Implementation Science

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This is an exciting time to work in education. More than ever before, we know what strategies and practices have the greatest impact on student learning. Study after study has tracked data regarding evidence-based instructional techniques, district support for schools, and more. Pilot programs in school transformation are returning outstanding results.

Unfortunately, outstanding results are more often the exception than the norm. While research has shown what works instructionally, student achievement has somehow remained relatively stagnant (e.g. PISA, TIMMS, NAEP). These disappointing outcomes highlight a gap in implementation—although highly-effective practices have been identified, they are often not used as intended, not sustained for a sufficient period of time, or not scaled sufficiently to move the needle for students.

How a strategy or practice is implemented in schools has everything to do with its success. In this paper, we discuss three keys to effective implementation: 1) empowering teachers with knowledge, skills, and ongoing support, 2) encouraging school leaders to set goals and foster a culture of growth, and 3) establishing a tiered system of accountability to coordinate efforts, monitor progress, and provide sustained support. This research is an installment in our School Turnaround Model Series, and hyperlinks to the full series can be found at the end of this paper.

Empowering Teachers

Effective implementation relies heavily on teachers because the classroom is ultimately where the rubber hits the road. For students to benefit from a new instructional strategy or practice, teachers must be equipped to implement it with fidelity. This is true for any educational initiative, but it is particularly essential for instructional strategies, which have the most potential to impact student achievement.[i]

To successfully implement an evidence-based instructional strategy, teachers need to have a whole and thorough understanding of the approach, opportunities to actively and deliberately practice the strategy, and the ongoing support of a qualified professional who can provide actionable feedback (e.g., a coach).

UNDERSTANDING THE STRATEGY

It takes considerable time and effort to make a new strategy work in the classroom, so teachers tend to rely on existing knowledge. In order to successfully implement new ways of thinking and working, teachers need to understand the value of doing things differently and they need support mastering the unfamiliar components of the strategies.

Before asking teachers to implement a new strategy or practice, school leaders should demonstrate the value of that approach—specifically its impact on student achievement, attendance, or other key indicators of success. This information brings a greater sense of purpose as teachers learn and implement the new technique. Additionally, when teachers fully understand a data-driven strategy, they feel inspired and motivated by the results possible in their classrooms. Schools and districts can share this information with teachers via:

- Distributing existing research
- Hosting open learning sessions to introduce and explain strategies
- Emphasizing impact statistics
- Sharing success stories

Because each classroom is unique, teachers need a deep level of understanding of strategies. Therefore, complex strategies cannot be implemented uniformly; rather, they must be skillfully adapted to each environment. This requires a thorough understanding of the theory behind the strategy, and sufficient comfort with it to implement it as intended, regardless of the situation.

Schools and districts can support teachers by making a variety of learning resources easily accessible. School leaders, coaches, and teacher leaders can demonstrate best practices for each strategy. Modeling in person and through videos can make the strategy authentic.

ENCOURAGING PRACTICE

Teachers at all levels of expertise and tenure must practice to achieve and maintain fluency in each strategy.

Deliberate practice is a highly effective way to engage in a growth mindset and to continually improve the complex skills required for a given strategy. A leading expert on the topic of deliberate practice, Anders Ericsson, finds that the level of expertise one achieves with a skill set has much to do with *how* one practices. Merely performing a skill many times does not translate into greater expertise; rather, practicing deliberately is the secret sauce for developing and maintaining expertise[ii].

According to the Marzano Center for Learning Sciences, educational professionals who successfully increase their expertise through deliberate practice do the following:

- Break down the specific skills into critical skill chunks
- Practice the skill daily
- Make the practice public (consistently seen and heard by others) so actionable feedback can be received
- Continually increase the level of challenge with the intention of becoming an expert. [iii]

Practice is not limited to teachers; principals, administrators, and teacher-leaders should also openly seek out new ideas, try new techniques, and adapt based on honest feedback. Leaders should strive to make their learning transparent so that teachers can feel safe stepping outside of their comfort zones. By consistently demonstrating a growth mindset, leaders can make deliberate practice a way of life at the school.

