

# The Impact of Fidelity of Implementation in Effective Standards-Based Instruction

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Delivery of instruction must match instructional design in order to maximize program benefits.

**S**tate-mandated assessment systems and No Child Left Behind requirements brought with them intense district and school efforts focused on aligning what is taught with what will be tested. Typically, these efforts began with the development of aligned curricula—*what* will be taught, followed by cultivating pacing guides that specified *when* particular content and skills would be covered. Finally, there was sometimes attention given to *how* lessons were to be taught.

The determination of how lessons were to be taught was most often provided when a school—or even a district—adopted a program that evidence suggested had a positive impact on student achievement. Such an approach might be as broad as a comprehensive school-reform program with instructional components or as narrow as a specific curriculum or instructional strategy. Education decision-makers used information about “what works” and selected a specific approach, hoping it would help their students learn the required content and skills.

As principal, you may have implemented a program that boasted glowing reports but didn’t live up to its promise. The cause of this disparity could be that the program didn’t match your school’s and students’ needs in terms of the curricular focus or that previous results were more positive than warranted.

However, there’s another possibility. Even programs that research demonstrates can have a strong positive impact on student learning must be put into practice every day in the way developers intended

because “No program—no matter how sound it is—can have impact if its essential elements are not used” (Yap, Aldersebaes, Railsback, Shaughnessy, & Speth, 2000). A program or approach that is effective in other settings can be ineffective in yours if the way it is being implemented takes it far away from its original design. The term used to describe this concept is fidelity of implementation (FOI)—“the delivery of instruction in the way in which it was designed to be delivered” (North Dakota Department of Public Instruction, n.d.).

Researchers Wallace, Blase, Fixsen, and Naoom (2008) connect implementation to student learning because “improved outcomes in education are the product of effective innovations and effective implementation efforts.” They write that the most critical piece to this puzzle is that “*teachers are the intervention*.” Well-described innovations inform when and how they interact with students and stakeholders, but it is the person (the teacher) who delivers the intervention through his or her words and actions.”



The FOI concept has received increased attention in recent years because evaluations of comprehensive school reform (CSR) programs found that, in general, schools implementing a CSR model experienced improvement in student achievement outcomes no better than matched schools that did not implement a CSR program. However, schools with “high levels of implementation [and] ... uniformity of high implementation across program components” did experience improvements in achievement, especially in the areas of math and reading (Aladjem & Borman, 2006). The analysis also found that schools implementing the CSR model called Success for All “showed larger gains in student achievement than other models.” In the view of the researchers, it was the “prescriptive nature of [Success for All] materials and instruction” that likely resulted in

high levels of implementation and consequently, higher levels of achievement.

In addition to this example, several research projects funded by the National Science Foundation are focused on developing ways to monitor FOI regarding specific approaches to teaching science and mathematics. For example, in their study of inquiry-based science instructional practices, researchers O’Donnell and Lynch (2008) found positive effects on student achievement only when teachers used inquiry-based materials *and* when there was “high fidelity of implementation to the instructional strategies embedded in the materials.”

FOI is also an explicit requirement of response to intervention strategies. Experts writing about response to intervention stress that FOI implementation is critical both in terms of the school-level process and teacher use of the

approach (Johnson, Mellard, Fuchs, & McKnight, 2006).

### Importance of FOI

Let’s return to three words key to standards-based instruction that were introduced at the beginning of this article: *what*, *when*, and *how*. Even if your school or district has clearly defined what should be taught and when, the *how* can have a significant impact on whether your students meet standards. Obviously, one aspect of this piece of the equation is general teacher competence. Does the teacher know the content? Is the teacher an effective classroom manager? Does the teacher know how to differentiate instruction in an ongoing way to meet the needs of an often wide range of student knowledge and abilities? Even if the answer to these questions is yes, a competent teacher may have his or her own ways

of interpreting and implementing the how-to's of a particular program or approach. This distinction can be problematic if instruction in practice looks very different than instruction as designed.

Johnson et al. (2006) identify four factors that affect FOI:

- **Complexity.** The more complex the intervention, the lower the fidelity because of the level of difficulty.
- **Materials and resources required.** If new or substantial resources are required, they need to be readily accessible.
- **Perceived and actual effectiveness (credibility).** Even with a solid research base, if teachers believe the approach will not be effective or if it is inconsistent with their teaching style, they will not implement it well.
- **Interventionists.** The number, expertise, and motivation of individuals who deliver the intervention are factors in the level of FOI.

