

LEADING INDICATORS OF SCHOOL TURNAROUNDS

*How to Know When
Dramatic Change
Is On Track*

by Julie Kowal and
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EXECUTIVE SUMMARY

IN RECENT YEARS, national policymakers have placed new emphasis on “school turnarounds” as a strategy for rapid, dramatic improvement in chronically failing schools, calling on education leaders to turn around performance in the 5,000 lowest-achieving schools nationwide. This goal may seem daunting, given the dismal success rates of school improvement efforts of past years. Indeed, even outside education—in for-profit businesses, nonprofit organizations and government agencies—bad-to-great turnaround and “major change” efforts succeed only about 30 percent of the time.

Given these odds, the success of the turnaround strategy in education will depend largely on the speed with which districts and leaders spot schools that are off-track and quickly redirect major change. **Leading indicators** are the early signs that leaders outside education use regularly to determine whether an organization is on the right track or destined to fail. In school turnarounds, leading indicators can provide early evidence about whether a school is on track—and if not, how to intervene to increase the odds of success.

In this report, we summarize the research and experience from other settings—including venture capital, franchising, and research and development in industries such as pharmaceuticals—in which leaders

have long relied on leading indicators to enhance the likelihood of success. From these lessons, we identify key principles and processes to guide the design and use of leading indicators in education. By critically examining systems in other sectors, and analyzing potential lessons for school turnarounds, education leaders can bring the benefits of leading indicators to bear where it is not simply dollars but students’ futures at stake.

In other sectors, organization leaders **identify a set of starting leading indicators** based on known success factors in the industry and the nature of the venture being monitored; **zealously monitor** those indicators for signs of impending success or failure; and then **act on what the indicators reveal**, using data to target assistance, modify investments, or redirect their focus.

What Principles Should Guide Selection of Leading Indicators?

A group of core principles guides the selection of leading indicators in other sectors, where indicators are:

- **Based on known success factors in similar settings.** Investors and organization leaders choose indicators based on factors that have been shown to contribute to organizational success in the past.

Indicators may be grounded in rigorous research, specific past experiences, or standard practice in a given field.

- ☛ **Constantly evolving to predict success at each stage.** Successful organizations continually reassess and redefine individual indicators at each stage of an effort, and over time across *all* efforts, ensuring that each indicator they use can predict success.
- ☛ **Tailored to specific circumstances and settings.** Leading indicators are finely tailored based on industry-, market-, and situation-specific predictors of success. Initial sets of indicators, often selected before an effort begins, form the basis for ongoing monitoring and evaluation.
- ☛ **Based on specific timetables.** Organization leaders in other sectors pay careful attention to *when* progress is made. Timing is especially crucial for achieving progress on certain key indicators, which may have a domino effect on progress on other key indicators and long-term outcomes.

How Should Schools and Districts Monitor Leading Indicators?

After selecting a set of leading indicators, organizations in other sectors monitor progress rigorously, setting guideposts and using indicators to analyze prospects for long-term performance. In these other sectors, monitoring is:

- ☛ **Frequent and ongoing.** Monitors—including venture capitalists, franchisors, and R&D managers—examine progress in their ventures frequently and on an ongoing basis. While some indicators may be designed for only annual or semiannual review, several are designed to allow much more frequent monitoring, such as quarterly, monthly, weekly, or even daily in some cases.
- ☛ **Hands-on.** Monitors are typically intimately involved in the operations of the organizations they monitor, such as by consulting with leaders on key decisions, conducting frequent site visits, engaging in regular communications, serving on boards, and recruiting members of the management team.

- ☛ **Tailored to needs and current circumstances.**

Monitors tailor their approaches over time based on information they receive about an organization's success and future prospects. They often increase or decrease their monitoring or their level of investment over time in response to what leading indicators reveal.

How Should Schools and Districts Put Leading Indicators to Use?

Organizations in other sectors use what they learn through leading indicators to make strategic decisions that alter operations and dramatically improve outcomes. Their actions take many forms, but generally fall into one of two broad categories:

- ☛ **Intervention, from targeted assistance to major change.** Signs of impending failure may trigger intense assistance, increased involvement by investors and monitors in key decisions, or a release of the investment entirely.
- ☛ **Increased autonomy or other reward.** Early, dramatic success as shown by leading indicators may prompt organizations to decrease the intensity of their oversight. Positive initial results may also serve as “green lights,” allowing projects to continue or even triggering increased investment.

Key Actions for State and District Leaders

The principles and strategies that other sectors use in developing, monitoring, and acting upon leading indicators provide important guidance for district leaders, state departments of education, and other partners as they embark on and monitor school turnarounds. By collecting and acting upon the information provided by leading indicators, education leaders will be able to intervene rapidly to increase cumulative success rates over time. On page 13 (Table 1), we present suggestions for district, state, and other education leaders to identify leading indicators for their own turnaround schools. Table 2 on page 17 sets out a proposed timetable to guide tracking of leading indicators in turnaround schools.

As they consider these recommendations and design and implement their own systems of leading indicators in turnaround schools, education leaders can build on the experience base in other sectors by:

1. **Starting with known success factors.** In turnaround schools, this includes the competencies of the turnaround leader, the leader's actions, steps that all staff members take to achieve goals according to plan, and common routines that must improve in any school seeking learning gains.
2. **Monitoring turnaround schools frequently and intimately.** Most districts and states need to monitor turnaround schools much more often than they do, collecting and analyzing data on a monthly or quarterly basis. Monitoring should also involve hands-on, active engagement such as weekly site visits and collaboration by district, state, or partner staff.
3. **Acting on early indicators of success or failure.** Where leading indicators show that an effort is

not on track, states and districts must be willing to provide targeted intervention and, if that fails, pursue dramatic change. Early indicators of success in turnaround schools might prompt decreased monitoring, performance rewards, or opportunities for highly capable leaders to extend their reach to more students. Early indicators of failure, on the other hand, should lead to targeted assistance or a new attempt at major change.

4. **Collecting mountains of data, and narrowing to the most predictive over time.** Because success factors in school turnarounds are just beginning to be understood, district and state leaders should begin with expansive data collection on numerous possible leading indicators, and narrow the list over time to those indicators that have the strongest and most persistent connections to student success.





