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Lessons from a 4-Year Fluency Intervention Time, Engagement, Melanie R. Kuhn Paula J. Schwanenflugel

Fluency is often seen as a bridge between decoding and comprehension (Pikulski &/Chard, 2005), one that enables students to become accurate, automatic, and expressive readers. However, this transition is a complex one and involves a range of developmental processes (Kuhn et al., 2006). Our chapter discusses these complexities through the lens of our multiyear, Interagency Education Research Initiative/National Institute of Child Health and Human Development (IERI/NICHD) intervention on fluency development, focusing on three components that we feel are critical to student growth: the amount of time students spent reading, their level of engagement with challenging material, and the support these students received in reading such texts. We consider each of these to be essential to fluency development, in particular, and skilled reading, in general, and believe that the structure of our lesson plans provide students with access to all three of these factors.

Fluency Defined and Described

There is a growing consensus that fluent reading is made up of three primary components: accuracy, automaticity, and appropriate prosody (e.g., National Institute of Child Health and Human Development [NICHD], 2000). In other words, fluent readers are able to identify the vast majority of the words they encounter both quickly and correctly and are able to read aloud using appropriate pacing, phrasing, and expression. We feel it is important to stress all three components for two reasons. First, there appears to be an overemphasis on fast, accurate reading in some classrooms at present, perhaps driven by the use of correct words per minute as the primary or only measure of fluent reading (e.g., Mathson, Allington, & Solic, 2006; Walker, Mokhtari, & Sargent, 2006). To prevent students from developing the mistaken notion that reading is a race, it is critical that their understanding of reading fluency incorporate prosody so that, when they read aloud, their reading sounds like oral language.

Our second reason for emphasizing accuracy, automaticity, and prosody has to do with their relationship to comprehension (Samuels, 2006). When students are beginning to develop their word recognition, they need to spend significant amounts of time—and attention—identifying each word they encounter in a text. Because these learners are expending so much attention on their decoding, they have little left over to focus on the text's meaning. However, as they develop their familiarity with words, both through decoding instruction in isolation and through extensive practice in reading connected text, their word recognition becomes automatic. As a result, the attention that they previously expended on word recognition is now available for the construction of meaning (Schwanenflugel et al., 2006). Since fluent readers are, by definition, not only accurate but also automatic readers, they are better able to comprehend text than are disfluent readers.

Next, fluent readers are also prosodic readers. Students who are just learning to read are monotonous in their oral reading and tend to group words in ways that diverge from oral language, often in word-by-word or two-word phrases. However, as their reading develops, they learn to read aloud with appropriate phrasing and expression, an indication that they are able to transfer elements present in oral language to print (Dowhower, 1991; Schreiber, 1991). Further, this denotes a level of comprehension regarding their reading, since the use of stress, pitch, and other prosodic elements helps to indicate nuances in the text (Miller & Schwanenflugel, 2006). Although there is a distinct relation-

ship between prosody and comprehension, exactly how the two are related to each other is still unclear—that is, does prosody contribute to comprehension, does comprehension need to occur before prosodic elements can be applied, or is the relationship between the two reciprocal (Erekson, 2003; Miller, 2007; Schwanenflugel, Hamilton, Kuhn, Wisenbaker, & Stahl, 2004)? Despite the need for further research in this area, what is clear is that prosody is an important element in text enjoyment and an essential part of fluency development.

Fluency Involves Practice

When discussing fluency, one element that is considered critical to its development, both in terms of theory (e.g., LaBerge & Samuels, 1974) and in terms of instruction (e.g., Rasinski, 2003), is that of practice. However, the type of practice that learners participate in determines to a large extent whether or not they become fluent readers. First, while word work (decoding, high frequency word instruction) is a necessary component in your students' fluency development, it is not sufficient (e.g., Allington, 1983; Chomsky, 1976; Levy, Abello, & Lysynchuk, 1997). In fact, learners who spend the bulk of their time practicing word identification in isolation without simultaneously practicing their reading of connected text become very skilled at word recognition in isolation; however, this does not necessarily transfer to their reading of connected text. To be skilled at both word and text reading, students must have opportunities to apply what they are learning about words to the reading of connected text. This allows developing readers access to the kinds of material, such as novels, magazines, newspapers, textbooks, and electronic text, that they will eventually want or need to read.

