

## **What I've Learned About Effective Reading Instruction From a Decade of Studying Exemplary Elementary Classroom Teachers**

Using data from a lengthy study of first- and fourth-grade teachers in six states, Mr. Allington concludes that enhanced reading proficiency rests largely on the capacity of classroom teachers to provide expert, exemplary reading instruction — instruction that cannot be packaged or regurgitated from a common script because it is responsive to children's needs.

By Richard L. Allington

It seems that, finally, those who make education policy — at the local, state, and federal levels — have begun to recognize just how much good teachers matter. A series of studies have confirmed what was probably obvious from the beginning. Good teachers, effective teachers, matter much more than particular curriculum materials, pedagogical approaches, or “proven programs.”<sup>1</sup> It has become clearer that investing in good teaching — whether through making sound hiring decisions or planning effective professional development — is the most “research-based” strategy available. If we truly hope to attain the goal of “no child left behind,” we must focus on creating a substantially larger number of effective, expert teachers.

Effective teachers manage to produce better achievement regardless of which curriculum materials, pedagogical approach, or reading program they use. I am not going to try to understand why it has taken education so long to recognize what other industries recognized almost from the start — expertise matters. Instead, I am going to describe what the teaching of exemplary elementary teachers looks like and challenge school administrators to examine whether their daily practice and longer-term planning are designed to foster such teaching. In other words, I believe that school administrators should be crafting policies that ensure that more effective teachers are created each year in their schools.

For much of the past decade my colleagues and I at the National Research Center on English Learning and Achievement have been studying some of the best elementary school teachers in the U.S.<sup>2</sup> These teachers were selected primarily from schools that enrolled substantial numbers of poor children and schools that reflected the racial, ethnic, and linguistic diversity of the nation. We observed first- and fourth - grade teachers from six states (New York, Texas, New Hampshire, California, Wisconsin, and New Jersey). We spent at least 10 full instructional days, and often more, observing, interviewing, and videotaping in each teacher's classroom. Two books, a number of articles, and related technical reports provide documentary details (the books and articles are cited throughout, and the technical reports, along with research summaries, can be found at <http://cela.albany.edu>).

We studied teachers who had been found to be particularly effective in developing reading and writing proficiency. Over the course of the study, however, it became clear that the teachers we were studying developed students' academic proficiencies well beyond the ability to score higher on reading and writing achievement tests (though the evidence we

gathered also demonstrated that these teachers produced significantly better performance on standardized tests as a matter of course).

The hundreds of days of classroom observation and the hundreds of interviews with teachers and students provided a clear picture of what good elementary teaching looks like. Below I sketch six common features — the six T's of effective elementary literacy instruction—that we observed in exemplary elementary classrooms.

## TIME

These teachers maintained a “reading and writing versus stuff” ratio that was far better balanced than is typically found in elementary classrooms.<sup>3</sup> In other words, these teachers routinely had children actually reading and writing for as much as half of the school day — around a 50/50 ratio of reading and writing to stuff (stuff is all the other things teachers have children do instead of reading and writing). In typical classrooms it is not unusual to find that children read and write for as little as 10% of the day (30 minutes of reading and writing activity in a 300-minute — five-hour — school day). In many classrooms, a 90-minute “reading block” produces only 10 to 15 minutes of actual reading — that is, less than 20% of the allocated reading time is spent reading. Worse, many classrooms devote only 20 minutes of the entire school day — less than 10% — to actual reading (including reading in science, social studies, math, and other subjects).<sup>4</sup>

When stuff dominates instructional time, warning flags should go up. This is true even when the activity, in some form, has been shown to be useful. For example, research supports activating students' background knowledge before reading<sup>5</sup> and holding discussions after reading.<sup>6</sup> But spending most of a 90-minute reading block on building background knowledge seems an unlikely strategy for improving reading proficiencies. Three to five minutes of this activity would be sufficient.

There is also a lot of stuff going on in less effective classrooms that is not supported by reliable evidence for any amount of use (e.g., going through test-preparation workbooks, copying vocabulary definitions from a dictionary, completing after-reading comprehension worksheets).