INTRODUCTION

IN TOO MANY SCHOOLS across the country, we fail to equip our students with the skills they need to succeed in college, work, and life. In elementary and middle school, far too few students receive the basic foundation necessary to prepare them for the demands of high school. Nationwide, proficiency rates among elementary and middle school students in reading and math hover between 20 and 50 percent.¹ Of the students who make it to high school, too many fail to graduate: one in 10 American high schools lose more than 40 percent of their students between ninth and 12th grades.² Students who do graduate from high school often leave without the necessary skills to thrive in college or the workforce: more than one-third of all college students require remedial courses to acquire basic skills, and minority and low-income students are even more likely to need remediation.³

These national and state averages mask significant differences in the quality of education provided to students in individual districts and schools. An enormous number of students are trapped in persistently low-achieving elementary and middle schools and “dropout factory” high schools, which serve high proportions of students failing to meet state standards year after year.⁴ Even though the number of such schools has decreased in recent years, the rate of progress is far too slow to

Policymakers are increasingly focusing on “turnarounds” as a strategy for rapid, dramatic improvement in persistently low-achieving schools.

meet national goals for high school graduation and postsecondary education.⁵

Our nation has struggled for decades to solve the intractable problem of dramatically improving these chronically failing schools. Although there are noted exceptions, the vast majority of the lowest performing schools have not changed course, either because they have received insufficient support or they have tried weak or only piecemeal interventions.

In response to a heightened awareness nationally about the consequences of our persistently low-achieving schools, policymakers have increasingly focused their efforts on “turnarounds,” one strategy for rapid, dramatic improvement typically led by a new principal with a new or newly empowered staff.⁶ Today, this approach is central to federal education policy and to reform efforts in many states and districts, with specific calls to turn around the 5,000 lowest achieving schools nationwide.⁷

This goal may seem daunting, given the dismal success rates of school improvement efforts of past years. Even outside education—in for-profit businesses, non-profit organizations and government agencies—bad-to-great turnaround and “major change” efforts succeed only about 30 percent of the time. If turnarounds are more difficult in public education due to restrictive policies, talent shortages, and other constraints, the success rate of school turnarounds may well be even lower, and perhaps significantly lower.⁸

Does this mean the situation is hopeless? Are we doomed to a success rate no better than 20 or 30 percent?

The answer depends on a critical variable: the speed with which we “retry” change when our initial attempts fall short.⁹ If we allow unsuccessful schools to languish in improvement for five years or more, our cumulative success rate in turnarounds will indeed hover around

With more and better information about successes and failures early in turnaround efforts, district leaders, state departments of education, and other partners will be able to take action to increase schools' cumulative success rates over time.

20 or 30 percent, if that. But if we spot schools that are off-track early and quickly redirect major change efforts, we can do much better over time.

Even if only 30 percent of individual turnaround attempts succeed, by redirecting turnaround efforts in schools that are not on the right track we could increase the *cumulative* success rate dramatically over time.¹⁰

To retry major change more rapidly, though, leaders need information about which turnaround efforts are on a path to success or failure. In any major change effort, there are early signs—**leading indicators**—that an organization is on the right track, or is doomed to become a statistic. These early signs matter particularly in the turnaround context, where dramatic improvements rely in large part on changes and activities that take place in the first few weeks and months of the effort.¹¹ In education, we can make much better use of leading indicators to differentiate which turnaround efforts are going well, and which require redirection. With more and better information about successes and failures early in the effort, district leaders, state departments of education, and other partners will be able to take action in turnaround schools to increase cumulative success rates over time. Although some evidence suggests it can take three to five years to see the full impact of a *successful* turnaround effort, leading indica-

tors allow us to gauge, far earlier, which schools will end up succeeding and which are destined for failure. In this way, leading indicators empower education officials with a strong basis for intervening in turnarounds without waiting several years to examine results.

Lessons from Other Sectors about Leading Indicators in Education

Most education leaders are not accustomed to thinking about, collecting, or using leading indicators in meaningful ways. Improvement efforts in education are typically designed to permit extended periods of failure before leaders intervene with major change (such as with a new leader, charter operator, or different governance structure), even in schools where very few students meet learning standards. Indeed, the current iteration of the Elementary and Secondary Education Act codifies six years of continued failure without major improvement as an acceptable timeframe.¹²

The current federal administration has begun to use the concept of leading indicators to track major change efforts in schools, by requiring states and districts that receive School Improvement Grant funds to report data annually about a number of early factors that may affect learning gains, including student attendance, behavior, and school learning environments.¹³ But the development, use, and refinement of leading indicators as a tool for enhancing the success of school turnarounds-in-progress remain largely uncharted territory. Fortunately, other sectors offer strong lessons for education as we move forward with the design and implementation of systems and decision-making processes tied to leading indicators. In the private sector, organizations use leading indicators to intervene early and forcefully to maximize returns on invested dollars. Shouldn't schools act just as decisively when children's futures hang in the balance?

In this report, we summarize the research and experience from other settings in which leaders have long relied on leading indicators to enhance the likelihood of success. These settings include venture capital, franchising, and research and development in industries such as pharmaceuticals.¹⁴ In these settings, organiza-



tions have developed systems to use leading indicators for making decisions that preserve time and money and improve financial and softer outcomes. We look to these settings because they resemble turnarounds in key respects: with new initiatives operating under intense pressure, low probabilities of success, and much at stake. In addition, while there is a limited research base on school turnarounds and the use of leading indicators in education, vast literature exists on the design

and use of leading indicators to inform key decisions and improve outcomes in other public (non-education), business, and nonprofit organizations. Although the indicators themselves can generally not be cut and pasted into the school turnaround context, the *principles* and *processes* used in other sectors provide critical guidance for designing and using a unique set of indicators in education.

DESIGNING LEADING INDICATOR SYSTEMS FOR TURNAROUND SCHOOLS

HOW CAN WE meaningfully integrate leading indicators into education turnarounds? In other sectors, three general steps shape the design and implementation of effective systems.