SUPPORTING THROUGH COACHING

Research has shown that even when teachers are presented with theory, shown demonstrations, and given opportunities to practice a strategy, fewer than 5% will actually use it in their classrooms.[iv] What is the final component necessary for teachers to successfully use an evidence-based strategy to impact student learning? Coaching. In fact, the same research showed that when on-site coaching was provided, 95% of teachers used the strategy in their classrooms.

Coaching is a powerful type of professional development because it is personalized and embedded in teachers' everyday practice. Coaching enables immediate feedback. Although coaches often wear a number of hats, their primary role should be supporting teachers' implementation of a new strategy in the classroom, modeling the strategy as needed, observing, and offering specific feedback for professional growth. This ongoing cycle may include:

- Collaborative goal setting
- Co-planning lessons
- Classroom observation & feedback
- Modeling strategies

While theory, demonstration, practice, and coaching are valuable, none of these individually is the key to effective implementation. Instead, as shown by Joyce and Showers, a combination of these methods will result in the highest levels of educator proficiency (see Figure 1).[v]

Goal-Oriented School Leaders

School leaders are essential in the implementation of any new initiative, whether it be an instructional strategy for teachers use in classrooms or a new plan to engage parents. Principals and administrators are the drivers of implementation strategy. Ultimately, they will be accountable for its success or failure.

School leaders are responsible for ensuring that teachers have the tools necessary to successfully implement a new strategy. They are also charged with setting clear goals, aligning and prioritizing initiatives, and creating a culture of learning among school staff. School leaders should serve as the lead learners in their schools.

SETTING AND PRIOTITIZING EXPLICIT GOALS

Goals are an essential component of successful change. When created and managed well, goals facilitate regular, organized progress. School leaders are responsible for setting, defining, and managing goals.

For goals to achieve excellent results, they need excellent design. When setting goals, school leaders at all levels should:

- *Set goals that are aspirational*. Leaders know their schools well enough to set goals that are realistic, relevant, and aspirational.
- *Narrow the focus*. Leaders should define a handful of clear goals with criteria for success. Using transparent processes, schools can track progress over the course of weeks, months, and the academic year.
- *Create ONE PLAN*. Leaders should align goals to reduce redundancy, confusion, or misalignment of efforts.
- *Over-communicate goals*. Leaders should regularly share goals with students, parents, teachers, and staff.

After clarifying goals, school leaders must actively manage progress by prioritizing related initiatives, concentrating focus on highest needs, and supporting areas with greatest potential for improvement. With short- and long-term results, leaders can celebrate success, inspire ongoing effort, identify weakness, and reorganize priorities.

BUILDING A CULTURE OF PROFESSIONAL LEARNING

While experience is highly valued in education, a teacher's expertise has the greatest impact on student achievement. Expertise is what a person knows and is able to do. Faculty members who value expertise listen to people who have skills to share, even those who have relatively-few years of tenure as teachers. As schools enter the transformation process, faculty members open up to learning from one another's expertise.

For implementation to be successful, teachers need to feel safe trying new strategies and collaborating with their peers. Both veteran and new teachers must feel supported and encouraged by their communities in their efforts to improve. School leaders have the opportunity and responsibility to nurture a supportive, growth-oriented culture.

To begin, school leaders can take initiative by regularly seeking out new information to improve their skills, and to then share their results transparently and publicly. By constantly demonstrating a growth mindset, school leaders

Type of Professional Learning and Development	Educator Proficiency		
	Knowledge	Skill Demonstration	Use in the Classroom
Theory and Discussion of Strategies	10%	5%	0%
Demonstration in Training Session	30%	20%	0%
Practice and Feedback in Training	60%	60%	5%
Coaching in the Classroom Setting	95%	95%	95%

FIGURE 1

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can set inclusive expectations for personal growth, so learning, innovating, and getting feedback becomes a way of life at the school.