Next, simply asking students who are not yet fluent to read, for example, during independent reading time, often fails to provide them with sufficient support to make this practice effective. Beginning readers tend to select books that are too difficult for them (Donovan, Smolkin, & Lomax, 2000), and struggling readers try to avoid the task altogether (e.g., Hasbrouck, 2006). Although students who are experiencing success with their reading development usually enjoy the opportunity to read for extended periods of time, students who are experiencing difficulties with their reading, including disfluent readers, do not. This can also result in behavioral issues that, in turn, prevent these learners from making the best use of their independent reading time (Bryan, Fawson, & Reutzel, 2003; Lee-Daniels & Murray, 2000). Being unable to engage effectively during independent reading simply makes it too

word work

July was

boring and frustrating to take part in day after day. We suggest that, instead of simply asking your students to read on their own for 10-to 20-minute periods and expecting all of them to be engaged, it may be more effective to provide them with options such as partner reading, reading-while-listening, or mumble reading—all of which include greater support—as a means of increasing their ability to make their practice successful. And, by providing all your students rather than just the disfluent ones with these options, you will be increasing the like-lihood that your learners will find these alternatives enjoyable rather than embarrassing.

Instructional Features That Foster Fluency

A recent review of the research on fluency instruction (Kuhn & Stahl, 2003) indicated that when sufficient support, or scaffolding, is provided, learners can benefit from reading texts that are far more challenging than their instructional level might indicate. As the result of these findings, challenging material has served as the basis for both our interventions. In fact, one of our research questions was designed to determine whether children who were reading below grade levelsometimes significantly below grade level—could become fluent readers using grade-level material if they were provided with sufficient support. This same review of research also indicated that, given sufficient scaffolding, learners might benefit from the reading of a number of different texts as much as if they were to read a single text repeatedly. Therefore, a second research question for our study involved looking at the relative effectiveness of the repeated reading of a given text and the reading of a greater number of texts for equivalent amounts of time; specifically, we wanted to know whether there was something unique in the repetition of text, a key component in most fluency instruction, that led to the development of automaticity or whether the provision of opportunities to read multiple scaffolded texts led to similar gains in reading development. Before presenting the results achieved over the course of the 4-year intervention, we want to discuss each of the approaches individually.

Fluency-Oriented Reading Instruction

The first instructional approach, Fluency-Oriented Reading Instruction (FORI; Stahl & Heubach, 2005), was designed in response to a district

mandate that required students to work exclusively with grade-level text. Since the district in question had high rates of poverty, many of the students within its jurisdiction were reading below grade level. As a result, both the teachers in the district and the authors of the program were concerned about the discrepancy between students' reading ability and the required texts. In order to alleviate some of the difficulties that might arise from the use of these texts and provide the students with means of accessing them, the authors worked with the teachers to design an approach that integrates scaffolding, repetition, and the gradual release of responsibility as part of a 5-day lesson plan (see Figure 7.1). Since the district used a basal reader/literature anthology, the teachers in the initial study built their lessons around these selections; however, any grade-level text could be used.

On the first day, the teacher introduces the text using typical preteaching activities (e.g., vocabulary development, building background knowledge, etc.). This is followed by his or her reading of the week's selection to the class while the students follow along in their own copy

Fluency approach	Monday	Tuesday	Wednesday	Thursday	Friday
Fluency- Oriented Reading Instruction Basal Iesson	Teacher introduces story. Teacher reads story to class; class discusses story. Option: Teacher develops graphic organizers. Option: Class does activities from basal story.	Students practice story. Teacher and students echo read story.	practice story. Teacher and	Old do	Students do extension activities. These may include writing in response to story, etc. Option: Teacher does running records of students' reading.
Home reading	Students read 15–30 minutes in a book of their choosing.	Students take story home and practice reading basal story aloud to someone.	Students who need more practice take home the basal story— others take book of their choosing.	Students who need more practice take home the basal story— others take book of their choosing.	Students read 15–30 minutes in a book of their choosing

FIGURE 7.1. Weekly lesson plan for the FORI approach.

of the material. Upon completion of the first reading, the teacher and students take part in a discussion of the material; the discussion is designed to take place early in the lesson to reinforce the understanding that comprehension rather than word recognition per se is the primary goal of reading (Hoffman & Crone, 1985). On day 2, the teacher and students echo read the passage, with the teacher interspersing questions throughout the selection to refine the students' comprehension (e.g., Stahl, 2007).

