



Find the Cause, Lose the Problem: *a White Paper*

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Executive Summary

Research shows that problem-solvers often jump right to developing solutions—missing the opportunity to fix a problem once and for all.

Problem solving that fully and permanently eliminates problems requires us to know true cause. Too often problem-solvers act quickly on one problem and then move on to the next problem—only to have the original problem later reappear. Effective problem solving requires us to:

1. Identify and understand the problem
2. Determine true cause
3. Develop a solution
4. Implement the solution

This white paper explores research illuminating the common pitfalls of problem solving and supporting best practices that ensure problem-solving excellence.

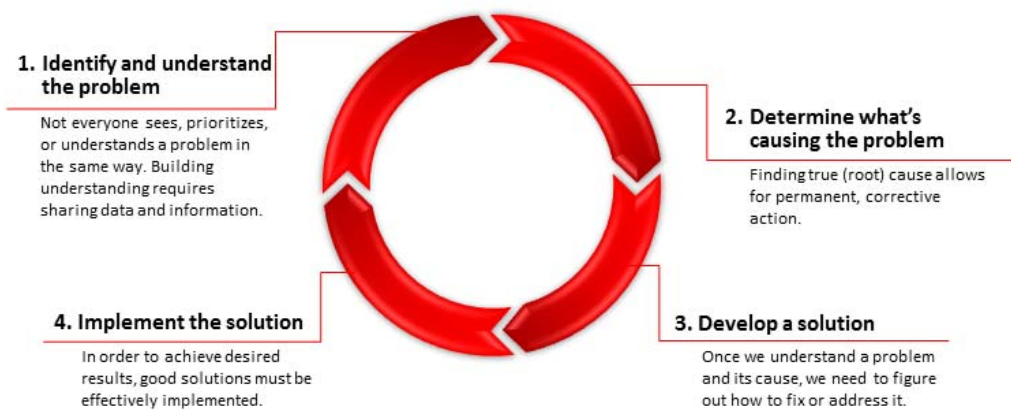
Find the Cause, Lose the Problem: *a White Paper*

Good problem solving requires hard thinking, discipline, courage, and persistence. It is not for the faint-of-heart, the arrogant, or the lazy. Too often though, we equate problem solving with speed—measuring response time and activity vs. efficacy of solutions. Often quick actions are like tourniquets: they may staunch the flow, but they haven’t permanently solved the problem. We put a proverbial tourniquet on a problem and once the bleeding has stopped, we think the problem is solved. But true problem solving requires an understanding of the root or true cause(s) of a problem.

Education leaders are regularly bombarded by problems of varying magnitudes and descriptions, e.g., disciplinary issues, unhappy stakeholders, chronic absenteeism, student achievement. While some problems may require quick action, many others are more in need of effective, lasting solutions. How do we permanently solve some of our most persistent and troublesome problems? How do we avoid simply reacting and instead become more intentional, effective, and proactive in our problem solving? What is required for effective problem solving?

The effective problem-solving sequence

True problem solving occurs in stages. Each stage requires different types of thinking, data, and involvement from others. Problem solving starts with recognizing a need or evidence that a problem exists. To effectively solve that problem, we must:



If new problems arise, the sequence begins again: we identify and understand the new problem and take steps to solve it, thus ensuring proactive and continuous improvement.

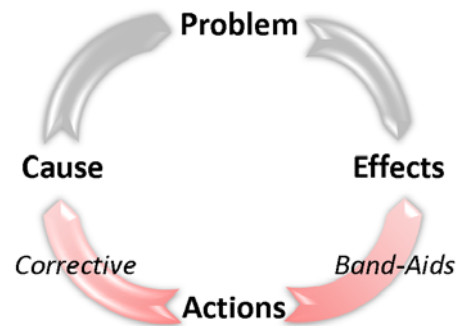
Not all of these stages are created equal—and not all stages get equal or adequate attention. Too often, problem solvers tend to skip over the cause-finding phase and jump right to solutions. Cause-finding is the linchpin of effective problem solving—it is what allows us to ensure our actions actually correct the problem—not just mask the symptoms.

Problem solving and true cause—what’s the connection?