1. First, leaders **identify** a set of starting leading indicators based on known success factors in the industry and the nature of the venture being monitored.
2. Second, they **zealously monitor** these indicators for signs of impending success or failure.
3. Finally, they **act** on what the indicators reveal, using data to target assistance, modify investments, or redirect focus.

In the following sections, we discuss each of these steps in turn. For each, we examine the methods used in other sectors and offer initial thoughts about how they might apply to turnarounds in education.

What Principles Should Guide Selection of Leading Indicators?

A core set of principles guides the selection of leading indicators in other sectors. These principles can provide crucial guidance for district and state leaders to choose leading indicators for school turnarounds. Leading indicators should be:

- based on known success factors in similar settings;
- constantly evolving to predict success at each stage;
- tailored to specific circumstances and settings; and
- based on specific timetables.¹⁵

In Table 1 on page 13, we build on the following factors known to contribute to successful turnarounds in education, to present suggestions for district, state, and other education leaders to identify leading indicators for their own turnaround schools.

Leading indicator principle #1: Based on known success factors.

Across a variety of industries, investors and organization leaders choose leading indicators based on factors that have been shown to contribute to organizational success in the past. These factors may be backed by rigorous research, be generally accepted in the field, or arise from the leader's own previous experiences. No matter the source, leaders have good reason to believe that certain early factors will contribute to the success of a new venture—whether a new investment, franchise, or research initiative—and watch them to track early progress. State, district, and other education leaders can use these same types of success factors to track progress in turnaround schools.

In other settings, research, time, and experience have shown three primary factors—the characteristics of the leader, the makeup of the management team, and the organization's connections with key players and resources—to consistently predict the success or failure of a new venture (see “Identifying Success Factors in Other Industries”).

The education sector still has a lot to learn about which factors matter most for successful school turnarounds. But an emerging research base, drawing from experience in other sectors as well as successful turnaround schools, is beginning to clarify several key

Identifying Success Factors in Other Industries

In other industries, leaders rely upon research, time, and experience to identify key characteristics and behaviors that have been shown to predict success in a new venture. In franchising and venture capital, for example, leaders keep a close eye on three major factors to learn whether their investments are on track:

Leader characteristics. Through research, time, and experience, venture capitalists have discovered that certain qualities of entrepreneurs consistently predict the success or failure of new ventures. In their initial selection of portfolios, venture investors typically pay close attention to these characteristics in the leader—such as evidence of staying power, ambition, ability to handle risk, and attention to detail.¹⁶ Many also monitor the degree to which entrepreneurs engage in behaviors that demonstrate these qualities, relying on these as leading indicators of success or failure for the venture.¹⁷

Makeup of the management team. Smart investors know that the completeness of a venture’s leadership team and its combined experience will be crucial to the organization’s progress. Indeed, research in other sectors has confirmed a crucial connection between the makeup of a new leadership team and the company’s success.¹⁸ In their initial investment decisions, they therefore pay attention to the size of the team, any previous experience members may have working together, and the chemistry between entrepreneurs and their teams.¹⁹ After making an investment, they will also continue to monitor team size, relationships, and functioning as indicators of organizational health and progress.²⁰

Connectedness with key players and resources. Research across sectors has shown that successful companies establish close ties with external organizations, including actual and potential customers, partners, and other allies.²¹ As they track the progress of their investments or franchisees, therefore, investors often gather data about the organization’s ability to attract and maintain these ties as early evidence about whether external alliances will help the venture succeed.²²

Several key factors that are necessary for turnaround success include:

- ☛ *the skills, habits, and behaviors of turnaround leaders;*
- ☛ *the series of actions that turnaround leaders take; and*
- ☛ *the support and flexibility that the school leader receives to do things differently.*

factors that are necessary for success. These findings are not dissimilar to the known success factors in low-probability events from other sectors. They include the skills, habits, and behaviors of turnaround leaders critical to their ability to turn the school around; the series of actions that education leaders should be able to observe in the school if the turnaround is truly on track; and the support and flexibility that the school leader receives from the external environment, including the district and/or the state.

Turnaround leader competencies. Research suggests that the competencies of successful turnaround leaders differ from those of successful leaders in already high-performing organizations. By examining these patterns of thinking, feeling, acting, and speaking, district and

state leaders can both identify and monitor principals who will have the best chance of success. The competencies of a turnaround leader include:

- Driving for results—the leader’s strong desire to achieve outstanding results and the task-oriented actions required for success.
- Influencing for results—motivating others and influencing their thinking and behavior to obtain results. Turnaround leaders cannot accomplish change alone, but instead must rely on the work of others.
- Engaging in problem solving—including analysis of data to inform decisions; making clear, logical plans that people can follow; and ensuring a strong connection between school learning goals and classroom activity.
- Showing confidence to lead—staying visibly focused, committed, and self-assured despite the barrage of personal and professional attacks common during turnarounds.²³

Turnaround leader actions. Research from across sectors, including turnaround schools, suggests that successful turnaround leaders also take a common set of actions to dramatically improve organizations. These actions include:

- Focusing on a few early wins—Successful turnaround leaders choose a few high-priority goals with visible payoffs and use early success to gain momentum, motivate staff, and disempower naysayers. These wins must focus on high-priority, not peripheral, elements of organization performance. In schools, examples might include achieving very high attendance and low disciplinary rates in the first two months of the school year, or making huge leaps in learning progress in a targeted academic area, such as aiming by the end of the first semester to have 90 percent of fifth-graders on track to make grade level by year’s end.
- Breaking organization norms—In a failing organization, existing practices contribute to failure. Successful turnaround leaders break rules and norms. Deviating to achieve early wins shows that new action gets new results.

