

The Need to Use Evidence in School-Based K-12 Improvement Efforts

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Overview

“Drowning in data.” If you have had conversations with K-12 teachers about their experiences in the post-No Child Left Behind era, there’s a good chance they brought up this term in the conversation. The assumption behind NCLB, and the large amounts of resulting student assessment data, was that an accountability system would affect daily interactions between teachers and students through classroom-level decision-making.¹ Yet, the typical way in which school and district leaders seek to use data to address student needs is through *structural* changes. Leaders review data to identify students who are in need of additional support and then often provide additional resources to these students outside of the typical classroom environment: in pull-outs, in before- and after-school tutoring sessions, and during advising periods. While providing “more” to students who have not been served well in our schools is necessary to ensure students’ progress, providing more of the same is not likely to lead to sustained school improvement. Further, providing effective interventions is only one small component of a plan for school improvement that will lead to higher achievement for all of our learners. Yet, I have observed people taking this approach to improvement time and time again. The reason is clear. The alternative—planning for, implementing, and leading an ongoing process to use data to facilitate improvement through *instructional* change—is likely one of the most difficult jobs that educational leaders face.

In an attempt to initiate instructional changes in the classroom and to tap the myriad types of data available, schools and districts nationwide have given teachers time to use the data in newly-formed professional learning communities (PLCs). Members of effective PLC teacher teams engage in ongoing collaborative work to improve student learning by discussing instructional challenges, selecting agreed-upon objectives to inform instructional improvement, and establishing measurable goals to guide student learning.² To facilitate the development of effective PLCs, however, teachers need to

learn how to work together to utilize assessment data and student work to identify students' learning needs and meet them in the classroom.³ Absent this professional learning and clear direction on how to use data, what has resulted, in many cases, is “analysis paralysis”; teachers and principals spend time analyzing data without a clear idea of how to use it to affect the core practice of teaching and learning—daily instruction.

To initiate an instructional improvement process that can be sustained over time, we need to move beyond a practice of analyzing student data to a process of collecting and employing both teacher and student *evidence* to inform actions. While data might represent any point of information, evidence from both teachers and students can add clarity to one's understanding of a particular challenge or strategy and assist in refining the approach.

To empower teachers to use data effectively, schools and districts need to engage in the systematic collection and analysis of evidence as part of an ongoing school improvement cycle. In both research and practice, I have identified four steps that school leaders, supported by their central office, must take to launch and implement this work effectively and sustain it over time to lead to improvement:

1. Identify a clear instructional focus to which all teachers can align their work.
2. Lead a schoolwide process of improvement that facilitates ongoing learning as part of a *plan, do, study, act* cycle.
3. Collect and analyze multiple types of evidence from teachers and students to enhance instruction.
4. Build a strong leadership team to guide the work of improvement in professional learning communities schoolwide.

Identify a Clear Instructional Focus

It is important to choose one specific area on which to focus the school's instructional improvement efforts. A school team might best begin this process by asking, “Who is not being served well?” and by examining evidence to identify the students with the greatest needs. By then triangulating evidence from multiple sources of teacher and

student data to understand why students are not performing well, a school team can begin to understand how instruction needs to change. The area of instructional focus selected should be one that, if addressed, is likely to improve learning for the students with the greatest needs and also meet the school's larger goals for improving instruction for all students. In *Data Wise*, Boudett, City, and Murnane refer to the identified student need as the "learner-centered problem."⁴

Once the learner-centered problem is identified, setting an instructional goal to guide teachers' efforts to change their practice can help crystallize the work to be done. An instructional goal articulates a change in instruction that will improve learning in a specific way. The goal should be written as, "All teachers will . . ." The work of instructional improvement cannot be effective if assigned only to the special education teacher or the math intervention teacher. To address student needs in the selected area, *all teachers* and *all leaders* will need to learn how to improve instruction in the area of focus and observe high-quality instruction in the classroom. This same instructional goal will guide teachers' work across grade levels and departments in their own professional learning communities.⁵

What might an effective instructional goal look like?

