



District
Management
Group

SPOTLIGHT

Innovating with Impact

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To implement a lasting innovation, leadership must protect, support, and nurture the initiative throughout the adoption cycle.

Too often, districts take a solution-centered approach: districts are drawn to a program or an innovation as a potential solution to a growing need or challenge.

does not view efforts to enhance processes and productivity as an attempt to “replace” the teacher, but rather as an effort to help teachers and districts complete tedious tasks more quickly and efficiently. These enhancements can help free up time for higher-value activities that have a greater impact on student learning. Innovations in these areas perhaps lack the appeal of iPads in the classroom and the latest learning apps, but these types of innovation can yield tremendous efficiencies, which ultimately means freeing up more time and money to direct toward serving students.

- **Accessibility:** Technology can help to break the boundaries of time and distance to enable learning anytime and anywhere. A rural high school student can now digitally visit a college campus thousands of miles away and imagine what life would be like there. The course catalog no longer needs to limit a future mathematician from pursuing classes in multivariable calculus. Students who are dealing with serious illnesses or pursuing an acting career can keep up with school. Technology can thus provide access and expand horizons. This type of technology innovation is already fully underway in higher education with organizations like Coursera boasting 23 million students learning online.⁸

Because of the tremendous potential of education technology to provide personalization, increase productivity, and enable accessibility, there is much energy and investment in education technology. In fact, investments in education technology tripled between 2011 and 2015 to \$4.5 billion (*Exhibit 1*).⁹

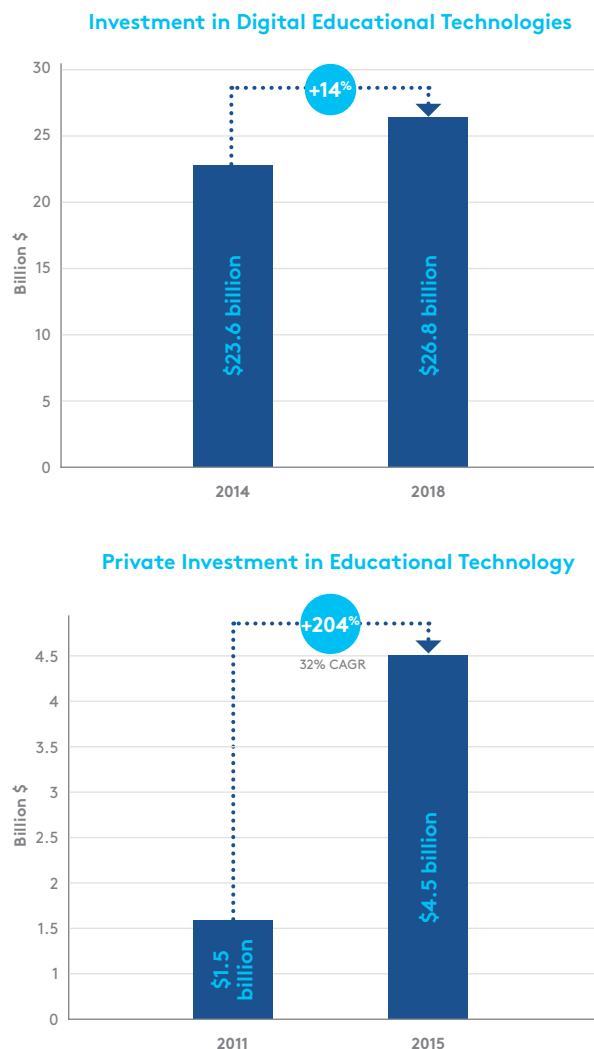
Why is innovation so hard ... especially in schools?

While the influx of dollars into education technology has been significant and the many benefits of innovation

are appealing, there are three broad challenges that make innovation particularly difficult to implement and sustain in the sphere of public education.

- **Past success:** Ironically, past success can be one of the most significant obstacles to innovation. Despite the dramatically changing environment and the imperative for change, it is easy to think that what has worked in the past can work in the future. This tendency for people to rest on past laurels is true across sectors and industries. One only need look at the automotive industry in the 1980s for an example: Detroit believed that despite the fuel crisis, they could continue to build large, gas-guzzling bulky sedans. Smaller Japanese imports began offering far better value, and the rest is history.