Extensive reading is critical to the development of reading proficiency.<sup>7</sup> Extensive practice provides the opportunity for students to consolidate the skills and strategies teachers often work so hard to develop. The exemplary elementary teachers we studied recognized this critical aspect of instructional planning. Their students did more guided reading, more independent reading, more social studies and science reading than students in less effective classrooms. Extensive reading is critical to the development of reading proficiency. But the teachers' instructional planning involved much more than simply allocating lots of time for reading and writing.

## TEXTS

If children are to read a lot throughout the school day, they will need a rich supply of books they can actually read. This seems a simple statement of fact. But there also exists a large and

potent research base that supports supplying children with books of appropriate complexity.<sup>8</sup> This research began in the 1940s and has continued into this new millennium.

Simply put, students need enormous quantities of successful reading to become independent, proficient readers. By successful reading, I mean reading experiences in which students perform with a high level of accuracy, fluency, and comprehension. When a 9-year-old misses as few as two or three words in each hundred running words of a text, the text may be too hard for effective practice. That text may be appropriate for instructional purposes, but developing readers need much more high-success reading than difficult reading. It is the high-accuracy, fluent, and easily comprehended reading that provides the opportunities to integrate complex skills and strategies into an automatic, independent reading process.

The exemplary teachers we studied too often had to teach against the organizational grain. They rejected district plans that required all children to be placed in the same textbook or trade book (and do the same worksheets on the same day). They recognized such schemes for what they are: truly anti-scientific, non-research-based fads designed more, it seems, to exert administrative power than to produce high levels of student achievement.

Unfortunately, these exemplary teachers too often had to spend both their personal time and their personal funds to locate and purchase the texts needed to effectively teach the children they were assigned. Some were lucky to work in “smart” organizations: organizations that supported them and provided a rich and expansive supply of texts to promote children’s learning across the school day (multilevel texts for social studies and science as well as for reading classes); organizations that knew that “one-size-fits-all” contradicts virtually everything we have learned about effective teaching.

Students of all achievement levels benefited from exemplary teaching, but it was the lowest achievers who benefited most.<sup>9</sup> In the classrooms of exemplary teachers, lower-achieving students spent their days with books they could successfully read. This has not typically been the case in less effective classrooms.<sup>10</sup> In too many schools, lower-achieving readers receive appropriate reading materials only when they participate in special-support instruction (e.g., special education resource rooms, Title I in-class support, bilingual education blocks). In other words, in too many cases the lower-achieving students receive, perhaps, an hour of appropriate instruction each day and four hours of instruction based on grade-level texts they cannot read. No child who spends 80% of his or her instructional time in texts that are inappropriately difficult will make much progress academically.

The exemplary teachers we studied noticed that the highest-achieving students 1) received a steady diet of “easy” texts — texts they could read accurately, fluently, and with good comprehension—and 2) consistently outgained both the average-achieving students and the lower-achieving students, year after year. They also noticed that motivation for reading was dramatically influenced by reading success. They acted on these observations by creating multilevel, multisourced curricula that met the needs of the diverse range of students in their classrooms.

## TEACHING

Obviously, part of good teaching is planning instructional time and selecting appropriate books. But here I want to focus more on the notion of active instruction—the modeling and demonstration of the useful strategies that good readers employ. Much of what many administrators might consider teaching behaviors involves little or no active instruction.<sup>11</sup> Much of what many teachers consider teaching is little more than assignment and assessment. Somewhere along the way, active teaching — explicit explanation, direct teaching — has been lost in the shuffle of thinking about classroom instruction.

The exemplary teachers in our study routinely gave direct, explicit demonstrations of the cognitive strategies that good readers use when they read. In other words, they modeled the thinking that skilled readers engage in as they attempt to decode a word, self-monitor for understanding, summarize while reading, or edit when composing. The “watch me” or “let me demonstrate” stance they took seems quite different from the “assign and assess” stance that dominates in less effective classrooms.<sup>12</sup>

The dominance of the assign-and-assess model has been too little written about, but the truth is that “instruction” of this nature is of little benefit to all but the few students who have already acquired a basic understanding of the strategy that is the focus of the lesson. As Marilyn Jager Adams pointed out in her analysis of traditional phonics programs, when teachers assign a worksheet that requires children to fill in the missing vowel, only children who already know the correct response can successfully do the task.<sup>13</sup> And they don’t need the practice. Children who do not know which vowel to put in the blank space cannot acquire that knowledge from the worksheet. They need actual teaching. In other words, the missing-vowel worksheet is an assessment of who already knows the vowel patterns, not an instructional activity that will teach the vowel pattern.