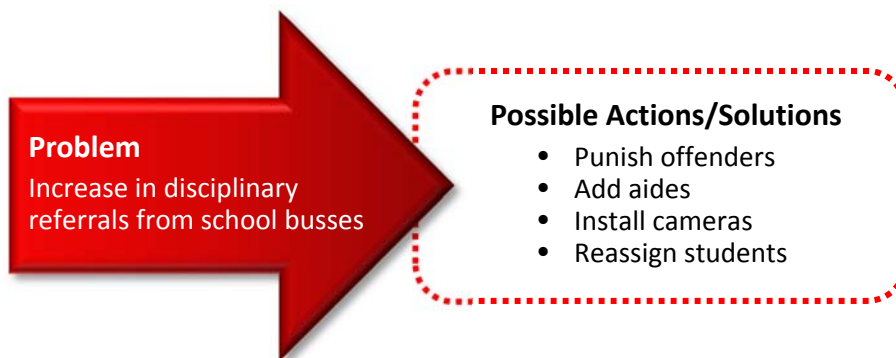
When asked what gets in the way of effective problem solving, most people cite the typical responses: not enough time, pressure to take action, lack of data, assigning blame, etc.

While these factors are significant, the biggest obstacle to effective, lasting problem solving is not addressing true cause.

When things go awry, it’s the symptoms or effects of a problem that alert us and prompt action. We then have a choice: our actions or solutions can focus on either the *cause* of the problem, the problem’s *effects*—or both.



When things go wrong, we often feel the need to act quickly and decisively—whether or not immediate action is needed. We throw possible *solutions* at the problem. But many quick fixes tend to be band-aids—attempts to minimize symptoms versus correcting the problem by addressing true cause. In the below example, a school brainstormed solutions to a problem of increased disciplinary referrals on its busses:



However, the effectiveness of these proposed solutions depends on the root cause. What if the root cause of this problem is that new drivers have a different understanding of what behavior warrants a referral? If that is the case, an effective solution that addresses root cause would look very different from any of the brainstormed ones.

It is often easier to brainstorm ways to deal with a problem than it is to figure out what is really causing it. But without understanding the true cause or “*why*” of a problem, the same problem may arise again and again—each time looking like a brand-new problem.

Be a Better Problem-Solving School District or Organization

Big problems rarely arrive in neat packages. They may come disguised as one thing only to reveal another when we peel back the layers. Often their impact extends in many directions and there is rarely one “magic bullet” solution.

Each stage of the problem-solving sequence has obstacles. Some barriers to effective problem solving are individual human tendencies—others are created by the situation or organization. All of them can be avoided or overcome with good practices.

Effective problem solving ensures the problem goes away—and stays away. The good news is: anyone can become a more effective problem-solving leader or district when provided with the right environment and skills.

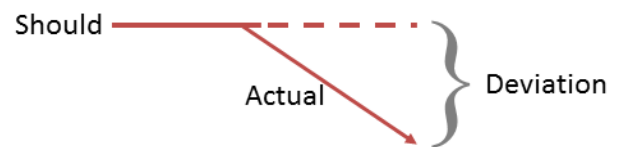
Research has shown the following best practices for effective problem solving:

Recognize problems in a timely way

The sooner we recognize that something is wrong or not working, the better. Smaller or newer problems typically have done less damage and are easier to fix. Too often, problems go unrecognized until they are big or painful enough to be obvious—and they typically get bigger and more painful until addressed.

In *Great by Choice: Uncertainty, Chaos, and Luck—Why Some Thrive Despite Them All*, authors Jim Collins and Morten T. Hansen examine why some organizations survive and even thrive despite significant challenges. One factor that accounts for this success is early recognition of problems and changing conditions. When problems are recognized early, the authors find organizations have a 71% success rate in achieving good outcomes—compared with only 13% when recognized late.ⁱ

Effective problem solvers fearlessly identify and address problems when problems are small. However, doing this requires clear performance expectations about what **should** be happening as well as accurate, timely, and relevant data about **actual** performance. Without both of these elements, we can't know if we even have a problem. How do we know if current rates of absenteeism, disciplinary referrals, turnovers, etc. are acceptable without having both a clear standard and good data about actual results?



The clearer our standards and the more we know about actual performance or results, the more likely we are to identify and catch a problem when it is relatively small.

Identify and stay focused on what's important

We must give sufficient time, attention, and resources to solving the right problems. Some problems are more directly connected to our fundamental mission and purpose and have a measurable impact on helping us achieve our goals. Often these problems are the ones that persist year after year because they are messy, overwhelming and perplexing. Sometimes we focus on the wrong problems—the ones we can easily solve. It may feel good to *cross things off the list*—but how much closer does it get us to achieving our important goals? Akin to organizing a utility drawer instead of fixing a leaking roof, we may fix one problem while a more significant one gets even bigger. This may appeal to our human need to feel competent and effectiveⁱⁱ, but it doesn't necessarily fix the problems that matter.