Exhibit 1 INVESTMENT IN EDUCATIONAL TECHNOLOGY



Source: Deloitte Review: Digital education 2.0. Boston Consulting Group: Where Is Investment Flowing in Education Technology?

In the public education sector, the story is a bit more complicated. Since the first National Assessment of Educational Progress (NAEP) exam was administered, the U.S. public education system has made substantial progress. Between 1990 and 2015, NAEP grade 4 math scores tripled and grade 8 math scores more than doubled.¹⁰ While overall achievement is still far below where policy makers and many educators want it to be and the achievement gap between white students and students of color has not substantially closed, there is no denying that schools have made a lot of progress. The problem is that students in other countries are making even faster progress and U.S. students are falling behind on standardized tests. But, past records of achievement and engrained ways of doing things can act as sizeable obstacles to trying something new. The incentives in the sector are not aligned to encourage innovative behavior; there is a much greater penalty for failure than there are rewards for success.

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- **Strong sense of identity:** Another impediment to innovating in schools and classrooms is educators' strong sense of identity. Harvard Business School Professor Michael Tushman, who researches leadership and change, cites a strong identity as one of the major reasons successful companies fail to innovate.¹¹ As an example, consider the advent of the mobile phone in the 1980s. The phone industry had long been dominated by AT&T, which had some of the country's brightest and best engineers, but whose identity was 100% steeped in fixed land-line telephones. When AT&T first heard about the mobile phone, its engineers declared that the mobile telephone would go the way of the ham radio; after all, early versions weighed more than 10 pounds, had horrible voice quality, and frequently dropped calls. AT&T never seriously invested time and resources into this emerging technology.

Today we know how important the mobile phone has become for people around the world. With this example in mind, we must consider how teachers may view their own sense of worth and identity. For a very long time, the world has viewed teachers as the fount of knowledge, the "sage on the stage," and has valued them for their strong content knowledge. But now, with virtually the entire world's knowledge available with a few clicks of the mouse, what should the teacher's role be? How willing are teachers to embrace this brave new world and let go of their identity as the provider of knowledge? Indeed, the role of teacher could transform to something of even higher value, but it is a big transition.

- **Implementation challenges:** Schools and districts have myriad incentives against innovating. Educators often feel uneasy about trying something new on children without a lot of research. There are also significant union issues to navigate. Given this complexity, it is important that district leaders put a great deal of thought and effort into planning for implementation.

DMGroup's Innovation Implementation Framework

If public school districts are to meet mounting challenges with limited resources, innovation is necessary. To help districts capitalize on the benefits of innovation, DMGroup has designed a framework to help guide districts in implementing innovation and addressing the challenges that accompany bold, important change (adapted from "Leading and Managing Change" by Ryan Raffaelli)¹² (*Exhibit 2*).

Set the Stage

At the outset, a district will need to wrestle with some fundamental questions about the implementation effort: What is this innovation meant to achieve? What are the infrastructure issues we need to address? These questions are essential to answer early on, as they will shape the implementation process.

Defining the Innovation: Taking a Problem-centric Approach and Setting an Outcomes-based Measure of Success

The very first step in implementation is to adopt a problem-centric approach. Too often, districts take a solution-centered approach: districts are drawn to a program or an innovation as a potential solution to a growing need or challenge. Enamored with the solution,

the district often does not sufficiently define the goals of the innovation or clearly identify the root causes of the challenge. After the “innovation” is applied, there is surprise and disappointment when it fails to deliver the anticipated results.

A problem-centric approach demands that the district begin by focusing on the problem. The problem needs to be analyzed and the root cause identified correctly. Consider the district that wanted to implement an innovative approach to credit recovery. The district decided to offer self-directed, online learning to all students who would be lacking the necessary credits to graduate on time. While this seemed to be an exciting and innovative solution, it failed to significantly raise graduation rates, with only 35% of participants attaining the necessary credits to graduate. Why? The district had the end goal in mind—to raise graduation rates—but it failed to clearly diagnose the root cause of the problem. The innovation was helpful for students who were employed while attending school, students who felt school was too large and impersonal, and students who were victims of bullying, but this innovation failed to address the issues of most of the students who were short of credits for graduation (e.g., students who had little interest in school, students with limited attention, and students with deep remedial needs). This seemingly exciting innovation failed to deliver significant results because the problem had not been clearly diagnosed, and thus the solution was not addressing the key underlying problems.