The third day involves the final teacher-led rendition of the text and takes the form of a choral reading. While it is reasonable to incorporate additional discussion at this point, the lesson plans do not call for it. Day 4 requires the students to take primary responsibility for the text by partner reading the week's selection. Should time permit, the students can complete a second reading of the text, with the students reading the pages opposite to those they read originally. On the final day, the teacher and students participate in their traditional extension activities (e.g., writing in response to the reading, imagining an alternative ending, etc.). From day 2 onward, students are also asked to read the week's selection at home. As individual students become comfortable with the material, they can choose to read a different text as an alternative; however, students who are still not fluent with the week's selection should continue to read it on Wednesday and Thursday nights as well. During the original 2 years of the intervention, the students participating in the FORI classroom demonstrated 1.8 and 1.7 years' growth, respectively, on an Informal Reading Inventory (IRI). Given these results and the relative simplicity of the approach, we concluded that this would be a useful approach to integrate into our study.

Wide Reading

The original wide reading study was designed to look at the relative effectiveness of repeated reading and wide reading over the same period of time (Kuhn, 2005, 2009). Four groups took part in this intervention: a repeated readings group Fluency-Oriented Oral Reading (FOOR), that read a single text three times over the course of a week; the Wide Fluency-Oriented Oral Reading (Wide FOOR) that read three different texts over the course of a week; a listening-only group whose members listened to three different texts over the course of a week; and a control group that received no additional literacy instruction beyond that which was occurring in the classroom. Each of the first three groups worked with the study's author for 15–20 minutes per session. On Mon-

day, the repeated readings group echo read a text; on Wednesday they partner read the story; and on Friday they choral read the story and, if they chose to, read a portion of the practiced text out loud. The wide reading group, on the other hand, echo or choral read a new text on all 3 days, while the listening-only group listened to the same selections that their peers in the wide reading group read for themselves.

While both of the groups who read the texts as part of the intervention demonstrated better growth in their reading proficiency than either the listening-only or the control groups, the results were not identical. On the measures of word recognition in isolation, prosody, and correct words per minute, both the FOOR and the Wide FOOR groups made similar gains; however, the Wide FOOR group showed greater growth in comprehension than any of the other groups, indicating that the Wide FOOR approach may be the more beneficial of the two. Since there were indications that wide reading might assist learners' reading development as much as (Kuhn & Stahl, 2003), if not more than (Kuhn, 2005), repeated reading, we wanted to use a wide reading approach as part of the intervention as well; but we needed to rework this intervention into a lesson plan that could be implemented on a weekly basis (see Figure 7.2). The modified FORI approach incorporated three grade-level texts, including the class's primary shared text—whether this was a selection from the basal anthology, the literature anthology, or a trade bookover the course of each week. The two additional texts were class sets of grade-level trade books provided by the researchers.

The first 2 days of the Wide FORI approach were designed to parallel the FORI lesson plan. On Monday, the teacher would conduct his or her usual introductory activities as a way of familiarizing students with the material; the teacher would then read the selection to the students while they followed along. This was followed by a discussion of what had been read. On Tuesday, the teacher and students would echo read the text, with the teacher interspersing comprehension questions throughout the material. On Wednesday, the two lessons diverged. Rather than continuing to reread the selection, the students in the Wide FORI approach instead worked on the extension activities for their primary text (paralleling day 5 of the FORI lesson). Finally, on Thursday and Friday, days 4 and 5 of the Wide FORI approach, the teacher would echo read a second and a third text with the students. The teacher was also encouraged to briefly introduce the text, intersperse questions during the echo reading, and hold a discussion with students after the reading of the selection was completed. All of the texts were also sent home for additional reading practice; the primary selection was sent

Fluency approach	Monday	Tuesday	Wednesday	Thursday	Friday
Wide FORI	Teacher introduces story. Teacher reads story to class; class discusses story. Option: Teacher develops graphic organizers. Option: Class does activities from basal (story 1).	Students practice story. Teacher and student echo read story 1. Option: Students do partner reading.	Students do extension activities. These may include writing in response to story, etc. Option: Teacher does running records of students' reading.	Teacher and students echo or choral read trade book (story 2). Option: Students partner read story 2. Option: Students do extension activities (writing, etc.).	Teacher and students echo or choral read trade book (story 3). Option: Students partner read story 3. Option: Students do extension activities (writing, etc.).
Home reading	Students read 15–30 minutes per day in a book of their choosing.	Students take story home and practice reading basal story aloud to someone.	Students read 15–30 minutes per day in a book of their choosing.	Students read 15–30 minutes per day in a book of their choosing.	Students read 15–30 minutes per day in a book of their choosing.