- Pushing rapid-fire experimentation—Turnaround leaders press a fast cycle of trying new tactics, discarding failed tactics, and investing more in what works. They resist touting mere progress as ultimate success.
- Getting the right staff, righting the remainder—Successful turnaround leaders typically do not replace all or even most staff at the start, but they often replace some key leaders who help organize and drive change. For the remaining staff, change is mandatory, not optional.
- Driving decisions with open-air data—Successful turnaround leaders are focused, fearless data hounds. They choose their initial goals based on rigorous analysis. They report key staff results openly and often. They require all staff who participate in decision-making to share periodic results in open-air sessions, shifting discussions from excuse-making and blaming to problem-solving.
- Leading a turnaround campaign—Leaders use a consistent combination of motivating and maneuvering tactics that include communicating a positive vision of success; helping staff personally feel the problems customers feel; working through key influencers; and silencing critics with speedy success.²⁴

Evidence from early efforts suggests that some activities are common among school turnarounds regardless of the specific academic improvement goals the leader identifies. Common focuses include improving the school environment, student discipline, and staff behavior to create the conditions necessary for improved learning outcomes.²⁵ Specific changes might include making scheduling or policy adjustments that improve student attendance; introducing and enforcing new behavior policies that dramatically reduce the number of disciplinary incidents, enabling teachers and students to focus on learning; or improving the school facility to make better use of instructional space and facilitate orderly, efficient class transitions. These are not the “early wins” described above, because by themselves they do not dramatically improve student learning. But most schools emerging from chronic failure need them to enable improved learning outcomes for students in any grade or subject. State and district leaders assessing a



turnaround's likely success or failure will need to monitor both the presence and success of these activities very early on, along with any specific steps required to achieve the learning goals that the school leader identifies (see Table 1 on page 13).

Support and flexibility. Evidence also demonstrates that the district and state play an important role in supporting turnaround efforts, by providing leaders sufficient flexibility to do things differently to dramatically improve learning. Crucial district and/or state actions include granting turnaround leaders staffing and operational autonomies up front. By giving the right leaders the “big yes,” districts and states allow principals the freedom to hire and dismiss staff in accordance with goals for the turnaround and what works for the student population. Districts and states must also provide support by monitoring and reporting on turnarounds—making sure that schools have access to the right data, and building positive pressure through public reporting of early results. In addition, district and

state leaders can aid turnaround efforts by proactively engaging the community in radical change, in particular by providing a stark look at current failure, creating a vision for the future, and publicizing early wins.²⁶

Leading indicator principle #2: Constantly evolving to better predict success.

Successful organizations in other sectors continually reassess and redefine the individual indicators they use to track a venture's success, to ensure that indicators can predict success at each stage of the effort. Education leaders can take the same approach by continually assessing which indicators can predict success for school turnarounds, and changing data collection in future years accordingly.

In other settings, monitors and investors typically begin the monitoring process by collecting and analyzing mountains of data from a wide variety of sources, and refining them over time. For example, research on franchisors suggests that they collect both quantitative and qualitative data franchise-wide, from franchisee reports, site visits, inspections, and ratings.²⁷ Similarly, venture capitalists typically scrutinize a variety of data on the entrepreneur and team, the product, its industry and market, company financial performance and projections, business plans, and other factors.²⁸

These large quantities of data enable leaders to identify over time the indicators that can predict a venture, franchise, or new product's prospects for success. Experience with a particular entrepreneur or product in development, as well as newly available research, informs and limits the types of indicators leaders choose to assess over time. For example, franchisors typically refine their processes for selecting franchisees based on previous franchisees' successes and failures.²⁹

Similarly, tests run to track the progress and efficacy of pharmaceutical products under development evolve as the industry develops new tests and standards based on past research and evolving standards.³⁰ In 2006, drugmaker Pfizer lost more than a decade of research and a billion dollars when it had to discontinue research on a major new cardiovascular drug late in the development process.³¹ Since then, and because of Pfizer's experience, new measures of product effectiveness have been introduced earlier in the process to cut

off development of drugs in the same class that exhibit similar characteristics.³²

In education—particularly because the field of turnarounds is relatively new—ongoing assessment of the connection between each indicator to schools’ ultimate success should inform data collection in future years. For example, do the leader competencies outlined above prepare school principals to more successfully carry out a turnaround? Are some more important than others? How important is it to establish preconditions for learning gains, such as improvements to the school facility, use of time, or student behavior? What other factors predict success or failure? Is there a real “implementation gap” before certain types of gains will materialize? Only by beginning to track each of these types of indicators and tie them to results will the education field be able to refine a consistent set of leading indicators of school turnaround. Based on that knowledge, district and state leaders will be able to focus on some indicators, introduce some new ones, and drop others in future years. As in other sectors, the design and use of leading indicators in education will evolve as more information becomes available about implementation hurdles and the expected timing of improvements.

Leading indicator principle #3: Tailored to specific circumstances and settings.

No one-size-fits-all set of leading indicators exists, even within individual industries. Rather, indicators are finely tailored based on industry-, market-, and situation-specific predictors of success.³³ In education, state and district leaders can be similarly responsive to individual schools by working with school leaders to identify specific benchmarks and goals for each school. Initial indicators should be based on starting data, the specific goals for early wins, and the steps needed to achieve those goals in light of the challenges at each school.

In the venture capital setting, for example, investors typically analyze potential investments carefully. This initial analysis—which may include data about the positioning of a product in the target market, anticipated competition, and foreseeable roadblocks—then serves as a guide for evaluating the organization and forms the

basis of post-investment monitoring.³⁴ In pharmaceutical R&D, companies also vary the indicators they use to track the progress of an innovation based on the nature of the product, including its chemical complexity, how long it will take to develop, and the type of health problem it is designed to address.³⁵ The company’s own tolerance for risk also determines to some extent what indicators it tracks, with those with lower tolerance requiring much more data about a product up front.³⁶ In both settings, individual investors or monitors and the organizations they oversee determine what is most significant and how best to measure it.

Similarly, in school turnarounds, there are a number of indicators worth tracking in every turnaround school, as well as indicators specific to each school’s plan for achieving early wins and later goals. Table 1 (page 13) proposes an initial set of common indicators, based on the factors that research suggests contribute to successful turnarounds, to inform the approach that district and state leaders take in all of their turnaround schools. Within these factors, however, specific goals and benchmarks will likely differ for each school, depending on where their students are starting, early win goals, and the specific challenges they face.

For example, interim benchmarks on student achievement are critical indicators of any school’s progress. But midyear targets and steps to achieve them for individual schools will depend on each school’s baseline data. A school in which 5 percent of students scored “proficient” in math in the previous year will have a different target for midyear assessments than a school in which 40 percent were proficient. It also

Research and experience suggest several common indicators worth tracking in every turnaround school, as well as others specific to each school’s plan for achieving early wins and later goals.