Districts also need to set clear outcome-based definitions of success for the innovation being implemented.

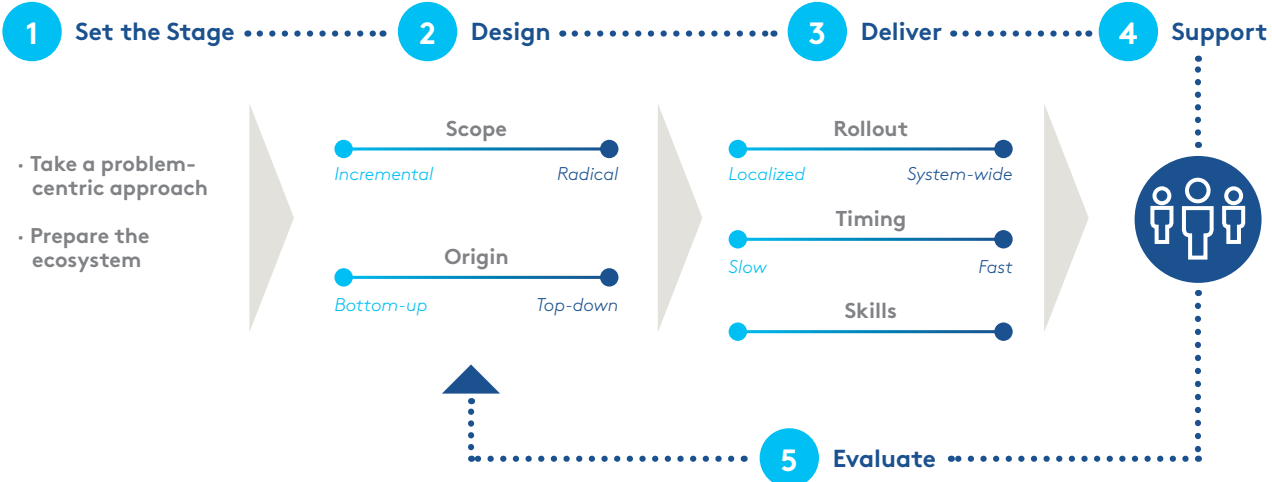
Consider again the implementation of a credit recovery program. In one district, the definition of success is based on a process input: “Students will access online content for 45 minutes every day.” In another district, the success is specific and outcome-centric: “70% of students will attain the necessary credits to graduate.” Both districts confirm that students used computers every day for 45 minutes. And, in both districts, outcomes showed that 35% of participating students attained the necessary credits to graduate. In the district where input metrics defined success, the goal was met and the initiative was deemed successful. In the district where outcomes defined success, inputs were tracked to measure the fidelity of implementation, but outcomes showed that the initiative did not meet the definition of success. An innovation’s success should be based on its ability to improve outcomes.

Preparing the Ecosystem

As a district prepares to implement an innovation, it also needs to be very proactive in developing the surrounding ecosystem to support the innovation. Based on DMGroup’s work with districts, we have identified three factors that are frequently overlooked but are essential to successful implementation.

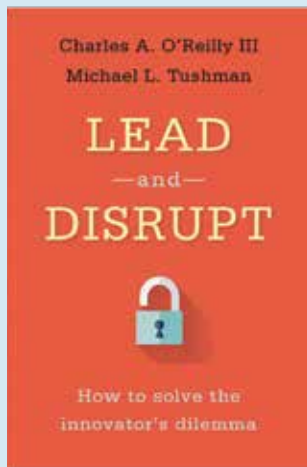
- **Schedules:** Many districts are looking to move beyond the traditional school day and typical course offerings. One district that wanted to expand foreign language opportunities beyond Spanish purchased an online Mandarin language course. Since the program was online, this innovation eliminated the need for students and teachers to be in the same location at the same time.

Exhibit 2 DMGROUP'S INNOVATION IMPLEMENTATION FRAMEWORK



Source: Adapted from Ryan Raffaelli, “Leading and Managing Change,” Harvard Business School.

