it ever was. As part of career-ready literacy, it must also expand to include data comprehension. Have you heard of a terabyte? It's roughly one trillion bytes of data. Big data has outgrown the word terabyte. Technology has made the collection and processing of data so simple that we're now talking about its storage in exabytes. Take a look at the following chart, which depicts the expected demand for data storage.



Data on this scale will not be consumable through text. It will be only be consumable through tables, graphs, and charts, and today's students are going to have to know how to read these depictions of data. To be able to digest complex data, students must learn how to view them both like a microscope and a telescope: they must be able to examine smaller details than are immediately apparent, as well as see things in large scale and determine connections, patterns, and correlations in data. The skills needed for big data analytics are interdisciplinary in nature. Therefore, the organization of your instructional program must be designed to have students find information and use analysis skills that are in multiple disciplines at once.

4. **Toward innovation and creativity.** Careers are no longer linear and obvious, and job skills are no longer linear and clear. In the same way that technology is forcing companies to be more flexible, adaptable, and entrepreneurial (no matter their size or age), people too must be more flexible, adaptable, and entrepreneurially minded (no matter their age) if they hope to remain valuable to employers. Creative thinking and an ability to innovate amid rapid change are ever more the skills valued in the workplace. They are also ever more the skills needed for individuals to stay afloat over long careers in a technology-driven world.

Test obsession has, in many ways, had the unfortunate effect of squashing creative and innovative thinking—for both educators and students alike. To help our students hone creativity, we have to infuse creativity back into our instruction. Remember: the most innovative schools boldly put tests and standards in their rightful place. Instead, students' successful futures take top billing. This means they cannot teach to the test. They must teach to 21st-century skills, which are built on creative and innovative thinking and doing.

5. ***Toward more technology.*** Let's face it; our students are better with most technologies than we are. Yet strategic technology use in our classrooms is not an option. Letting your discomfort with technology drive your choices around technologies in your classroom is putting your needs first.

Let the students teach you the basics on how to use technological devices. Then you can teach them the consequences of using that technology and how to use it smartly and shrewdly. Which brings us to this next point.

6. ***Toward cautious and smart social media and online use.*** In the late 1970s, I was the new kid on the block in the New York State Department of Education. So I was given the task of discussing with educators how to teach drug and sex education in schools so that we could craft school policy. We're so used to drug and sex ed now that this doesn't seem like a big deal. But at the time, it was like putting a grenade in my young, green hands.

It's my belief that how to teach social media and online use is today's drug and sex ed issue. It's tough, messy, and explosive, just as drug and sex ed were 40 years ago. Its exclusion from Common Core State Standards does not mean we can continue to ignore it.

A while back, I was trying to explain to my granddaughter what a digital footprint is. I explained that what we post and say online is permanent. Many people think that if we delete something from our social media accounts, it's gone forever. But there is software capable of finding deleted posts buried in the depths of the Internet. Companies and colleges use these technologies to vet candidates and applicants. And, I explained to my granddaughter, what you do online can hurt and follow you. She astutely pointed out that the term "digital tattoo" seems like a better fit.

If our job is to prepare students for successful futures, we have no choice but to teach smart and safe social media and online use. We must explain to them its permanence, its pitfalls, and all its risks, not just to their college and professional careers, but also to their safety. We need to teach students to be savvy, judicious consumers of the information they find on social media and online and how to vet sources. We need to teach them to be wary of online predators. And please teach them how vital it is to balance face-to-face interaction with digital interaction so that their non-cognitive skills remain practiced and sharp—and their personal relationships can be enriching.

7. ***Toward non-cognitive skills.*** Earlier, we went deep into why schools must change. At core, it is because technology has fundamentally changed how we work and the skills necessary for success in today's careers. You might recall that even those tech companies doing all the disrupting get disrupted themselves. Uber disrupted the taxi and limousine industry. Yet, self-driving car technologies are on the verge of disrupting Uber.

If the tech companies are always shifting, so too will all companies. Today's employees must be generalists who can adapt and evolve again and again. They must understand the micro and macro environments of their company and be capable of working with people across

functions, and often across geographies. Surviving in this world requires non-cognitive skills. They have to be part of what we teach.

At ICLE, we like to use what we call the 12 Guiding Principles:

1. Responsibility
2. Contemplation
3. Initiative
4. Perseverance
5. Optimism
6. Courage
7. Respect
8. Compassion
9. Adaptability
10. Honesty
11. Trustworthiness
12. Loyalty.

These are a suggestion. Discuss with your teams the non-cognitive skills that feel important to your 21st-century curriculum goals, and then talk about how you can weave them into instruction wherever and whenever possible.

Be the Difference

We've covered a lot of ground in this Innovating for Impact paper. When we ask our teams to innovate, we are asking a lot of them. If we want them to be successful—and of course we do—leadership has to support them at every turn. This includes providing professional coaching and training where needed—with a caveat: it is not enough simply to hire coaches or provide some training courses and call it a day. Just as it's not enough to make some instructional changes. Or bring in some iPads. Or decide you will organize instruction as academies.

Start with the end in mind. If you want your teachers to accept the call to innovate, they must first know **why** changes are needed. Then they must understand **what** needs to change. Then they must understand **how** to change.

If you want them to be the change, that's where purposeful coaching and training, specifically chosen for alignment to your school's goals, can have a real impact.

Schools are not failing. The world is changing around them—and fast—so schools must adapt.

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