TABLE 1. Initial Set of Leading Indicators for Turnaround Schools

SUCCESS FACTOR	LEADING INDICATOR
LEADERS EXHIBIT TURNAROUND COMPETENCIES	
Competency Cluster (each includes one to four related competencies) ⁴⁰ <ul style="list-style-type: none"> • Driving for results • Influencing for results • Engaging in problem solving • Showing confidence to lead 	<ul style="list-style-type: none"> • School leader’s overall rating on each competency • Leader’s rating within each cluster of related competencies
LEADERS TAKE SPECIFIC TURNAROUND ACTIONS	
<ul style="list-style-type: none"> • Focusing on a limited set of high-priority short-term goals • Signaling the magnitude and urgency of dramatic change • Discarding failed rules and routines and deploying new tactics for early wins • Releasing or redeploying staff not fully committed to the turnaround; bringing in new staff who can help organize and drive change • Influencing stakeholders to support turnaround actions • Quickly trying new tactics and discarding failed ones, investing in what works • Driving decisions by openly reporting staff results and sharing results in open-air sessions 	<ul style="list-style-type: none"> • Ratings on the degree to which the leader engages in each action • Teacher turnover rates (voluntary/involuntary)
LEADERS MAKE A TURNAROUND PLAN TO ACHIEVE EARLY WINS AND LATER GOALS	
<ul style="list-style-type: none"> • Plan is based on review of data, addresses implementation of turnaround success actions • Plan includes goals (early-win and later) and detailed steps for all • Leader and all staff take steps according to plan 	<ul style="list-style-type: none"> • Existence of a plan including turnaround success actions • Level of clarity and detail in goals, steps, and timing for all staff • Ratings of timeliness of actions to implement steps in plan • Existence of systems to regularly collect, analyze, and use data
SCHOOLS ACHIEVE PRECONDITIONS FOR LEARNING GAINS	
<ul style="list-style-type: none"> • Improved instructional quality 	<ul style="list-style-type: none"> • Distribution of teacher quality • Percentage of students taught by highly effective teachers • Number of instructional minutes • Students in AP/IB/dual-enrollment classes
<ul style="list-style-type: none"> • Increased participation in school 	<ul style="list-style-type: none"> • Student attendance • Teacher attendance • Truants • Student turnover rates • Dropout rate • Participation on state assessments
<ul style="list-style-type: none"> • Improved school culture 	<ul style="list-style-type: none"> • Discipline incidents • Student waiting list (if applicable) • Student, teacher, and parent satisfaction
SCHOOLS ACHIEVE EARLY WINS RELATED TO HIGH-PRIORITY GOALS⁴¹	
	<ul style="list-style-type: none"> • State test results • Benchmark test results and short-cycle assessments • Other indicators based on school-specific, early-win goals⁴²

might have different early-win goals, perhaps focusing on achieving extreme gains in one gateway grade. These differences in goals and the steps needed to achieve them would require different indicators, which would be apparent from each school's turnaround plan. Even if district and state leaders set the same ultimate expectations for both schools, they may rightly expect different paths to those goals based on each school's starting point.

Research suggests that successful turnaround leaders analyze a variety of data early on to develop detailed plans that explain to every actor what actions are needed, focusing first on steps to achieve early wins.³⁷ The specific steps in these plans, as well as the existence of the plan itself, produce one large category of leading indicators that are common for the earliest phase of any turnaround. After a school achieves early wins, the steps needed to broaden success to other grades and subjects become indicators of success for the next

phase. The particular focus of those steps will likely differ from school to school.

For example, an elementary principal may decide to zero in on third-grade reading, or even on a particular reading skill, as a first priority, while another may focus on fifth-grade math in year one. Both schools are likely to set goals for all grades, but expect rapid, momentum-building gains in a few strategically targeted grade levels and subjects. Similarly, a high school may place a special emphasis on reducing behavioral incidents in the fall because of their prevalence in past years, while another focuses on boosting attendance. Both schools are likely to have goals for behavior and attendance, but the expectations for improvement in one or the other will vary based on the school's specific challenges. Some principals may also set their own unique goals that respond directly to special needs at the school, using data to identify *root causes* of students' struggles and inform the most appropriate solutions. The bot-



tom row of Table 1 reflects the importance of tailoring these goals to specific circumstances and student needs rather than basing them on end-of-year data alone.

Leading indicator principle #4: Based on specific timetables.

In addition to measuring steps and milestones toward outcomes, organization leaders in other sectors often monitor *when* particular steps in the process occur. Venture capitalists often want to know, for example, that a new venture has sufficient time to actualize its plans and enter the market in a position of strength, and so will monitor whether the venture stays ahead of others in the field or needs to catch up.³⁸

Venture capitalist Russ Siegelman explains how his venture capital firm stages investments around milestones, using the example of a medical device company. “They had to build [a] device and show it could be used in an animal study. ...We put in one million up front, another million to build the prototype, and the third million for the animal study.” If the company had shown signs of impending failure after the initial investment, Siegelman’s firm could have exited having invested \$1 million—no small loss—but being free to direct the remaining \$2 million to more promising opportunities.³⁹

Timetables are similarly relevant in turnaround schools. In particular, the timing of some leader actions is critical to their impact on the turnaround effort. For example, achieving focused, early-win goals with visible payoffs is most important early in the year. Early victories will be more effective for building momentum and disempowering naysayers if they occur in the first half of the year than in January or March. Likewise, the steps in the plan leading toward achieving those early-win goals must start very early in the school year. Similarly, the common preconditions for learning gains outlined above should improve dramatically in the early months to set the stage for early wins. If those preconditions come about only at the end of the first year, it is less likely that the school will achieve desired learning gains. For all of these types of indicators, therefore, district and state leaders must monitor not only whether the steps and victories occur, but when.

How Should Schools and Districts Monitor Leading Indicators?