Building an Ambidextrous Organization to Foster Innovation



What became of Blockbuster, Kodak, and Lehman Brothers? Was their demise inevitable? Are well-known companies such as these incapable of innovating and prevailing? By contrast, how has Ball Corporation, long known for its canning jars, managed to prevail?

Charles O'Reilly and Michael L. Tushman acknowledge in their book *Lead and Disrupt: How to Solve the Innovator's Dilemma*¹ that sustaining a successful organization is almost antithetical to innovation. The authors conclude that to survive and thrive, one must develop an *ambidextrous* organization, one that can both look to *exploit*—focusing on incremental innovation and continuous improvements to existing capabilities—while also gazing forward to *explore*—experimenting with new opportunities that fundamentally change some aspect of their business.

Most successful enterprises are adept at “exploiting” or refining their current offerings, but they falter when it comes to pioneering radically new products and services. Therefore, an arm of the business must be created to “explore” or actively pursue innovation; this unit must be initially provided sufficient separation from the existing businesses and must have clear support from senior leadership. Eventually, the innovations developed by this unit can be incorporated into the existing business to help the company as a whole sustain its success and thrive.

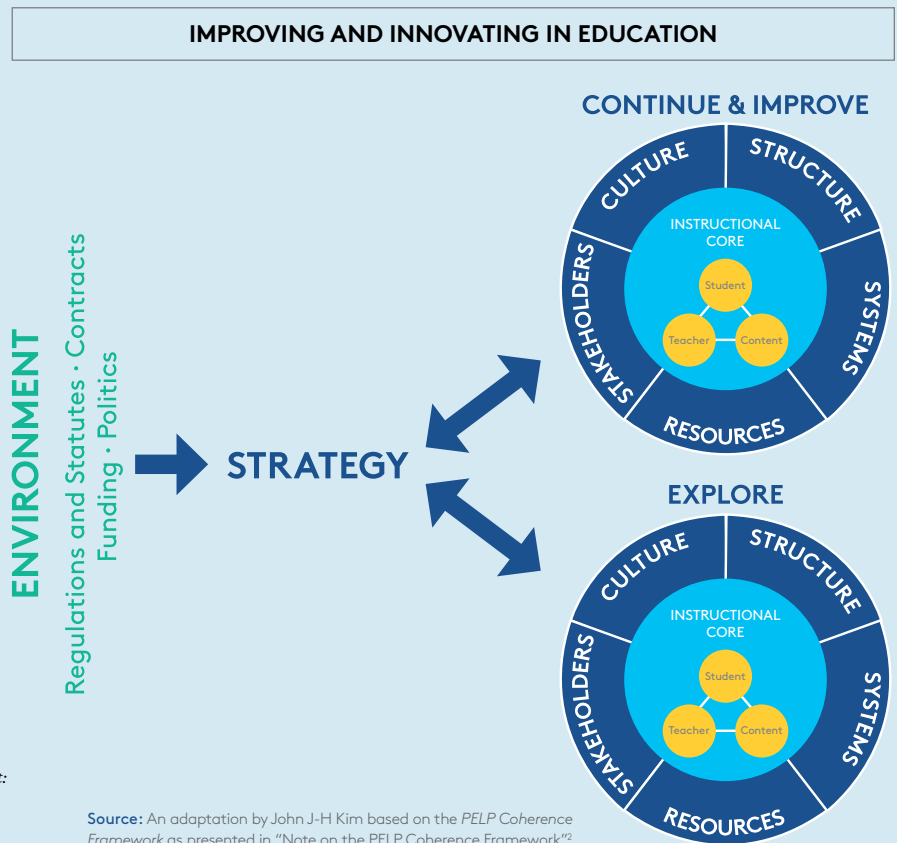
For school districts, this idea of ambidexterity poses difficult but exciting questions. How can a district focus on continuing to make everyday improvements and simultaneously invest in exploring innovative ideas?

In their book, O'Reilly and Tushman identify four structural elements common to successful ambidextrous organizations:

- A compelling strategic intent justifying the need for both exploitation and exploration
- Senior management’s commitment to protect exploratory efforts
- Sufficient separation between the exploitative and exploratory businesses while still preserving access to the existing assets and capabilities
- A common identity that allows both sides to see they are on the same team

One of the most important lessons is that ambidextrous organizations need ambidextrous senior teams and managers—leaders who can understand and be sensitive to the needs of very different kinds of businesses. A company’s senior team must be committed to operating ambidextrously even if its members aren’t ambidextrous themselves. Resistance at the top levels of an organization can’t be tolerated. O'Reilly and Tushman explain that a clear and compelling vision, relentlessly communicated by the senior leadership team, is crucial in building ambidexterity. These aspirations provide an overarching goal that permits exploitation and exploration to coexist.