"Successful problem solving requires finding the right solution to the right problem. We fail more often because we solve the wrong problem than because we get the wrong solution to the right problem."

Russell Ackoff (Organizational Theorist and Professor)

Engage in a courageous and deliberate search for cause

Effective problem solving requires cause-finding. Sometimes finding true cause requires us to fearlessly consider alternative theories. **Effective problem solvers would rather get the right answer than be right.** It requires courage and humility to check our egos at the door and to be willing to go where the data leads. Collins & Hansen state: "The best leaders we studied...observe what worked, figured out **why** it worked, and built upon proven foundations. They were not bolder, more visionary, or more creative than their peers. They were more disciplined, more empirical, and more paranoid."ⁱⁱⁱ Paranoid meaning they were hypervigilant and aware of threats and changes, even during good times.

When things go wrong, we may feel intense pressure to do something—to *fix* it! Usually that means *make it stop hurting*. We need to remember that just because a problem hurts less, doesn't mean it is fixed. Applying ice packs to deal with a fever may make us feel better, but it doesn't fix the problem or address the underlying cause.

In *Thinking Fast and Slow*, Nobel Prize-winning author Daniel Kahneman asserts “Jumping to conclusions is risky when situations are unfamiliar, the stakes are high, and there is no time to collect more information.”^{iv} However, several factors contribute to our tendency to jump to conclusions or theories about cause:

- First, our brains are hard-wired to take the path of least resistance when thinking.^v Lazy thinking—making and trusting our hunches—is easier and takes less effort than doing a rigorous job of uncovering and analyzing information, even if the results aren't as good.
- Second, we tend to over-estimate the quality of our own judgments. Consequently, we tend to favor or over-rely on our own conclusions, intuition or *gut feelings*.^{vi}
- Paradoxically, the more knowledgeable we actually are, the less reliable our prognostications.^{vii} Studies have found that the greater our expertise, the less likely we are to even consider contradictory evidence or opinions—and the more confident we become that our conclusions are unassailable.

When critical problems emerge, we need to persist in efforts to find true cause and avoid taking the easy (and potentially ineffective) way out.

Use a systematic process for more efficient and effective results

It is hard to fight the urge for easy answers/sloppy thinking—*taking fast action in the place of effective action*. But slower, more deliberate action almost always produces better results.^{viii} A systematic, shared approach not only facilitates necessary involvement from stakeholders, it helps ensure you get the results you desire—and that you efficiently use time and resources in the process. Collins & Hansen found that when critical situations turned out well, 63% of the time a deliberate approach had been used. Conversely, of situations that turned out poorly—97% were associated with a reactive approach.^{ix}

Embrace the data

Good problem solving doesn't happen without good data. In today's world, we are often drowning in data. One expert estimates that 90% of the world's data was generated over the last two years.^x That is an astonishing statistic that speaks to the losing battle we face trying to be data *experts*. When problem solving, though, we often have an overabundance of data we don't need, and a lack of data we do. How do we tell the difference? And how do we handle the data we have? We need to be able to figure out which data are useful and which are extraneous, and then make sense of the good data we have.

Sometimes, we selectively use data—drawing on that which supports our theories while overlooking contradictory data. When we either do not get data we need or analyze them well, the quality of our solutions suffers. Using good data effectively helps us better understand the problem, find cause, and avoid ineffective fixes. We need to allow the problem to speak for itself (in the form of data)—and be willing to listen.

Value the involvement of others

Effective involvement of others increases the quality of solutions^{xi} and the commitment to them^{xii}. If we want the best, most accurate, relevant, and timely data, we need to include the people who have access to it – and share data with those who are part of the problem-solving efforts. In addition, the further we are

from the source of the problem, the more we must rely on others to shed light on the problem and how things actually work. Including others brings additional benefits to the problem-solving process: ideas, analysis, experiences, and increased commitment to solutions. Involving stakeholders elevates their understanding and capabilities and sends important signals about our value for them and what they offer. This is how organizational cultures begin to change—in small, but noticeable ways.

Invest in people and their skills

Good problem solving is a skill that can be taught, learned, and applied; people and organizations don't magically acquire it. We drastically reduce the learning curve by purposefully investing in the development of this skill. Incremental adjustments in skill level can have huge pay-offs. Organizations can reap big rewards with small improvements to problem solving. It isn't enough, though, to just **expose** people to skills. Seeing a return on training investment requires effort and sustained focus before, during, and after the training—for individuals and organizations. It sends a powerful, positive message when organizations invest in developing their peoples' skills—and then value and expect use of these skills.