- All teachers will provide scaffolding to students to assist them in solving complex multi-step problems independently.
- All teachers will provide frequent opportunities for students to engage in student-to-student discourse on content-specific topics.

The instructional goal should be narrow enough to clarify what the school is working on, but broad enough to allow differentiation at each grade level and subject area. Most importantly, the goal should meet the school's larger aim to improve student learning, if implemented, and should focus specifically on the knowledge and skills students should have.⁶

Changing a practice that has been done the same way for multiple years requires intentional planning for instruction. And as with any new skill, it will take multiple attempts to get it right and produce the intended positive effect on student learning. For this reason, professional learning designed specifically to enhance teachers' and leaders'

knowledge of the focus area is an essential component of an ongoing process of improvement.

Lead a Schoolwide Cycle of Improvement

Many school districts require school teams to draft complicated school improvement documents that focus school leaders' energies on filling in boxes, thereby reinforcing the traditional role of the central office as a compliance-oriented organization. A clear school improvement plan that specifically articulates the actions school leaders will take to facilitate improvement, and the role of leadership team members, teachers, staff, parents, and community partners in the process of improvement, can provide a roadmap to guide school partners in achieving these goals. Furthermore, central office supervisors can most effectively develop principals' instructional leadership skills to implement this plan when they prioritize student achievement, classroom instruction, and school improvement in their work with principals and in the learning opportunities they organize.⁷ By first preparing school leaders to draft clear action plans to achieve an instructional goal through a cycle of improvement, central office administrators can then work with school leaders as collaborators and partners in the implementation of this plan.

A multitude of school improvement cycles and processes exist, including some that have been created by individual school districts to meet their particular needs and others that have been published and widely distributed. At a very basic level, an effective school improvement process includes the four key components of *plan*, *do*, *study*, and *act*:⁸

- *Plan* — Identify the student need, gather teacher and student evidence to better understand the need and craft an instructional focus, and engage in professional learning to improve teachers' and leaders' knowledge and skills in this area.
- *Do* — Implement a change in teacher practice intended to improve student learning in the area of the instructional focus.
- *Study* — Gather teacher and student evidence to learn the degree to which the instructional change is having the intended impact on the students with the

greatest needs. Are students engaged when the strategy is used? What do student assessments following the use of the strategy reveal about student learning? What similarities and differences can be observed in how teachers are implementing the instructional change, and how does student performance differ as a result?

- *Act* — Refine the instructional change to further improve student learning. If the student need has been fully addressed, how could the instructional strategy be utilized in different contexts to deepen student learning?

Engaging in a full *plan, do, study, act* cycle, in which both school leaders and teachers take actions to facilitate improvement and analyze student learning results to inform further changes in practice, requires a significant dedication of time from the school leader, leadership team members, and the entire school community. I have not observed a school facilitate a cycle successfully in less than one quarter (i.e., September to November); often, it takes a full school year to complete one full cycle, particularly at the onset of this work.

Use Evidence to Enhance Instruction

While data is often assumed to include student achievement results, attendance records, and graduation data, to name a few examples, *evidence* encapsulates the broader array of teacher and student data that together create a strong understanding of instructional needs and facilitate the planning of next steps to improve instruction in all classrooms. But just as student achievement data alone will not point to the change that needs to be made in instruction, neither will classroom observation data nor students' formative assessment results if used independently of other sources of evidence. Multiple types and sources of evidence must be used together to triangulate both students' and teachers' understanding of a specific concept in order to devise, evaluate, and refine a plan that will lead to instructional improvement.

What types of evidence will help a school team to answer critical questions about their progress on the school improvement journey? Table 1 lists a few types of essential evidence.