At DMGroup, we encourage district leaders to embrace and foster innovation and to consider ambidexterity as a way to position their districts to explore and thrive.



NOTES

¹ Charles A. O'Reilly and Michael Tushman, *Lead and Disrupt: How to Solve the Innovator's Dilemma* (Stanford: Stanford Business Books, 2016).
² Stacy Childress, Richard Elmore, Allen S. Grossman, and Caroline King, “Note on the PELP Coherence Framework,” Public Education Leadership Project at Harvard University, June 8, 2011.
³ O'Reilly and Tushman, *Lead and Disrupt*.

Source: An adaptation by John J-H Kim based on the *PELP Coherence Framework* as presented in “Note on the PELP Coherence Framework”² by Stacy Childress, Richard Elmore, Allen Grossman, and Caroline King, and the ambidextrous organization as presented in *Lead and Disrupt*³ by Charles O'Reilly and Michael Tushman.

If public education is to meet its mission in this environment rife with challenges, bold leadership that embraces change is required.

However, when the program was implemented, it was scheduled in the same way as any other class, requiring a certified teacher to be on duty, a classroom location, and a schedule of instruction identical to that of other foreign language classes. Districts should consider how schedules can help or hurt the way innovation or technology is applied.

- **Policies:** As districts consider implementing a new program such as online Mandarin, existing policies can pose obstacles. Often, credit-earning rules stipulate that no credits are awarded unless the course is taken at school. And graduation requirements may not recognize online courses as satisfactory completion of the curriculum. Teacher workload rules may be an obstacle if online courses require a teacher of record or if collective bargaining agreements limit a teacher's workload based on teacher of record.
- **Infrastructure:** Often a district may have bold plans for innovating to aid student learning, but district infrastructure gets in the way. Districts should be mindful of issues such as technical support, hardware incompatibility, security system restrictions, lack of adequate bandwidth, or the potential need to reimagine physical spaces to support the desired learning environment.

Implementation Design

As a second step in the innovation process, a district needs to design the change to fit what the district seeks to accomplish. Designing innovation requires a district to address some key questions: What is the scope of innovation? What is the origin of innovation?

- **Scope:** When a district is considering the scope of innovation, it can think about scope as being on the spectrum of incremental to radical.

An *incremental change* is intended to make small adjustments to the existing organizational

systems, processes, and routines. These types of changes can be meaningful and very effective, but technically would not fall under our definition of "innovation in education."

On the other end of the spectrum, *radical innovation* is intended to affect nearly every aspect of the organization. DMGroup encourages all types of change that will improve outcomes, but encourages districts to think boldly and consider how innovations on the more radical end of the spectrum might be undertaken to effect transformative change.

- **Origin:** District leaders should reflect on where the idea for innovation originated within the district—from district leadership or from teachers and staff. It is unlikely in school districts that an innovation will be purely top-down or bottom-up, but districts need to give careful consideration to this parameter.

Top-down and bottom-up change each have strengths and weaknesses. In top-down change, ideas from the district leadership team disseminate to the school and classroom level. Top-down change often provides greater certainty and control, but can stifle innovation or buy-in from those below. For top-down driven change, it is important to build support from teachers and staff; allowing participants to opt in can provide time for support to build. In bottom-up change, ideas emerge from within the organization, such as from teachers or staff, and flow back up to district leadership. Bottom-up change can lead to greater diversity of ideas because teachers and principals are close to students and have a keen understanding of their challenges. The knowledge that the idea was

initiated from the bottom up can greatly increase buy-in and facilitate broader adoption across the district. While the bottom-up approach has many benefits, it can be harder to coordinate and implement reliably across the organization. In this case, district leaders must remember that as leaders they must help champion and shepherd this change with support from the top if it is truly to be successful.

Implementation Delivery

With an understanding of the design, the district may turn to three key questions to determine delivery: Where should the innovation be rolled out? What should be the rollout's timing? What skills do people in the district need to support the innovation?