Create a culture that supports good problem solving

We can run from problems—or we can treat them as opportunities for continuous improvement. All organizations and districts have a culture with spoken or unspoken norms and values that guide employee behavior and choices. These norms may not be specified, but they are understood and learned—and powerful influencers of behavior.

Some norms may be counter-productive to good problem solving, *e.g.*:

Problems? What problems?

In some systems, people tend to keep a problem hidden—or even deny its existence. Admitting problems may be shameful or threatening. “What they don't know won't hurt them”, or “Why open a can of worms if no one's complained?” These organizations may greatly limit who knows about or is involved in dealing with a problem.

Not my fault!

In some places, there's a tendency to point fingers and blame others for a problem. This fosters a culture where people do not take responsibility for fixing problems or being part of the solution. If it is always someone else's fault, what incentive is there to change?

Problem? Consider it fixed!

In some organizational cultures, immediate action shows responsiveness; “they can never question your value if you look busy.” “Keep the important people happy.” “If you want it done right, do it yourself.” Those at an administrative level may be expected to have all the answers—or at least appear like they do. In these cultures, action and frenetic activity are valued more than results.

While common, these types of norms run counter to what's required for good problem solving. If these characteristics exist in a culture, it encourages people to keep problems subverted and unresolved.

Districts and organizations that want a track record of effectively solving tough problems, need a culture that supports it. Creating a culture that supports desired outcomes takes intentional, sustained, and concerted effort. A positive, goal-aligned culture can be a powerful asset for change. Districts and leaders send powerful signals about what is expected and valued through:

- The goals they set and the way these goals are approached
- The ways in which big issues, problems, successes, and failures are handled
- The extent to which information is shared (or not)
- The results that are celebrated or criticized
- The value exhibited for others—e.g., the ways in which stakeholders are involved in problem solving and decision making, the investments made in professional development, etc.

These signals and behaviors begin to change norms and cultures. Cultures don't change overnight, but they are a powerful asset—or barrier—to creating positive change.

Develop effective solutions

After we determine a problem's cause, we need to figure out how to address it. Avoiding ineffective action is as important as taking effective action. When we are guessing at true cause, our actions are more likely to be ineffective. It may not always be feasible to take action directly against cause. For example, if dyslexia is the cause of a student's reading difficulty, we cannot eliminate the dyslexia, but we can certainly take actions to minimize its effects. That being said, our actions or solutions are always going to be more intentional and effective when we know what is truly causing the problem.

In conclusion

Effective problem solving requires us to size up a problem, understand its cause, and determine how best to fix it. Consider the difference between a solution that addresses a problem's cause, and one that addresses its symptoms. It's the difference between continuing to put water in the car radiator so it won't overheat, or fixing the leaky radiator. The first solution addresses the symptoms, the second the cause. Typically, solutions that address *cause* tend to be more long-lasting and effective.

When things go bad—or even off course—asking *why* allows us to take more informed and effective action. Several factors—human, situational, or organizational—may get in the way. But with intentional and concerted effort, we can elevate the problem-solving capabilities of individuals **and** organizations. Setting goals is the easy part. Pursuing and ultimately achieving goals takes focused and sustained effort—it takes a coordinated and systematic approach. But it is doable—and infinitely rewarding. When problems are better solved, students are better served—and that is a great outcome!

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Endnotes

ⁱ Collins, Jim & Hansen, Morten T. (2011). *Great by Choice: Uncertainty, Chaos, and Luck—Why Some Thrive Despite Them All*. Harper Business: New York, p.237.

ⁱⁱ Dorner, Dietrich. (1996). *The Logic of Failure: Recognizing and Avoiding Error in Complex Situations*, New York: Metropolitan Books, p. 189.

ⁱⁱⁱ Collins & Hansen, p.9.

^{iv} Kahneman, Daniel (2011). *Thinking Fast and Slow*. New York, p. 79.

^v Kahneman, p. 31, p.49.

^{vi} Metcalfe, Janet & Wiebe, David (1987). *Intuition in Insight and Non-insight Problem-Solving*. *Memory & Cognition*, 15(3), 238-246.

^{vii} Kahneman, p.219.

^{viii} Collins & Hansen, p.238.

^{ix} Collins & Hansen, pp.238-239.

^x SINTEF. "Big Data, for better or worse: 90% of world's data generated over last two years." ScienceDaily. ScienceDaily, 22 May 2013.

^{xi} Perkins, D.N. (1981). "The Mind's Best Work." Cambridge, MA: Harvard University Press.

^{xii} Vroom, V.H. & Yetton, W.P. (1973). *Leadership & Decision-Making*. Pittsburgh: University of Pittsburgh Press.