Likewise, when assigned a story to read and questions to answer at the end, children who have developed the appropriate strategy to use while reading can respond correctly, but those who have not developed it cannot.<sup>14</sup> And these latter children cannot acquire the strategy from the end-of-story questions. They need someone to actually teach it to them — someone who can model and demonstrate its use.<sup>15</sup>

The exemplary teachers seemed to realize that most commercial instructional packages provide no useful information on the direct and explicit teaching of skills or strategies. The scripts one typically finds in teachers’ manuals accompanying commercial packages may offer a “definitional” model (for example, explaining that the main idea is the author’s most important idea about a topic), but they offer little in the way of helping children develop useful reading strategies (for example, showing how to determine the relative importance of the various ideas an author might present on a topic).

Thus these teachers took on the responsibility of crafting explicit demonstrations of skills and strategies. For example, to demonstrate the use of the deletion strategy when teaching summarization, they would first list the various ideas an author presented in a persuasive paragraph through a line-by-line analysis — a watch-me-do-this lesson. Then they would

demonstrate through a think-aloud process the strategy of deleting redundant, trivial, and subordinate information until they had arrived at the summary statement.

These teachers offered models of useful strategies — decoding strategies, composing strategies, self-regulating strategies — as separate lessons to the whole class, to targeted small groups, and to individual students in side-by-side instruction. In fact, it is this plethora of instructional activity that truly sets these teachers apart and explains much of their effectiveness with lower-achieving students.<sup>16</sup>

We have a wealth of studies demonstrating the power of active teaching, especially for children who struggle to learn to read and write. But expert teaching requires knowing not only how to teach strategies explicitly but also how to foster transfer of the strategies from the structured practice activities to students' independent use of them while engaged in reading. A real concern is that, when instruction becomes too explicit, children never learn when and how to use the strategies profitably and successfully in their independent reading.

### TALK

Like the teaching component, classroom talk is underresearched. We saw fundamental differences between the nature of the classroom talk in the exemplary teachers' classrooms and the talk typically reported in classroom observational studies. First, we observed the exemplary teachers fostering much more student talk — teacher/student and student/student — than has previously been reported. In other words, these exemplary teachers encouraged, modeled, and supported lots of talk across the school day. This talk was purposeful talk, though, not simply chatter. It was problem-posing, problem-solving talk related to curricular topics.<sup>17</sup>

It wasn't just more talk but a different sort of talk than is commonly heard in classrooms. The interrogational nature of most classroom talk has been well documented. Teachers pose questions, children respond, teachers verify or correct. That is the dominant pattern observed in study after study, grade after grade.<sup>18</sup> The classroom talk we observed was more often conversational than interrogational. Teachers and students discussed ideas, concepts, hypotheses, strategies, and responses with one another. Teachers posed more "open" questions, to which multiple responses would be appropriate. For instance, consider the different types of after-reading questions below:

Question 1: So, where were the children going after all?

Question 2: So, what other story have we read that had an ending like this one?

Question 3: Has anyone had a problem with a pet, like the boy in the story?

Responses to question 1 are strictly limited to a single "correct" answer as dictated by the story content. But questions 2 and 3 offer the opportunity for multiple "correct" responses. In addition, while a response to the first question leads only to a teacher reply of "Right" or "Wrong," the others lead to follow-up teacher queries along the lines of "Explain how the endings are similar" and "Tell us more about how your pet problem was like the problem in the story." While question 1 allows the teacher to assess whether the student has used a strategy appropriately, questions 2 and 3 offer the opportunity to examine the thinking — the

strategy as it is being used — and to continue instruction. Question 1 assesses recall; questions 2 and 3 assess a broader understanding and help make children’s thinking visible.