- **Rollout:** When choosing where to introduce an innovation, districts can think about the spectrum from localized to system-wide.

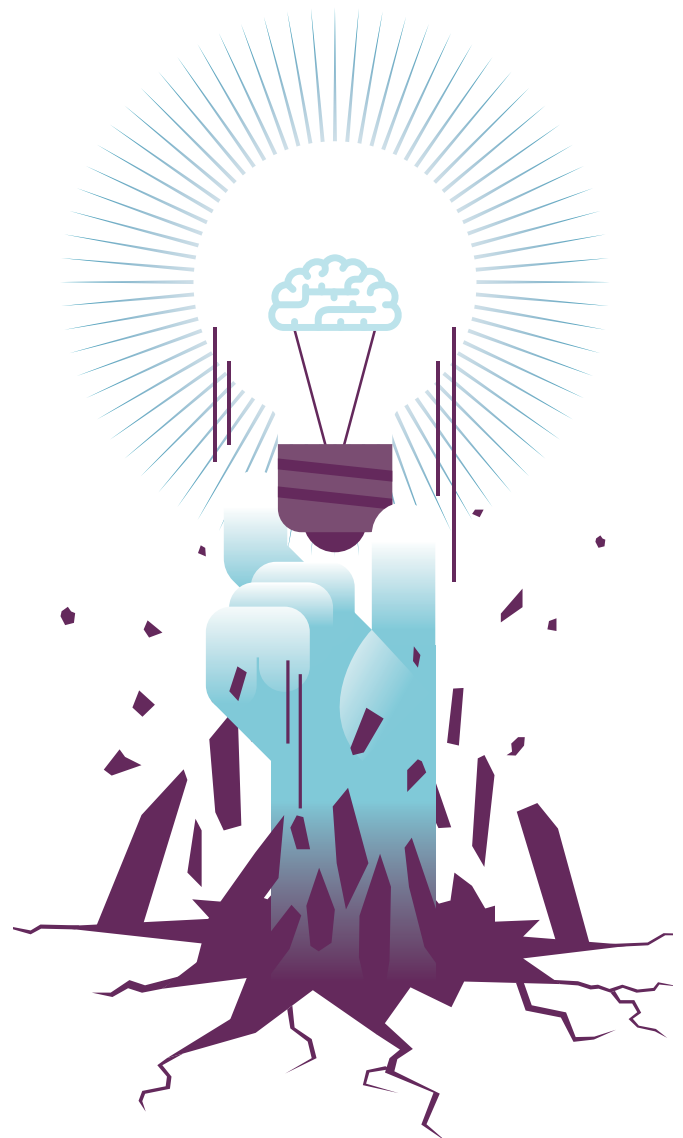
In a localized rollout, the innovation initially may be introduced only to one classroom, one school, or a certain population of students. A localized rollout provides the district with the ability to pilot, test, and refine the innovation before transferring it elsewhere. For districts looking to implement a significant technology, a localized rollout may allow infrastructure kinks to be worked out before implementing to a wider audience. It is important to ensure that the localized rollout is “protected” in a manner that will allow for sufficient experimentation and even small failures.

In a system-wide rollout, change is rolled out across multiple parts of the district simultaneously. If a district leader is trying a bold innovation that needs to occur immediately, a system-wide rollout may be most effective. We have seen this approach be effective in particular instances: (1) when a leader is expecting significant political pushback and believes a phased rollout or pilot would likely result in cancellation of the project, a rapid system-wide rollout is the only way to ensure that the program gets implemented; or (2) when a leader is attempting to get ahead of changing state legislation, such as in the implementation of a teacher merit pay system. Such wide-reaching change requires careful planning and coordination across the district.

- **Timing:** A district can consider whether to move quickly or slowly. With a slow implementation, the innovation is implemented over an extended

period or may go on indefinitely. Given the many complexities of significant change, a slower implementation allows the district to test and refine and iterate. In a fast implementation, change is completed more quickly, and full implementation is completed within a finite period. DMGroup's experience is that if the innovation arose from the bottom up, implementation timing can be rapid. For example, in several districts, teachers began using Newsela, a technology application that provides news and nonfiction articles at different levels of complexity.¹³ Because teachers initially led the adoption, rolling out the tool district-wide was a relatively straightforward process.