FIGURE 7.2. Weekly lesson plan for Wide FORI approach.

home on Tuesday and, possibly, Wednesday for those students who were still not fluent with the piece; the second and third texts, on the other hand, were sent home with the students only on the days they were read (Thursday and Friday, respectively). These modifications allow any teacher using this approach to cover the material required by a district while simultaneously extending students' opportunities to read two additional texts each week.

Nonintervention Classrooms

Before moving on to our results, we briefly outline the range of reading and language arts instruction that the teachers were using in the nonintervention classrooms. There were a number of different literacy activities going on in all of the classrooms, none of which dominated in any single class, including reading workshop, guided reading, writing workshop, round-robin reading, shared reading, and a variety of

literacy centers. While some of these approaches are considered to be more effective instructionally than others (e.g., Ash & Kuhn, 2006), we found these activities to be typical of the range of approaches used in the literacy curricula we have encountered over each of our 20-plus years of teaching and conducting research.

What Happened over the Course of the Intervention?

There were several important findings from this study, some of which we determined through assessment measures and others that we ascertained through the use of a version of the CIERA school change classroom observation scheme (Taylor & Pearson, 2000) that was modified to include the fluency practices we presented as part of our intervention's professional development. However, because of the variations that occurred over the course of the intervention, we believe that these results need to be presented on a year-by-year basis.

Years 1 and 2

Our initial data, based on our classroom observations, determined that there was an increase in what we consider to be our core fluency activities in the FORI and Wide FORI classrooms during the first 2 years of the intervention. That is, there was greater emphasis on teacher readalouds, repeated readings, echo reading, choral reading, and partner reading in the intervention classrooms than in the nonintervention classrooms. In terms of other forms of reading instruction, we found that the teachers in the nonintervention classrooms spent more time on word work and round-robin reading than did their peers in the intervention classrooms. Finally, there was greater emphasis on reading, particularly oral reading, and less emphasis on language arts activities in the intervention classrooms than in the nonintervention classrooms.

The year 1 findings (see Kuhn et al., 2006) indicated that the intervention teachers willingly shifted to more fluency-oriented instructional practices as compared with control teachers and engaged in fewer of the less effective practices such as round-robin reading. As a result, students in both types of intervention classrooms enjoyed better word reading efficiency and comprehension skills than their counterparts in the nonintervention classrooms. However, students in the Wide FORI intervention also demonstrated greater text reading fluency than those in control classrooms (see Table 7.1).

TABLE 7.1. Results for Year 1 Students (2001–2002), Using Test Standard Scores

Deores				
Assessment point	Condition	TOWRE	GORT-3	WIAT
End of year	Control	98	8.8	99
	FORI	1024	9.1	101ª
	Wide FORI	101ª	9.34	102

Note. TOWRE, Test of Word Reading Efficiency; GORT-3, Gray Oral Reading Test—Third Edition; WIAT, Wechsler Individual Achievement Test, Reading Comprehension Subtest.

In the second year, we replicated this study but broadened our focus somewhat. We were concerned about long-term consequences and possible "unintended effects" of the interventions. An honest evaluation of any program or, in our case, set of programs should take into account all types of changes that the programs might bring—the good, the bad, and the ugly.

We looked for effects on reading soft skills, such as changes in reading motivation and children's general attentiveness during reading lessons. We had been told in informal conversations with our first-year intervention teachers that their students were more motivated to read as compared with approaches these teachers had used previously. If their perceptions were accurate, this endorsement would be an excellent unintended consequence! Thus, in this second year, we evaluated this possibility by expanding our assessments to include the Motivation to Read profile (Gambrell, Palmer, Codling, & Mazzoni, 1996). This scale has two subscales, Value of Reading and Self-Concept as a Reader. Value of Reading assesses how important the respondent believes reading is, how frequently he or she likes to engage in reading-related activity, and generally how useful the respondent believes reading will be in his or her life. Self-Concept as a Reader, on the other hand, measures the respondent's personal assessment of his or her competence in performing reading tasks and his or her view of reading as either easy or difficult.