The nature of classroom talk is complicated and too little understood. While there is evidence that more “thoughtful” classroom talk leads to improved reading comprehension,<sup>19</sup> especially in high-poverty schools,<sup>20</sup> we still have few interventions available that focus on helping teachers develop the instructional skill to create such classrooms, and few of the packaged programs offer teachers any support along this line. The classroom talk we observed was highly personalized, providing targeted replies to student responses. Teacher expertise was the key, not a scripted, teacher-proof instructional product.

## TASKS

Another characteristic of these exemplary teachers’ classrooms was greater use of longer assignments and less emphasis on filling the day with multiple, shorter tasks. In these classrooms students often worked on a writing task for 10 days or more. They read whole books, completed individual and small-group research projects, and worked on tasks that integrated several content areas (reading, writing, and social studies).

The work the children in these classrooms completed was more substantive and challenging and required more self-regulation than the work that has commonly been observed in elementary classrooms. We observed far less of the low-level worksheet-type tasks and found a greater reliance on more complex tasks across the school day and across subjects. Perhaps because of the nature of this work, students seemed more often engaged and less often off task than researchers in other classrooms have reported.

Another factor related to student engagement was that the tasks assigned by exemplary teachers often involved student choice. We described the instructional environment as one of “managed choice.” Students did not have an unlimited range of task or topic choices, but it was less common to find every student doing the same task and more common to observe students working on similar but different tasks. For instance, in a fourth-grade unit on insects, each child caught an insect and brought it to class. The students then sketched their insects using magnifying glasses to discover detail. These sketches were then labeled for body parts (thorax, abdomen, antennae, and so on). Students also observed the insects in their natural environments and jotted field notes about behaviors and habits. They wrote short descriptions based on these notes and constructed models of the insects from craft materials. Finally, they presented their insects to their classmates and then posted their sketches, models, and descriptions on the classroom wall, where classmates could review them.

Choice of this sort has been shown to lead to greater student ownership of and engagement with the work.<sup>21</sup> Another interesting outcome is that the diversity of student work makes it more difficult for students (and perhaps teachers) to rank that work from best to worst. A low-achieving student may have selected one of the more interesting insects to study and display. Peers see the new information on an interesting bug, instead of comparing the low-achieving student’s work to their own on an identical insect worksheet.

## TESTING

Finally, these exemplary teachers evaluated student work and awarded grades based more on effort and improvement than simply on achievement. Thus all students had a chance to earn good grades. Achievement-based grading — whereby the best performances get the best grades — operates to foster classrooms in which no one works very hard. The higher-achieving students don't have to put forth much effort to rank well, and the lower-achieving students soon realize that even working hard doesn't produce performances that compare well to those of higher-achieving students. If you are a lucky low achiever, hard work gets you a C in an achievement-based grading scheme.

The complexity, though, of effort-and-improvement grading lies in the fact that teachers must truly know each of their students well in order to assign grades. They have to be able to recognize growth and to track or estimate the student effort involved. The exemplary teachers often used a rubric-based evaluation scheme to assign grades. Improvement was noted based on where students started and where they ended up, rather than on the latter alone.

Another impact of the effort-and-improvement evaluation model was that it shifted much of the responsibility for earning grades over to the students. Students could not assign bad grades to “unluckiness,” since the evaluation scheme was rather transparent to them. The rubrics provided the information they needed to improve their grades.

The fourth-grade exemplary teachers we studied did acknowledge that the effort-and-improvement grading scheme required careful explanation to parents, who were more familiar with achievement-based grading. However, none of the teachers reported much parental resistance, perhaps because the teachers were typically able to describe in substantive detail just what a child needed to do to achieve a better grade.

I must also note that we observed almost no test-preparation activity in these classrooms. None of the teachers relied on the increasingly popular commercial test-preparation materials (e.g., workbooks, software). Instead, these teachers believed that good instruction would lead to enhanced test performance. The data bore out their beliefs. It was in the less effective teachers' classrooms (which we observed as part of a substudy) that we found test-preparation activity. It seems that less effective teachers truly don't know what to do and, as a result, drift toward the use of packaged test-preparation activities in the hope that they will make up for less effective teaching throughout the year.

