

“Fractal” Experiences, Quick Wins, and School Success

By Mike Galvin

If you take a close look at a fern plant, you’ll notice something striking. Each frond on the plant looks like a miniature version of the plant itself. And each leaf on the frond resembles



a miniature version of the frond. This self-replicating pattern in the fern plant—a phenomenon which is found throughout nature in such things as snowflakes, clouds, and river networks—is called a “fractal.”

The fractal pattern of the fern can serve as a metaphor for successful school change—change that happens simultaneously at many magnitudes and at many levels within an organization.

Few schools have had success with significant and multi-leveled changes, and most would benefit from experiences with change on a small scale before they tackle changes at a grander scale. We use the term “fractal experience” to describe a small-scale, carefully designed school improvement experience that contains the same elements as a large-scale, school-wide improvement effort.

Because fractals are small, simple, and completed in a short period of time, it’s easier for stakeholders to “connect the dots” between actions and outcomes. Quick wins can help address key intangibles in school improvement, such as creating a “can-do” attitude or “collective efficacy” among school staff, which University of Michigan researcher Roger Goddard notes is a key predictor of school success.¹ And, just as importantly, fractal experiences that do not achieve their desired results help the organization learn how to become better at initiating and managing change.

What it looks like in practice

Recently, McREL consultants helped a high school design a fractal experience to increase parent

involvement of students with failing grades in one or more classes. The fractal grew out of data showing that parent involvement of these students was low and a belief that increased parental support would help decrease the number of students who were failing courses. The leadership team designed a strategy for reaching out to parents to encourage them to attend spring parent-teacher conferences. Teachers agreed to contact previously non-attending parents by phone and set up a simple system to monitor their plan.

As a result, more parents attended spring conferences, and many were parents of students who were failing courses—parents who had not attended conferences in the past. The fractal experience demonstrated to teachers that when everyone worked together around a shared agreement, they could make a difference in parent involvement. The leadership team is considering ways to sustain the success of this outreach program and measure its effects on student achievement. **CS**

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How to Create a Fractal Experience

- Select a goal (or a small portion of a goal) from the existing school improvement plan and a strategy related to the goal that lends itself to a short-term effort.
- Develop simple, easily administered assessments for pre- and post-measurement.
- Develop an easy-to-use record keeping system to track the implementation and results of the effort.
- Ensure that all staff members have a clear understanding of the shared goal and their individual roles in the fractal experience.
- Debrief the fractal experience, specifically attributing success or failure to the collective effort; identify steps to take to sustain successful change, or to improve results during the next improvement cycle.

¹Goddard, Y.L., Goddard, R.G., & Tschannen-Moran, M. (in press). A theoretical and empirical investigation of teacher collaboration for school improvement and student achievement in public elementary schools. *Teachers College Record*.