We also evaluated the student's time on task more closely. Teachers at some of the sites expressed the concern that there was a bit of "social loafing" going on during some of these reading lessons—that is, slacking off during choral reading and echo reading or perhaps kidding around during partner reading. If true, this would be a negative unintended consequence.

Finally, we worried that the emphasis on fluency might detract

from other important types of instruction, particularly comprehension instruction. After all, there are only so many minutes in the reading day! We worried that the increase in fluency-oriented instruction came at the expense of this important type of instruction. Consequently, we evaluated whether there was less comprehension instruction happening in our intervention classrooms.

The good news was that, like the first year, teachers were willing to include more fluency-oriented practices in their classrooms, but their emphasis on comprehension was similar to that experienced in control classrooms. Fluency practice was not added at the expense of an emphasis on comprehension. On the downside, our classroom observations indicated that some students were, indeed, more likely to be off-task during the reading lessons in the second year. However, in all fairness, some of the classrooms in which these interventions took place did not have the best classroom management techniques to begin with.

Further, by the end of the year, reading fluency had increased over controls, but only for the students in Wide FORI classrooms, despite early gains by the FORI group. There were no other detectable differences between controls and intervention students on reading skills per se. Moreover, students in Wide FORI classrooms rated themselves as having a more positive self-concept as a reader as compared to students in control classrooms, although both groups valued reading similarly (which is close to ceiling at this age).

One year later, fluency was similar for all three groups, but students in both the FORI and Wide FORI groups demonstrated better reading comprehension skills (see Table 7.2). Thus, whatever resource benefits that early fluency had provided intervention children resulted in improved comprehension a year later.

Year 3 (Scaling Up)

Our final year of interventions brought major changes to the implementation of the fluency intervention. Our mandate was to scale up one of these approaches to a large number of classrooms—in our case, it was nearly 60 classrooms. We decided to focus exclusively on the FORI approach because, since it required fewer resources, it was the more practicable alternative; we considered this to be a reasonable decision, given the lack of resources faced by many schools. After 2 years of assisting teachers in providing materials for both approaches, we were well aware that the Wide FORI approach was expensive, perhaps too expensive for resource-strapped low-income schools. A quick calcula-

[&]quot;Indicates significant controls at time point, adjusting for preintervention pretest scores, using HLM.

TABLE 7.2. Results for Year 2 Students (2002-2003), Using Test Standard Scores

Assessment point	Condition	TOWRE	GORT-3	WIAT
End of intervention year	Control	199	8.7	101
	FORI	200	9.0	101
	Wide FORI	203	9.3^{a}	103
1 year later	Control	100	8.8	96
,	FORI	102	9.2	98 ^a
	Wide FORI	102	9.4	99 ^a

Note. TOWRE, Test of Word Reading Efficiency; GORT-3, Gray Oral Reading Test-Third Edition; WIAT, Wechsler Individual Achievement Test, Reading Comprehension Subtest.

"Indicates significant increase over controls at time point, adjusting for pretest scores, using one-tailed HLM test.

tion, for example, suggests that, for the typical 35-week school year, 105 separate class sets of grade-level texts would have to be bought or found to carry out Wide FORI effectively. Although we do not think this is an insurmountable number, even for low-income schools, we do think that it requires considerable imagination for large-scale implementation (although we present some possibilities later in this chapter).

It also appeared that the Wide FORI approach requires greater professional development and support with regard to finding grade-level texts than the FORI approach. Thus, while the FORI approach could be carried out with the basal materials provided by one's school system and with virtually no time spent in identifying appropriate texts, the Wide FORI approach would require time, energy, and expertise for finding enough grade-level classroom sets to provide wide reading practice for the whole year. Up to this point, significant amounts of professional development support had been provided by us through trained assistants who visited the schools often and through meetings that were scheduled between the researchers, faculty, and students' families. In the final year, however, we included only a standard professional development training session and one follow-up meeting with each teacher after we carried out a formative classroom observation. This was more typical of, or even better than, the professional development teachers often receive, but it was certainly well below what might be considered ideal.

The results were incredibly disappointing. After 24 weeks, students in FORI classrooms experienced no benefits over those in control classrooms in word reading efficiency or reading comprehension. Even

more surprising, students in FORI classes performed even worse than control students in terms of the number of words correct per minute (wcpm)! What happened?