Additionally, leaders can:

- Promote regular, constructive, honest feedback systems while also enforcing a zero-tolerance policy for disparaging or demoralizing interaction
- Establish clear expectations that implementing improvement goals is not optional; in other words, that there are no "opt outs"
- Approach and encourage teachers who are hesitant to take risks or timid to give feedback to their peers
- Celebrate teams of teachers who model these principles and make real progress

Trust is built on a foundation of respect, personal regard, competence, and integrity. School leaders should not only model these values themselves, but should insist upon them from everyone in the building. The likelihood of teachers implementing new strategies increases as leaders create a safe environment of respect and a shared focus on student learning.

Supporting Implementation Through Systems of Support

There are hundreds of ways in which a research-based improvement initiative can fail before it reaches fruition. Maybe it lacks support or resources, or is drowned out by a flood of other initiatives. While good school leaders can fix some of these impediments to implementation, some are out simply of their hands and beyond their capacity.

At Ed Direction, we encourage schools and districts to build a tiered system of accountability and support so that every teacher receives the resources necessary for deep implementation—so

that teachers and students don't fall through the cracks. Building a system of collaborative teams that work in harmony from the classroom up to the school district or charter network will facilitate successful implementation.

CLASSROOM-LEVEL TEAMS

Often, the best resource for a teacher is someone else who has similar goals and challenges. Many schools already have Professional Learning Communities (PLCs), so they can create more focused and accountable teams by building on those PLCs. Sometimes, simply giving a team a new name helps to clarify new expectations. When we support school transformation, we utilize PLCs to form "Collaborative Teacher Teams" (CTTs).

CTTs are made up of teachers who share common assignments, either content or a grade level. Sometimes they share both, such as: 6th grade math. The CTTs focus on:

- Planning inquiry cycles
- Designing units of study that are standards-based, clearly sequenced, and structured around regular checks for understanding in the form of short-term assessments
- Implementing inquiry cycles together and collaboratively by analyzing student data collected through short-term assessments
- Designing evidence-based instructional adjustments that are responsive to student needs as demonstrated through short-term assessment analysis
- Reflecting on the effectiveness of instructional strategies and of their collaborative work as a team

In addition, as various teams engage in professional learning, CTTs serve as the structure for group coaching, learning walkthroughs, lesson study, video analysis of instruction, and other practices meant to help teachers improve. Teachers who are part of an effective CTT report feeling supported in their work. They also report increased stamina to

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improve—they ask questions and adjust instead of giving up, and are ultimately much more successful at implementing new strategies than they would be alone.

SCHOOL-LEVEL TEAMS

The most effective Collaborative Teacher Teams (CTTs) maintain their focus on continued learning and receive guidance from a school-level transformation team, which we call the School Transformation Team (STT).

This schoolwide leadership team is representative of the entire school; ideally, it should have one teacher from every department or grade level. These members can be a voice for their individual CTTs, and can take STT information back to their smaller CTT groups. The STT's job includes:

- Representing their colleagues in goal-setting conversations
- Analyzing data about implementation and student performance to track progress and adjust as needed
- Identifying areas for whole-school growth
- Determining appropriate supports for teachers
- Supporting Collaborative Teacher Teams

The only true requirement of members of the STT is that they are willing to demonstrate a growth mindset, and step up as lead learners at the school. We have found that a strong STT is essential for effective CTTs because the STT plays a key role in the successful implementation of new strategies and initiatives.

DISTRICT- AND CHARTER-LEVEL TEAMS

Schools are typically part of a larger system. We have found that School Transformation Teams are essential, but not necessarily sufficient, to the work of school improvement. At the end of the day, some things are simply outside of their control. In these instances, establishing a support team at the district or charter level can make all the difference

between successful implementation or a return to status quo. We call these teams: District Transformation Team (DTT) or Charter Leadership Team (CLT). The DTT/CLT typically includes representatives from departments that oversee instructional programs who can allocate resources to improvement efforts at schools.