Wallace et al. (2008) identify the concept of "core components" as another element affecting FOI. These were the "essential and indispensable" elements of a practice—those that were critical to the likelihood of achieving positive results. In the view of these researchers, "There is some evidence that the more clearly the core components of an intervention program are known and defined, the more readily the innovation can be implemented successfully."

### Working to Ensure FOI

There are obviously additional and practical elements that affect the way an approach looks in practice. For example, Leonard-Barton and Kraus (1985) suggest that "Many implementation efforts fail because someone underestimated the scope or importance of preparation." As your school's instructional leader, you need to be proactive in addressing this issue, even if the program or curriculum is a district-level initiative. Ask questions such as these:

- Have teachers been fully trained?

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- Have they had time to discuss and practice the approach?
- Have you or other members of the school staff received training in what the practice would look like in the classroom if implemented effectively?
- Does the instruction you're observing fit this pattern?

Wallace et al. (2008) conducted an extensive review of research on implementation efforts and found that neither information about a practice nor training alone was enough to ensure that a program would be implemented accurately. A meta-analysis of research on training and coaching identified the importance of adding a coaching component to helping teachers master effective use of new skills in the classroom (Joyce & Showers, 2002).

Gunn (n.d.) suggests that a school's preparation for and work with a new program or instructional approach should include these key components:

- Learning the program—both curriculum content and approaches for instructional delivery, including ways to provide explicit instruction, demonstrate skills and strategies, guide student practice, and provide corrective feedback;
- Staff observation of the practice in operation—either by visiting other schools or classrooms, or by allowing teachers time to practice and observe one another during initial implementation;
- Teaching time during which teachers develop comfort and fluency and assess how the approach works with their students;

- Observation by other staff members who have been trained in what they should be observing, with feedback provided as a way to increase FOI, not as an evaluation of teaching quality in general; and
- Refinement through teacher use of observation feedback, grade-level or team meetings to discuss the practice and its implementation, and development of some "calibration checks" for teachers to use to monitor their own implementation.

Gunn (n.d.) also provides some specific suggestions for principals to ensure that the "how" of teaching is on target. In particular, principals need a working knowledge of the adopted program or strategy, should make special efforts to observe in classrooms during the initial

### WEB RESOURCES

*Responsiveness to Intervention (RTI): How to Do It* is an online guide posted by the National Research Center on Learning Disabilities that includes a section on fidelity of implementation. [www.nrcld.org/rti\\_manual/index.html](http://www.nrcld.org/rti_manual/index.html)

Researchers from the National Implementation Research Network present "Lessons Learned from Research on Implementation" in this PowerPoint presentation. [www.nwrel.org/nwrc7/images/rti2007/fixsen1.pdf](http://www.nwrel.org/nwrc7/images/rti2007/fixsen1.pdf)

In this *Journal of Staff Development* article, Robby Champion writes about an approach to "gathering diagnostic data on individuals involved in incorporating a new approach into their daily work." [www.nsd.org/publications/getDocument.cfm?articleID=514](http://www.nsd.org/publications/getDocument.cfm?articleID=514)

phase of implementation, and “facilitate fidelity without evaluation.”

Another aspect of your role in regard to your teachers’ implementation of a new program or practice is to create opportunities for formative assessment. Waiting until the end of the year to identify positive impact—or lack of it—on student learning is too late. Instead, work with teachers to develop ways to monitor implementation and to ask, “Does this seem to be working for our students?” Periodic reviews of how things are going can help:

- Determine whether the program is being implemented as the program developers designed it, and that the most vital components of the program are in place; and
- Enable staff to retool and fine-tune their efforts to make a program work at a specific site. A strong formative evaluation can help a program to “hum” at a particular school (Yap et al., 2000).

Finally, Wallace and colleagues recognize that the professional judgment of you and the teachers in your school should not be ignored just for the sake of staying with the “script” provided by program developers. They have this suggestion for school leaders: “First, implement the innovation with high degrees of fidelity and assess intended outcomes, then look at how to change the innovation in ways that better suit the needs of your school while maintaining or improving the outcomes” (Wallace et al., 2008). □

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