- **Skills:** Districts also need to be mindful that the implementation of innovation is a human-led endeavor and requires the effective coordination of departments, skills, and talents. Districts need to be proactive in supporting the leadership



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skills of principals, and focus on the instruction of classroom teachers and the inclusion and accommodation skills for special education teachers. Additionally, districts should recognize that in the case of technology-driven innovation, much will be required of technologists and other central office personnel as they manage vendors, IT, accountability, and assessment. The district will need to proactively include continuous skill-building training for all staff involved in the rollout.

In summary, if the change is localized and slow, more opportunities for piloting and experimentation will exist. Under this approach, the leader can test ideas in a targeted fashion, gather data and feedback from members, and then adjust before implementing the change across the district over time. If the change is system-wide and fast, change is implemented rapidly and simultaneously throughout the organization and will have an immediate

impact on the district's core. In this approach, the district sacrifices some ability to learn from past successes or failures before implementing the change more broadly.

Implementation Support

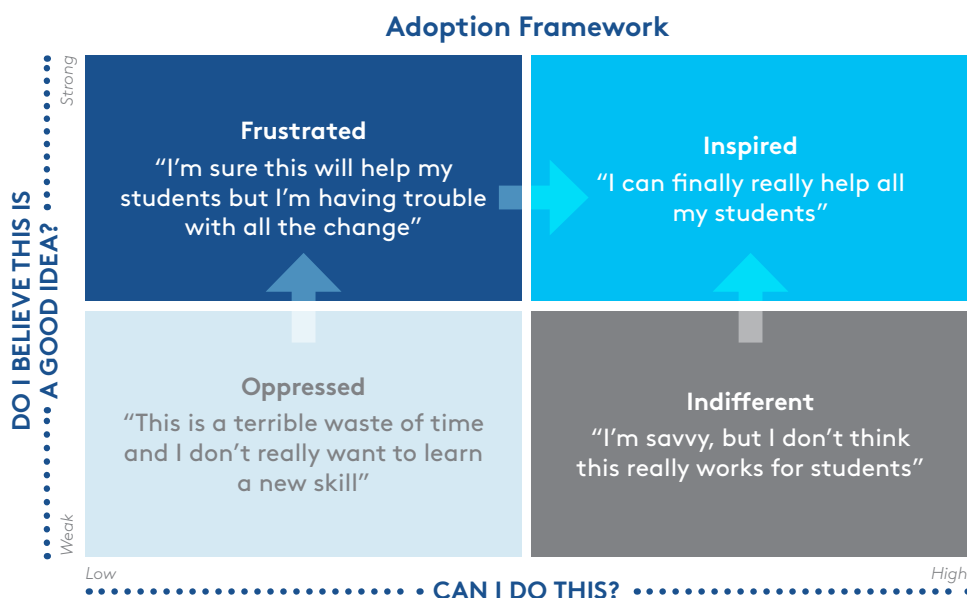
As a district is considering delivering the innovation, it must focus on facilitating buy-in to ensure the innovation lasts. Often, change can be perceived as a challenge to the identity of leaders and staff. Consider how an innovation like online learning is often framed: "Learning can happen anywhere and anytime" or "Students will be more engaged" are statements that are frequently heard. Such statements can lead hardworking teachers to believe that the district sees them as replaceable, that their work is being denigrated, or that there's something wrong with the way they're instructing and engaging students. This resistance is especially true in instances where the change is more top-down.

To address this perception, districts should have a clear understanding of staff responses to two central questions of identity (adapted from "Global Business Speaks English" by Tsedal Neeley):¹⁴

1. Do staff believe the innovation is a good idea?
2. Do staff believe they can accomplish what is being asked of them?

With these two questions in mind, the district can describe staff as fitting one of four categories based on their response to the proposed change (*Exhibit 3*):

Exhibit 3 GUIDING STAKEHOLDERS THROUGH THE ADOPTION FRAMEWORK TO LEAD THEM TO BE INSPIRED



Source: Adapted from Tsedal Neeley, "Global Business Speaks English: Why You Need a Language Strategy Now," *Harvard Business Review*.