The DTT/CLT should take on the following key actions:

- Narrow the focus for improvement to a limited number of programs and initiatives that are aligned with school goals
- Ensure that schools and teachers have the necessary resources for implementation
- Provide professional learning and support

The DTT is also essential to the sustainability of school improvement. We have found that the presence of a well-functioning DTT ensures that implementation continues successfully long after any external partners leave.

Conclusion

Kouzes & Posner (2012) report:

> In the thousands of cases we've studied, we've yet to encounter a single example of extraordinary achievement that didn't involve the active participation and support of many people. We've yet to find a single instance in which one talented person—leader or individual contributor—accounted for most, let alone 100% of the success. [. . .] Leadership is not a solo act; it's a team performance. [. . .] The winning strategies will be based upon the "we" not the "I" philosophy. Collaboration is a social imperative. Without it people can't get extraordinary things done in organizations.[vi]

At the end of the day, successful implementation is about working together effectively. Today, in the field of education, we know more than we ever

have about what really works in the classroom. But even with ample research about effective instruction, we still only see islands of excellence and no real growth in student learning across the board.

If we really want to move the needle for our students, we must create a *system*—larger than just individual classrooms—that works*.* This means providing teachers with effective training and coaching. It means cultivating leaders who are willing to demonstrate a growth mindset and create a culture of trying. And finally, it means building a system to coordinate and prioritize efforts, monitor progress, and provide ongoing support.

The Ed Direction School Turnaround Model series

In case you're just tuning into this series, we invite you to read through the other five white papers. As you can see, this paper is number six of six, and the whole series is listed below:

1. The School Turnaround Success Model
2. Teaching Optimization
3. Leadership in School Turnaround
4. Collaborative Coaching
5. Parent Engagement in Student Success
6. Implementation Science (this paper)

About the Authors

Dr. Hollie Pettersson partners with state, district, and school leaders to implement systems of support for effective instruction. Dr. Pettersson has over 23 years of experience in public education. She has served as an elementary, middle, and high school classroom teacher, school psychologist, school and district administrator, and state professional development specialist. She loves engaging in Collaborative Coaching and finds learning from other professional educators to be incredibly rewarding.

Mavis Snelson helps schools execute comprehensive transformation programs that significantly improve student outcomes. She worked as a teacher in an underprivileged community through Teach For America, as a Senior Instructor for an education center in Hong Kong, and as a school district employee. Mavis has also worked with the Big Brothers Big Sisters organization and as an AmeriCorps counselor.

Ed Direction (www.eddirection.com) is a premier provider of school turnaround services. We collaboratively partner with existing school and district staff to maximize student achievement. Throughout the process, we provide personalized support implementing evidence-based practices to increase student success.

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[i] Hattie, John. Visible Learning for Teachers: Maximizing Impact on Learning. London: Routledge, 2012. Print.
[ii] Ericsson, A. K., Krampe, R. T., and Tesch-Romer, C. (1993). The role of deliberate practice in the acquisition of expert performance. Psychological Review. V. 100(3), 363–406. Retrieved from NYTimes.com May 2016: http://www.nytimes.com/images/blogs/freakonomics/pdf/DeliberatePractice(PsychologicalReview).pdf

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[iii] Marzano Center for Learning, retrieved May 2016:
http://www.marzanocenter.com/blog/article/deliberate-practice-a-pathway-to-measurable-improvement/

[iv] Joyce and Showers, 2002.

[v] *Ibid.*

[vi] Kouzes, J. M. & Posner, B. Z. (2012). The leadership challenge: How to make extraordinary things happen in organizations, 5th Edition, Jossey-Bass.

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