## SUMMARY

In reducing a complex activity to a list of key features, there is always the risk of oversimplification. Such seems to be the case here. While the six T's offer a shorthand, of sorts, for describing exemplary teaching in the elementary grades, they also oversimplify the complex nature of good teaching. For instance, the six T's actually operate interactively. It seems highly unlikely that we could develop teaching that reflects any single T alone.

For instance, if we want to increase substantially the amount of reading that children do (and I would argue that this is one absolutely crucial step toward enhancing reading proficiency), it is important to give children books they can read and choices regarding which books they

will read. Likewise, crafting a supportive conversational environment in which students talk to their teachers and to their peers about the books they are reading is an important component for sustaining increased reading. And active teaching of useful reading strategies expands the array of books that children are able to read. Finally, shifting evaluation to focus on effort and improvement enhances students' motivation for reading.

In other words, creating and supporting exemplary teaching of the sort we observed is complicated. It really seems unfortunate that so many of the exemplary teachers we studied were forced to teach against the organizational grain. These teachers had to reject school and district plans that put the same reader, trade book, textbook, or workbook on every child's desk. They had to reject scripted lessons, pacing schedules, and grading schemes that presented a one-size-fits-all model for instruction. Too often they had to search out appropriate instructional texts and materials on their own because the one text that the school or district provided was not of appropriate difficulty for most students and failed to offer the sort of accurate and engaging information that might entice students into sustained and effortful study. Worse, in too many cases, these teachers were forced to spend their own funds to purchase the materials they needed to teach the students they were assigned.

Exemplary teaching should not be so hard to accomplish. Schools and school districts must take more responsibility for providing instructional and curricular support so that exemplary teaching becomes more common and requires far less effort. Good teaching should not have to work against the organizational grain.

In closing, I will note that few of these exemplary teachers gave much credit to their school districts for the development of their expertise. Some pointed to administrators who allowed them to experiment, encouraged them to "break the mold," and told them not worry about test scores or about following the organizational plan. But most credited other exemplary teachers for supporting them and encouraging them to become better teachers and to assume greater professional responsibility for the success of their students. These teachers seemed to understand that professional responsibility meant choosing how to teach, what to teach, and with what sorts of curricular materials and tasks: they rejected the low-autonomy/high-accountability models that seem increasingly popular with advocates of "proven programs."<sup>22</sup>

Instead, these teachers elected a high-autonomy/high accountability model. They seemed to feel no particular pressure from state testing schemes, perhaps because their students performed so well. At the same time, because they were the architects of the instruction offered in their classrooms, they reported a greater sense of responsibility for student outcomes. In other words, these teachers accepted the professional responsibility for developing high levels of reading proficiency but insisted on the autonomy to act on their expertise.<sup>23</sup>

Educational leaders might do well to consider the nature of the instruction these teachers offered. They might do well to ask whether current school policies seem likely to foster this sort of teaching. They might ponder how the organizational plan, including the professional development opportunities and the curricular schemes, currently work to foster or undermine the emergence of exemplary elementary classroom teaching.



In the end, enhanced reading proficiency rests largely on the capacity of classroom teachers to provide expert, exemplary reading instruction. Our study of these exemplary teachers suggests that such teaching cannot be packaged. Exemplary teaching is not regurgitation of a common script but is responsive to children's needs. In the end it will become clearer that there are no "proven programs," just schools in which we find more expert teachers — teachers who need no script to tell them what to do. The question for the education profession — teachers, principals, professors, and policy makers — is, Are we creating schools in which every year every teacher becomes more expert?