- **Inspired:** Staff who believe the idea is good and that they can implement it.
- **Indifferent:** Staff who don't believe the idea is good, but do believe they can implement it.
- **Frustrated:** Staff who do believe the idea is good, but don't believe they can implement it.
- **Oppressed:** Staff who neither believe the idea is good nor that they can implement it.

Ideally, staff will feel inspired by the change and feel that the innovation will enable them to help their students. However, on the opposite end of the spectrum, there will be



staff who feel oppressed, doubting the idea is good and not believing that they can accomplish the innovation's goals.

Generating buy-in requires capable, empowered, and committed leadership. However, the right leaders aren't always selected to implement the innovation. As an example, central office leaders may be charged with an innovation that they are unfamiliar with, but that was selected based on its title. Similarly, principals may be asked to implement a plan they do not support or even understand. This situation can be particularly problematic for principals tasked with turning around struggling schools who are already overtaxed. Districts need to start with leaders who are ready, willing, and able to lead rollout and adoption of the innovation.

Once a district has identified its key leaders for innovation, the district needs to focus on gaining support in the following order:

1. The indifferent staff must be helped to feel inspired about the innovation. A key component of developing buy-in among these staff is to frame the need for innovation as positive and student-centric. Instead of suggesting that students will be more engaged with the innovation, consider a statement such as, "Students have such diverse needs—it's extremely challenging to personalize learning for everyone," or "Students can begin learning to work more independently, and that can help prepare them for the more independent college environment."
2. Leadership needs to ensure that those staff who feel frustrated have a clear understanding of the supports the district will provide to support implementation. If the district does not provide such resources, their support may erode because they will not be able to develop the technical abilities to implement the change.
3. The district should work to help those staff who feel oppressed to first see the idea as a good one, and then to understand the provided supports. At some point, the district may determine that it is better to find new staff to support the effort; this approach likely will have a negative impact on the morale of the organization for a period of time, but sometimes is necessary for success.

Throughout this process, inspired staff should be leveraged to be champions of the effort and to help communicate the benefit of change to others.

Ultimately, creating buy-in and acceptance of the innovation will require continued support over time. Leaders should maintain support for innovation throughout the adoption cycle until it becomes accepted practice. Typically, the superintendent and district leaders are more involved when innovation initiatives are first being proposed and approval is sought, yet leadership's direct involvement decreases during the period when innovation initiatives are most scrutinized and challenged by other stakeholders. To implement a lasting innovation, leadership must protect, support, and nurture the initiative throughout the adoption cycle.

It is up to public education leaders to provide not only the vision but the tactical decisions needed to turn innovative ideas into transformative and sustainable change.

Implementation Evaluation

As an innovation is being implemented, districts should be monitoring and measuring the fidelity of implementation and must evaluate the innovation against the definitions of success established at the outset of implementation. This monitoring and measuring should occur throughout the process, not just at the beginning and end.

Successful innovations include a process that promotes significant feedback and a culture of continuous improvement. Consider the credit recovery program once more. When the implementation team discovered that only 35% of students participating in the innovation had attained the necessary credits to graduate because the innovation failed to address the needs of those students who had little interest in school, had attention issues, or had deep remedial needs, the team refined the approach. The district limited this program to those students for whom the program was suitable and sought alternative strategies for the students who had different needs. Embracing implementation as an opportunity for continuous learning is essential for districts hoping to achieve pattern-breaking change.

Conclusion

School districts are at a critical juncture, with myriad challenges before them. With rising student needs and constrained resources, finding more efficient and effective processes and exploring new approaches and ideas will be critical to doing more with less. At DMGroup, we recognize that even incremental changes can be challenging for large organizations with entrenched processes and regulations. Furthermore, given that students' achievement is at stake, change can seem risky. However, if public education is to meet its mission in this environment rife with challenges, bold leadership that embraces change is required. Additionally, change needs to be supported by a well-formed implementation plan to ensure the success of innovation and position it for long-term results. Innovative ideas can be very alluring, but for implementation to be successful, the district must ensure that the idea addresses root causes of the problems at hand, the rollout plan must have adequate supports and must include cultivating sufficient buy-in, and the monitoring and measuring of outcomes must be in place to allow for evaluation and continuous improvement. It is up to public education leaders to provide not only the vision but the tactical decisions needed to turn innovative ideas into transformative and sustainable change. ♦

NOTES

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