To better understand the statistical results, we reverse engineered the issue by turning to our observations for answers. What we found was an inconsistency in the implementation of FORI over the course of the year. In terms of basic fidelity to the research plan, we found that 49% of the intervention teachers followed the basic format, but 22%used it only part of the time and 29% did not use it at all. This level of fidelity was well below what we had calculated during our first intervention year. Further, the core activities were seen in only 23% of the 5-minute segments we observed in the FORI classrooms, not all that different from the 15% of the segments observed in the nonintervention classrooms. This finding also implies that even the teachers who were following the basic format were not implementing it for the significant lengths of time that we recommended.

In addition to looking at the observations directly, we also tried to reason backward by comparing the seven most successful classes in terms of improved fluency (measured by the increase in wcpm over the course of the year) to the seven least successful classes regardless of condition. What exactly were the effective teachers doing that the ineffective teachers were not? When comparing the classes that made the most improvement with those that made the least, we found that the difference could be captured largely by one simple fact—namely, there was a noticeable difference in the amount of reading that was occurring during the students' shared reading instruction. Specifically, the students in the classes that showed the greatest growth in reading proficiency read approximately 7 minutes more per day on days we observed than did their peers in the least successful classes; if extrapolated over the full 24-week period, this totals 840 additional minutes of reading over the course of the intervention for successful classes. Moreover, the teachers in the classes with the greatest growth demonstrated better classroom management, and, not surprisingly, their students exhibited more ontask behavior than was the case in the least successful classes.

Thoughts, Theory, and Some Questions

Thoughts

Given the findings from our multiyear intervention, we have several insights regarding the relative effectiveness of the two approaches.

Time, Engagement, and Support

First, we feel fairly confident that the Wide FORI approach—that is, the use of multiple challenging texts with significant support—is more consistently effective in assisting students in their reading development. This finding has begun to be confirmed in other studies as well (e.g., Mostow & Beck, 2005; Schwebel, 2007). Although we initially had reservations regarding recommending this approach over the FORI approach because of the difficulty some schools may have in finding sufficient materials, we think our evidence for Wide FORI is strong enough to recommend it. We believe the materials issue can be solved through some creative "scavenging." For example, it is quite likely that most schools have retained earlier versions of basal readers or literature anthologies; these can serve as the basis of some additional selections. Similarly, many schools receive weekly magazines designed for young readers, and these can serve as another source for selected texts. Also, many schools have enough copies of a given title available to make up a class set of a text. For example, one school we worked with had six copies of Frog and Toad Are Friends (Lobel, 1970) in each of the three second-grade classrooms, and there were several other copies in the school and various classroom libraries; taken all together, there were enough to make a class set. Finally, we have found numerous grade-level texts available on the Internet that can be downloaded. Allowing for the use of these various options, we believe it is reasonable to recommend the Wide FORI approach as the basis of a fluency curriculum.

Second, we believe the FORI approach might be deceptively simple-so simple, in fact, that teachers may think that they do not need to attend to the implementation of the instruction as carefully as they might for other, more complex, literacy programs. This lack of attention may, in turn, have led to insufficient amounts of time being spent reading the actual texts, creating what amounts to a haphazard implementation of the approach. In fact, because of repeated readings, children do quickly become fluent on the weekly selection. As a result, we saw teachers in less successful classrooms moving on from FORI practice after a single quickly executed reading on a given day. This leads to insufficient reading practice on the children's part. We consider 20-40 minutes, depending upon the daily activity, to be a reasonable amount of time to spend on the FORI selections. Although the approach is very straightforward, teachers still need to ensure that the selections are sufficiently challenging and of sufficient length to warrant being read between four and seven times weekly. Teachers also need to continue preparing appropriate introductory and conclusion activities for the material, along with comprehension questions to be used after the first reading and during the echo reading of the selection, rather than assuming that the repetition of the material is, in and of itself, sufficient for dealing with a complex shared text.

Third, the final year left us wondering (we do not yet have a clear answer) as to how important the integration of consistent feedback and monitoring is to the implementation and maintenance of a new curricular element. Professional development, whether teacher-driven (as in study groups) or district-driven (as in professional workshops), is central to change in our schools. However, exactly how this development is structured may make a significant difference in the effectiveness of a new approach. While we believe there is great value in 1-day presentations, if the notes that teachers take are just put into a drawer, they will do little to bring about improved instruction. Instead, if the research is to be applied in practice, it seems likely that the creation of a support group is needed to share positive ideas, questions that may arise, and frustrations encountered in implementation of the new approach. Given the relative ease of implementing the FORI procedure, the importance of continuing professional development becomes even more critical in our minds.