Settling on a set of leading indicators is only the first step in forecasting the likely success or failure of a turnaround effort. The second, equally crucial step is monitoring each individual indicator: setting guideposts and using them to analyze indicators along the implementation path. Tracking progress and measuring interim steps and outcomes enable midcourse corrections and keep the spotlight on variables that predict long-term performance. From other sectors, we learn that organizations monitor leading indicators frequently, engage in hands-on data-gathering, and tailor their monitoring to individual circumstances.

Frequent. Rather than waiting for the end of a quarter or a year to examine results, leaders in other settings monitor progress frequently and on an ongoing basis. Frequent oversight creates accountability for those whose performance is being tracked, but also enables monitors to determine how best to intervene. Monitoring might reveal a need for greater oversight, bumped-up reporting requirements, or more dramatic interventions such as shifts in strategy or leader replacement.

In research and development, for example, many companies establish monitoring timelines for new products based on specific stages of development, which may occur in a matter of days, weeks, or months. Arriving at each new stage triggers a new round of monitoring to evaluate progress.⁴³

Venture capitalists sometimes use “staged financing” to condition continued funding on early success. Each stage involves monitoring and reevaluating the venture

Experience from other sectors suggests that education leaders should monitor indicators in turnaround schools early and often, on at least a monthly or quarterly basis.

against preset expectations, as well as ongoing monitoring during each stage to inform the next funding decision. For example, in the early days of Federal Express, venture capitalists invested an initial \$12.25 million in the company. Just six months later, in early 1974, the company was failing to achieve necessary progress on several leading indicators, and so investors put in only \$6.4 million, much lower than FedEx leaders expected. After another six months, investors intervened extensively in company strategy and only then invested an additional \$3.88 million. The company turned around and achieved success, going public in 1978.⁴⁴ At each stage, frequent, in-depth monitoring allowed venture capitalists to base their recurring investments on the company's performance and progress.

In schools, one of the primary transitions from traditional accountability efforts to tracking leading indicators is to measure earlier and increase the frequency of monitoring. Given the typical timetables

for intervention in state and federal policy, increasing monitoring efforts to track leading indicators on even an annual basis could be considered an improvement, and would likely increase turnaround success rates somewhat. But as illustrated in Table 1 on page 13, the most powerful way to dramatically increase overall success rates over time is by making decisions much earlier in the turnaround effort. Experience from other successful organizations suggests that to make these types of decisions in education, state and district leaders would need to monitor indicators in turnaround schools much earlier and more frequently, such as on a monthly or quarterly basis.

It may not be feasible or practical to monitor all indicators this frequently—for example, dropout rates and student results on state assessments may be available only once a year, and results on interim assessments may be available only once every six or eight weeks. But other indicators, such as student and teacher attendance, or a leader's action toward early high-priority goals, could be tracked earlier and much more frequently. In addition, districts can aim to make interim assessment data available to educators more regularly, particularly for high-priority subjects.⁴⁵

In Table 2 (page 17), we propose a timetable to guide tracking of leading indicators in turnaround schools. Most indicators are designed to be tracked on a quarterly basis, with some once or twice each year. Many districts may find that more frequent—even weekly—collection of some types of data is crucial to fully understanding a school's progress. Education leaders can tailor this timetable to the indicators they select, the availability of data, and other factors in their state or district.

It is worth noting that in other sectors, this type of monitoring often involves substantial time and effort. Venture capitalists, for example, spend up to 25 percent of their time on monitoring.⁴⁶ A typical venture capitalist might visit the site of each investment once a month for four to five hours per visit.⁴⁷ School turnaround efforts likely need more frequent visits, and state and district staff will need to spend more time monitoring than most spend today.

Hands-on. While organization leaders in other sectors often rely on some level of passive engagement



TABLE 2. Monitoring Leading Indicators: Expected Measurement and Timetables

SUCCESS FACTOR	LEADING INDICATOR			
Leaders exhibit turnaround competencies	<ul style="list-style-type: none"> School leader’s overall rating on each competency Leader’s rating in each cluster of competencies 	<ul style="list-style-type: none"> Competency assessments that rate leader on quantitative scales (e.g., interview, 360-degree review) 	<ul style="list-style-type: none"> At placement prior to year 1 December/January in year 1 Annually thereafter 	
Leaders take turnaround success actions	<ul style="list-style-type: none"> Ratings on the degree to which the leader engages in each action 	<ul style="list-style-type: none"> School visits and interviews 	<ul style="list-style-type: none"> Quarterly 	
	<ul style="list-style-type: none"> Teacher turnover rates 	<ul style="list-style-type: none"> School- or district-reported data about voluntary and involuntary turnover 		
Leaders make turnaround plans to achieve early-win and later goals	<ul style="list-style-type: none"> Existence of a plan including turnaround success actions Level of clarity and detail in goals, steps, and timing for all staff Ratings of timeliness of actions to implement steps in plan Existence of systems to regularly collect, analyze, and use data 	<ul style="list-style-type: none"> Structured assessment: existence and content of written plan and data systems School visits, interviews, and surveys to assess plan follow-through 	<ul style="list-style-type: none"> Written plan by school opening Action quarterly in year 1; semiannually thereafter 	
Schools achieve preconditions for learning gains	<ul style="list-style-type: none"> Distribution of teacher quality (SIG) Percentage of students taught by highly effective teachers 	<ul style="list-style-type: none"> Ratings on LEA teacher evaluation system Student enrollment data 	<ul style="list-style-type: none"> Annually 	
	<ul style="list-style-type: none"> Number of instructional minutes (SIG) Students in AP/IB/dual-enrollment classes (SIG) 	<ul style="list-style-type: none"> School- or district-reported data 		
	<ul style="list-style-type: none"> Student attendance (SIG) Teacher attendance (SIG) Truants (SIG) Student turnover rates 	<ul style="list-style-type: none"> School- or district-reported data 	<ul style="list-style-type: none"> Quarterly 	
	<ul style="list-style-type: none"> Dropout rate (SIG) Participation on state assessments (SIG) 		<ul style="list-style-type: none"> Annually 	
		<ul style="list-style-type: none"> Discipline incidents (SIG) Student waiting list (if applicable) 	<ul style="list-style-type: none"> School- or district-reported data 	<ul style="list-style-type: none"> Quarterly
		<ul style="list-style-type: none"> Student, teacher, and parent satisfaction 	<ul style="list-style-type: none"> Student, teacher, and parent surveys Survey response rates 	
Schools achieve early wins related to high-priority goals	<ul style="list-style-type: none"> Benchmark test results 	<ul style="list-style-type: none"> School- or district-reported data 	<ul style="list-style-type: none"> Quarterly 	
	<ul style="list-style-type: none"> Short-cycle assessments 		<ul style="list-style-type: none"> Weekly, biweekly, monthly 	
	<ul style="list-style-type: none"> Other indicators based on school-specific goals 		<ul style="list-style-type: none"> Quarterly 	
	<ul style="list-style-type: none"> State test results 		<ul style="list-style-type: none"> Annually 	

*(SIG) denotes indicators that are required to be reported annually under the federal School Improvement Grant program.