Table 1. Adult Practice and Student Learning Evidence

Type of Adult Practice Evidence	Questions Answered by the Evidence
Curricular plans to implement an instructional change following the provision of professional learning sessions for teachers and leaders	<ul style="list-style-type: none"> • To what degree do school leaders and teachers understand how to implement the instructional change and what it should look like in the classroom?
Observations of teaching practice	<ul style="list-style-type: none"> • Are adults changing their practice in alignment with the instructional focus?
Observations of teachers in PLCs	<ul style="list-style-type: none"> • How are teachers engaging in continued learning around the instructional focus? • How are teachers planning for next steps to address the identified area of student need? • How are teachers evaluating student learning results to make adjustments to their instruction?
Teacher survey	<ul style="list-style-type: none"> • How do teachers perceive that adult actions are facilitating student learning? • How do teachers describe the content of their work in PLCs and its effect on their classroom instruction?
Type of Student Learning Evidence	Questions Answered by the Evidence
Observations of students with greatest needs	<ul style="list-style-type: none"> • How are the students with greatest needs engaging in learning when the new instructional strategy is used?
Formative and summative assessments	<ul style="list-style-type: none"> • Are students demonstrating attainment of the intended objective(s) when the strategy is used?
Student grades	<ul style="list-style-type: none"> • How are the students with the greatest needs being impacted by changes in adult practice?
Student focus group or survey	<ul style="list-style-type: none"> • How are students experiencing the instructional change? Do they see a difference in the classroom instruction they are receiving?

There are two key points to remember when beginning a systematic plan to collect and utilize evidence:

- Evidence of changes in adult practice must be gathered and reviewed prior to determining whether adult practice is impacting student learning. Without knowledge of the types of changes, if any, that have been made in the classroom, it will not be possible to tie student results to the adult actions that led to these results. Doug Reeves⁹ describes the actions that lead to high results as the antecedents of excellence. For this reason, it is critical to gather evidence of teacher practice at each step of an ongoing process of school improvement, and to review evidence from both teachers and students at regular intervals, to shorten the “evidence to action” trajectory.

- The instructional goal to guide a school's work is originally crafted to address a learner-centered problem that will improve learning for the students with the greatest needs. Once the goal is identified and the work to change teacher practice has begun, it is important to continually go back to these same students, the school's "focus students," to see how they are progressing. It is therefore critical to identify and know these students by name. Yet, it is also important to gather evidence from all students to understand whether the change is helping the school to meet its larger goals for students. To gather evidence, a PLC might analyze student grades and formative assessment results for all students, but the leadership team might assemble a focus group conversation with just those students who have the greatest needs and have not been served well, in order to understand how they are experiencing the change in instruction.

While school improvement plans have historically been designed to establish new goals based on annual state test results, an ongoing process of improvement uses evidence from leaders, teachers, and students at each part of the cycle to immediately initiate changes in student learning to facilitate continued improvement.

Build a Strong Leadership Team

One person cannot lead the work of school improvement alone; rather, grade-level leaders and department chairs should be involved in designing, implementing, and assessing this work. To ensure progress toward achieving the instructional focus, each team leader must have the knowledge and skills to lead an effective PLC cycle by creating a trusting environment in which practice can be discussed and data can be shared, and by facilitating and engaging the team in its own learning on the instructional area of focus. PLCs are most effective when they are interconnected in purposes and tied to school and district reform initiatives.¹⁰ Specifically, the work of PLCs should be directly aligned to the schoolwide *plan, do, study, act* process. For instance, if the math department is currently designing a new lesson to incorporate a process to solve multi-step problems and the science department has spent the last two weeks writing common formative assessments to assess how well students are learning from this new strategy, then how will leaders of the math and science PLCs work together to refine their own leadership practice and, more importantly, share findings

and student results schoolwide? And how will the school leader provide professional learning to prepare department leaders to lead this work when they are leading *different* work?

When school leaders and teachers collaboratively plan for, implement, and lead an ongoing process to utilize evidence, instruction can be improved in every classroom, for every child. Involving all staff in the collection and analysis of evidence not only increases data literacy, but also ensures that both teacher and student evidence is used transparently to inform the school's next steps to facilitate improvement.

Conclusion

When data is used as part of an ongoing cycle of improvement that involves the regular collection and systematic analysis of evidence, teachers can change their instructional practice to improve student achievement. To do so, the school leader must share leadership of a schoolwide process of improvement with teachers. Most critically, central office must give priority to developing the skills of principals to lead the difficult but rewarding work of improving instruction and schools.

Notes

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