1. Richard L. Allington and Peter H. Johnston, "What Do We Know About Effective Fourth-Grade Teachers and Their Classrooms?," in Cathy Roller, ed., *Learning to Teach Reading: Setting the Research Agenda* (Newark, Del.: International Reading Association, 2001), pp. 150-65; Linda Darling-Hammond, *Teacher Quality and Student Achievement: A Review of State Policy Evidence* (Seattle: Center for Teaching Policy, University of Washington, 1999); Gerald G. Duffy, "Powerful Models or Powerful Teachers? An Argument for Teacher-as-Entrepreneur," in Steven Stahl and David Hayes, eds., *Instructional Models in Reading* (Mahwah, N.J.: Erlbaum, 1997), pp. 331-65; Michael Pressley et al., "A Study of Effective First-Grade Literacy Instruction," *Scientific Studies in Reading*, vol. 5, 2001, pp. 35-58; William L. Sanders, "Value-Added Assessment," *School Administrator*, vol. 55, 1998, pp. 101-13; and Barbara M. Taylor et al., "Effective Schools and Accomplished Teachers: Lessons About Primary Grade Reading Instruction in Low-Income Schools," *Elementary School Journal*, vol. 101, 2000, pp. 121-65.
2. Richard L. Allington and Peter H. Johnston, *Reading to Learn: Lessons from Exemplary Fourth - Grade Classrooms* (New York: Guilford, 2002); and Michael Pressley et al., *Learning to Read: Lessons from Exemplary First - Grade Classrooms* (New York: Guilford, 2001).
3. Richard L. Allington, *What Really Matters for Struggling Readers: Designing Research-Based Interventions* (New York: Longman, 2001).
4. Michael S. Knapp, *Teaching for Meaning in High-Poverty Classrooms* (New York: Teachers College Press, 1995).
5. P. David Pearson and Linda Fielding, "Comprehension Instruction," in Rebecca Barr et al., eds., *Handbook of Reading Research*, Vol. II (New York: Longman, 1991), pp. 815-60.
6. Randy Fall, Noreen M. Webb, and Naomi Chudowsky, "Group Discussion and Large-Scale Language Arts Assessment: Effects on Students' Comprehension," *American Educational Research Journal*, vol. 37, 2000, pp. 911-41.
7. Stephen Krashen, "More Smoke and Mirrors: A Critique of the National Reading Panel Report on Fluency," *Phi Delta Kappan*, October 2001, pp. 119-23; and Keith E. Stanovich, *Progress in Understanding Reading: Scientific Foundations and New Frontiers* (New York: Guilford, 2000).
8. Allington, *op. cit.*
9. Allington and Johnston, *Reading to Learn*; and Pressley et al., "A Study of Effective First-Grade Literacy Instruction."
10. Richard L. Allington, "The Reading Instruction Provided Readers of Differing Abilities," *Elementary School Journal*, vol. 83, 1983, pp. 548- 59.

11. NICHD Early Childcare Research Network, "The Relation of First-Grade Classroom Environments to Structural Classroom Features, Teacher and Student Behaviors," *Elementary School Journal*, in press.
12. Marilyn Jager Adams, *Beginning to Read: Thinking and Learning About Print* (Cambridge, Mass.: MIT Press, 1990); and Dolores Durkin, "What Classroom Observations Reveal About Reading Comprehension Instruction," *Reading Research Quarterly*, vol. 14, 1978-79, pp. 481- 533.
13. Adams, *op. cit.*
14. Durkin, *op. cit.*
15. Duffy, *op. cit.*
16. Taylor et al., *op. cit.*
17. Allington and Johnston, *Reading to Learn*; and Peter Johnston, Haley Woodside-Jiron, and Jeni Day, "Teaching and Learning Literate Epistemologies," *Journal of Educational Psychology*, vol. 93, 2001, pp. 223- 33.
18. Courtney B. Cazden, *Classroom Discourse: The Language of Teaching and Learning* (Portsmouth, N.H.: Heinemann, 1988); and Martin Nystrand, *Opening Dialogue: Understanding the Dynamics of Language and Learning in the English Classroom*(New York: Teachers College Press, 1997).
19. Fall et al., *op. cit.*; Johnston, Woodside-Jiron, and Day, *op. cit.*; and Ny strand, *op. cit.*
20. Knapp, *op. city.*
21. Julianne C. Turner, "The Influence of Classroom Contexts on Young Children's Motivation for Literacy," *Reading Research Quarterly*, vol. 30, 1995, pp. 410-41.
22. Jeni Pollack Day, "How I Became an Exemplary Teacher," in Pressley et al., *Learning to Read*, pp. 205-18.
23. Anne McGill-Franzen, "Policy and Instruction: What Is the Relationship?," in Michael Kamil et al., eds., *Handbook of Reading Research*, Vol. III (Mahwah, N.J.: Erlbaum, 2000), pp. 891-908.

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