Site visits provide opportunities to provide active assistance, such as by connecting school leaders to potential partners and other resources, and by identifying and helping to remove barriers.

to track the progress of their investments—such as collecting and reviewing financial reports and other data off-site at regular intervals—they also tend to become involved in the ventures they are monitoring.⁴⁸ This hands-on involvement generates various benefits, including valuable, ongoing information about the organizations in which they have invested.

Venture capitalists in particular are often intimately involved in their investment companies. In addition to the monitoring activities and site visits noted above, they often serve on boards, meet with customers and suppliers, act as consultants, recruit management, and assist with networking.⁴⁹ Each of these roles takes time and resources, but they enable venture capitalists to gather valuable day-to-day information about the firm's progress on many fronts.⁵⁰ In fact, venture capital firms often take geographic proximity into account in selecting investments, to make frequent monitoring more feasible. It is easier to drop in and talk with the leader of a new venture if he is located right down the road, rather than across the country.⁵¹

In education, monitoring should similarly involve more than “desktop audits.” While quantitative data that feeds automatically to district- or state-level dashboards is a critical component of progress monitoring, qualitative data and information that results only from on-site visits will offer crucial insight into how turnaround schools are progressing. District and/or state monitoring staff should plan to conduct regular site visits in turnaround schools, to conduct interviews with the school leader and teachers, and to visit with students and staff. In addition to providing an opportunity for observation and data collection,

frequent visits will also allow district and/or state staff to build relationships with school leaders and hold them accountable for turnaround actions and expected progress. Site visits will also enable district leaders to see the reasons behind the data provided in desktop audits, and respond accordingly. And site visits will provide opportunities for district and state staff to provide active assistance, such as by connecting leaders to potential partners and other resources, identifying and helping to remove barriers, and offering advice.

Surveys may also be a helpful way to gauge progress and perceptions among the school's staff, students, parents, partners, and even members of the surrounding community. We include a timetable for site visits, interviews, and surveys in Table 2 (page 17) to enable education leaders to benefit from much more sophisticated information than quantitative reports.

Tailored to needs and current circumstances.

Across industries, organization leaders and investors tailor their monitoring approaches over time based on information they receive about a venture's status and future prospects. In schools, as well, the frequency and rigor of monitoring may best be tailored to the degree of success the school shows in early stages of the turnaround.

In early 2011, the first-ever longitudinal study of decision-making in venture capital investment found that the processes investors used to evaluate their investments changed over time as a result of lessons learned within the venture capital firm.⁵² As new ventures mature and demonstrate their ability to succeed, investors typically increase the duration of their investments and reduce the intensity of their monitoring efforts.⁵³ Similarly, as companies show signs of failure, venture capitalists often scale back the level or duration of investments and impose stricter controls or more intense monitoring on their ventures, such as by increasing contractual control over the venture or representation on its board.⁵⁴

Franchisors also typically increase the frequency of their monitoring and data collection when problems occur, allowing them to act more rapidly based upon current information.⁵⁵ And in R&D, when monitoring reveals that early phases of a research effort are not proceeding as planned, researchers rapidly modify re-

search plans based on the early results, instead of sticking to plans that have shown diminishing prospects of success.⁵⁶

The same principles apply to schools, where it may not be necessary to monitor all indicators with the same frequency in every school. If a school is on the right track in year one, monitoring on several indicators may decrease in year two. On the other hand, if a leader encounters new challenges midway through the year, district leaders should pay closer attention to relevant indicators for several months thereafter. With regular, hands-on monitoring, district and state leaders will have better access to data that enable informed decision-making about which indicators need more close attention and which can reduce in intensity.

How Should Schools and Districts Put Leading Indicators to Use?

Organizations in other sectors do more than just develop and monitor leading indicators—they also use what they learn to make strategic decisions that alter operations and dramatically improve outcomes. Empowered with more and better information about progress in turnaround schools, education leaders will be able to do the same.

Intervention or closure. Leaders use leading indicators to inform and direct intervention in organizations that are not on the right track. In education, district and state leaders can dramatically increase the success rate of school turnarounds by taking similar action based on the information collected through leading indicators.

In other sectors, indicators sometimes provide a “red flag” that warns monitors or investors about the need for serious changes in the organization or its direction—for example in franchising, where low initial sales or high volatility may alone trigger action.⁵⁷ At other times, multiple indicators must be viewed together as a package—such as when sales are only slightly lower than expected, but employee turnover and customer complaints are high. In many cases, though no single indicator alone mandates action, the totality of available information can support intervention.⁵⁸ Venture capitalist Russ Siegelman highlighted



When leading indicators show that a school turnaround is not on the right track, state and district leaders should provide additional assistance or targeted intervention to address specific challenges, or retry major change with a new leader or new approach.

the importance of flexibility by leaders of new startups: “[T]he best [leaders] are willing to reexamine their assumptions and are willing to veer left or right or pivot all the way around when the data suggests they’re headed in the wrong direction. They amble around until they find something good. The bad ones typically get overcommitted or wed to a particular idea.”⁵⁹

When leading indicators show that a new venture’s leadership is making poor decisions or the organization is heading off track, venture capitalists will often increase their involvement in key management decisions, require that more of the key leaders’ compensation be tied to future performance, or step in to replace the leader with a better candidate.⁶⁰ In extreme cases, failure to meet key targets may lead funders to establish additional or more onerous requirements for subsequent rounds of funding, or to discontinue investment entirely.⁶¹

Franchisors often use leading indicators to inform similar decisions, identifying performance gaps and targeting struggling franchisees for hands-on assistance through visits or advice, or revocation of the franchise license.⁶² In these situations, organizations and their funders respond to leading indicators with action, not waiting for crises to balloon into full-blown failures.