The second piece of the professional development puzzle has to do with the length of time such support needs to be available for the implementation of an approach to become a permanent part of the curriculum. Is 1 year sufficient, or does this need to be a multiyear process? In our own experience, we have found that old habits die hard; given this reality, how long does it take for an ineffective instructional approach, such as round-robin reading, to be replaced with a more effective approach, such as Wide FORI, in such a way that the new method is truly integrated into a teacher's core instruction? We would argue that, as a profession, we need to rethink instructional change in a systematic way if teachers are going to embrace new approaches. At present, many teachers have seen so many trends in the teaching of reading—both good and bad—come and go that they have developed a healthy distrust of the newest instructional method, whether research-based or not.

Theory

In our research we have been struck by the effectiveness of the Wide FORI approach for enhancing fluency. In each year that we tried it, students who received the Wide FORI program displayed better fluency than control students. We think the explanation for its success can be

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traced to the way that automaticity develops in a wide reading environment as compared to a repeated-reading one.

To some extent the ideas expressed in the FORI approach emerge from an earlier view of automaticity (LaBerge & Samuels, 1974). In these earlier views, the emphasis was on repetition as the key to automaticity. However, recent versions of automaticity theory, in particular, the instance theory of automaticity proposed by Logan (1997), imply that there may be benefits from a more distributed approach to practice over a purely repetitive one. It is important for reading theory to consider these changes and integrate them into thinking about the development of automaticity. The implications for reading instruction from these newer views are intriguing.

From an instance theory point of view, each time a child attends to text, an instance, or trace, of that text is automatically encoded in memory at the sublexical, lexical, phrase, and text levels. As these multileveled instances build up and their learning levels off, within a relatively few repetitions (three to five, according to many authors; e.g., O'Shea, Sindelar, & O'Shea, 1985, 1987; Reutzel, 2003) they become reasonably easy to retrieve.

In the FORI approach, a relatively small set of phrase, word, and sublexical instances are encoded and reactivated on each reading, allowing these and only these particular traces to be easily retrieved. In the Wide FORI approach, many instances at the phrase, word, and sublexical level are encoded through exposure to a variety of texts. In the Wide FORI approach described here, there is some repetition also, albeit less than in the FORI approach. There is probably enough repetition that the text instances are relatively easily retrieved. Children are likely to be able to read a number of text segments several times during the course of the week, but each one only two or three times. As a result, in the Wide FORI condition, children may have a great range of higher-level traces (i.e., a greater diversity of phrases and words) encoded well enough to become activated automatically during reading. Thus, because of wide reading, students are more likely to have similar traces available in memory to become activated, which would lead to overall improvement in their oral reading fluency. By contrast, reading approaches that emphasize constant repetition of only sublexical information (i.e., strict phonics and rime approaches), isolated sight-word repetition, or text repetition (such as FORI) might not create a diverse enough set of high-level traces to enable students to benefit from the activation of these traces in the way that wide reading does.

Consequently, we find more consistent theoretical and empirical support for Wide FORI approaches.

Questions

Although we have referred to some of our questions in the previous sections, we want to end this chapter with issues we feel are specific to the title of our chapter and are worthy of further research. First, we believe it is important to determine the extent to which common words appear specifically in the texts that we used in our two approaches, a question that is currently being pursued by Hiebert (2007) and, more broadly, in second grade leveled material (or texts that range from the late first grade through the early third grade since that was the range used in the study). This information will better allow us to determine the degree to which the diversity of traces at the lexical and sublexical level may influence the development of fluency. We think it is important to determine how much the recurrence of words affects students' retention of those words; in other words, how does seeing the same words or phrases in multiple texts help develop learners' word recognition? We also wonder what happens as the texts become increasingly challenging and the number of shared words decreases? That is, are there optimal levels of shared words, new vocabulary, and unknown concepts for developing learners' word recognition and fluency? And are these levels the same for developing students' knowledge of a construct as well? While we feel this study has increased our knowledge of the importance of time, engagement, and support in the development of reading fluency and has begun to clarify the role text plays in this process, there are still important research questions remaining. As such, we hope our work can serve as a stepping stone to the further clarification of these issues in future research.

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PART III

CRITICAL FACTORS IN SUPPORTING MORE AND BETTER READING