For education leaders, when leading indicators show that a school turnaround is not on the right track, options include providing additional assistance or targeted intervention to address specific challenges, or retrying major change with a new leader or new approach.

Targeted assistance responds directly to a specific challenge at the school, and might include deploying a community coordinator to work alongside the principal in addressing parents’ or other community members’ concerns about the turnaround; providing additional flexibility to accommodate a longer school day or school year; or helping to remove or reassign select members of the school staff who fail to contribute to the turnaround.

When early indicators reveal difficulties, more dramatic change may be needed. Major retry efforts should respond to specific challenges at the school, and may include replacing the school leader with a proven change leader or one with the right competencies for a turnaround; contracting school operations to an

external provider that has demonstrated previous success in similar schools, such as a charter management organization; or, when feasible, closing the school and reassigning students to higher-performing schools.⁶³

Decreased monitoring or increased reward. In organizations where leading indicators show early, dramatic success, investors or monitors often decrease monitoring or trust that the organization will not require major intervention or modification of existing plans. In education, district and state leaders can similarly decrease monitoring or offer rewards to turnaround schools that demonstrate early, significant success.

In many other sectors, rapid growth in the early stages of development is a strong early sign of later success: New ventures benefit from establishing positions quickly, and strong early performance allows them to rapidly generate large revenue streams.⁶⁴ Franchises also rely on early, rapid growth to achieve efficiencies associated with larger scale.⁶⁵ When franchisors and investors see this type of growth, therefore, they often reduce their frequency of monitoring or the degree of hands-on involvement.

Positive results on leading indicators can also serve as “green lights,” prompting continued development, and, in some cases, increased financial investment. In R&D, positive results at early stages allow products to continue moving along development pipelines.⁶⁶ For venture capitalists, strong early results confirm pre-investment judgments of promise and justify continued investment.⁶⁷

The same principles can apply to education. In turnaround schools that are on track, quarterly monitoring of some indicators might drop to once or twice a year, reducing the reporting burden and level of scrutiny in successful schools. District or state leaders could also recognize a turnaround leader’s success with a performance bonus, or extend the reach of highly capable leaders by allowing them to oversee turnaround efforts in more than one school.

Ultimately, this is where leading indicators become most powerful: in empowering district and state leaders with timely data to make decisions about how to ensure greater turnaround success, faster and in more schools.

KEY ACTIONS FOR STATE AND DISTRICT LEADERS

FEDERAL, STATE, AND LOCAL education leaders across the country have become committed to dramatically improving outcomes for students in chronically low-achieving schools. But the odds are tough: Across sectors, major change efforts have only about a 30 percent chance of success.

To increase the odds for these students, education leaders have a powerful tool: leading indicators that predict the likely success or failure of turnaround efforts. By collecting and acting upon more and better information early in the effort, district leaders, state departments of education, and other partners will be able to take rapid actions that increase cumulative success rates over time.

Research from other sectors that have broad experience with similar, low-probability events offers several key considerations to guide efforts in turnaround schools. We summarize them here, and readers will find more detail on each in the main body of this paper.

Start with known success factors. Develop sets of leading indicators by examining factors with a demonstrated impact on success. In turnaround schools, this includes the competencies of the turnaround leader, the leader's actions, steps that all staff members take to achieve goals according to the turnaround plan, and common routines that must improve in any school seeking learning gains.

Monitor schools frequently and intimately. Every indicator may not need monitoring with the same frequency, and not every school will require the same intensity. But to gather and use leading indicators meaningfully, most districts and states must monitor turnaround schools much more often than they do

today, with monthly or quarterly data collection and analysis. Monitoring should also be hands-on, involving site visits or other active engagement by district or state staff.

Act on early indicators of success or failure. Leading indicators are most powerful when used to make concrete decisions. When a turnaround is not on the right track, leaders can use leading indicators to choose the right assistance for addressing specific challenges, or to justify major change, such as replacing the leader, contracting with an external provider, or closing the school and reassigning students to higher-performing schools nearby. Early and sustained success in turnaround schools can lead to decreased monitoring, performance rewards, and a greater reach for highly capable leaders.

Collect mountains of data, and narrow to the most predictive over time. Because the field of school turnarounds is so new and research is just emerging, state and district leaders will need to begin collecting data on a significant number of potential leading indicators and narrow the list over time. By looking at root causes and correlating an initial set of indicators with student outcome data, researchers will be able to understand which indicators are most useful. Over time, this will allow a narrowing of leading indicators to those most connected to success.

In addition, while the field needs better information about success and failure in school turnarounds at the school level, leading indicators as a concept are applicable at any level. The next generation of thinking about leading indicators should build on the same lessons we outline here to identify and use indicators at the district level, as well.

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14. There are a few notable differences between these industry settings and school turnarounds worth mentioning here. While these do not diminish the utility of lessons learned in other sectors, they do inform our careful analysis of how they might apply in education. Most notable, of course, is the option to abandon an investment that is not showing success—although venture capitalists and franchisors can cut ties with a venture that is not successful, education leaders maintain an obligation to students no matter the success of their school. They may abandon a particular reform strategy or replace an individual turnaround leader, but cannot simply pull students out of low-performing schools and leave them on the sidelines until new options present themselves. Organizations in other sectors also typically have flexibilities available that enable them to quickly redirect that schools often do not have. We would argue, however, that where these flexibilities are necessary to keep a change effort on track, states and districts should grant similar autonomies to schools where possible. Finally, the specific measures used as leading indicators in other sectors will often not translate precisely, if at all, to schools—students cannot be evaluated through the types of go/no-go tests used in research and development, for example, and franchise success is more likely to be linked to inputs and less likely to be tied to process variables than success in schools. But as we explain in our findings, the principles that inform the selection of leading indicators in other sectors apply directly to the education setting as well, and can provide significant guidance about the types of indicators we should be tracking in schools.

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