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Reflections on 7 Years of Strategy Instruction

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Abstract

Most investigations of literacy programs are relatively short-term endeavors. Here, we reflect on what we have learned in 7 years of studying a program to teach word-learning strategies. The program was developed with a 3-year Institute of Education Sciences (IES) Small Business Innovation Research (SBIR) grant and is currently being studied in a 4-year IES Efficacy grant. Here, we describe our choice of a topic; describe the curriculum, instruction, and teacher preparation in the program; and reflect on positive aspects of the program and aspects of it that could be improved. We believe that much of what we discuss is relevant to various types of instruction.

Keywords

curriculum, educational studies, literacy, teaching, strategies

Observations on 7 Years of Strategy Instruction

We are three educators who together have nearly 100 years of experience in the field. Here, we are writing to share our experiences in designing and implementing a program to teach word-learning strategies (the use of word parts, context, and the dictionary to unlock the meanings of unknown words) to upper elementary grade students. The program, titled Word-Learning Strategies, was initially funded with a 3-year Institute of Education Sciences Small Business Innovation Research (IES SBIR) grant (Sales, 2008–2011) and research on its impact is currently funded with a 4-year IES Efficacy grant (Schneider, 2015–2019). The first author, an emeritus professor of literacy education at a large state university, has worked with the program for 7 years. The second and third authors, researchers at a large nonprofit research and development organization, have worked with the program over the past 4 years. Together, we have observed and taken part in the initial development of the program, as well as early and large-scale trials of its effectiveness. In the process, we have worked with and learned from instructional designers, university-based curriculum experts, educational researchers, experts in in-service education, and hundreds of teachers from more than 20 districts. While our project dealt specifically with instruction in word-learning strategies, we believe that much of what we discuss here is relevant to strategy instruction more generally—to, for example, blending in beginning reading instruction, making inferences in comprehension instruction, and using structured academic controversies in civics and history classes. We also believe that much of what we discuss is relevant to other types of instruction, not just to strategy instruction.

We begin by justifying our choice of vocabulary as a general area in which to work and our further choice of word-learning strategies as a specific area to concentrate on. Following that, we discuss our roles in the project, the project curriculum, the instruction used in the project, and the preparation we provided for teachers. Following each of these sections, we provide our subjective evaluations of what went right and what we believe could be improved in a revised version of the program.

The Importance of Vocabulary in U.S. Schools

Vocabulary has been an important interest of U.S. educators for more than 100 years. What is among the oldest, if not the oldest, archival study of English vocabulary, Kirkpatrick's "The Number of Words in an Ordinary English Vocabulary," was published in 1891, 8 years before E. L. Thorndike received his PhD. By 1910, Thorndike is reported to have begun his vocabulary studies (Clifford, 1978). Several years later, in 1917, Thorndike published his influential article, "Reading as Reasoning," in which he convincingly argued that reading is an activity focused on comprehending text and that vocabulary knowledge is a

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critical component of reading comprehension (Thorndike, 1917). Then, in 1921, Thorndike published the first version of *The Teacher's Word Book*, a set of words that he twice expanded (Thorndike, 1921, 1930; Thorndike & Lorge, 1944) and that strongly influenced the vocabulary included in beginning reading series for more than 40 years (Clifford, 1978).

Over the 100 plus years that followed Thorndike's groundbreaking work, research and reviews of research have repeatedly identified vocabulary knowledge as a critical and powerful factor underlying reading proficiency (Baumann et al., 2003; Beck & McKeown, 1991; Becker, 1977; Blachowicz & Fisher, 2000; Carroll, 1971; Chall et al., 1990; Davis, 1944; Graves, 1986; Graves & Silverman, 2010; Hart & Risley, 1995; Watts-Taffe et al., 2017). Vocabulary is a major component of widely accepted models of comprehension such as Anderson and Pearson's (1984) schema-theoretic view, the RAND Reading Study Group's (2002) heuristic for thinking about reading comprehension, and Kintsch's (2004) construction–integration model, all of which consider word knowledge to be crucial to comprehension. Moreover, certain types of vocabulary instruction can affect students' comprehension of what they read (Baumann, 2005; Elleman et al., 2009; Wright & Cervetti, 2016). In 2000, the National Reading Panel, a group of prominent scholars assembled by the National Institute of Child Health and Human Development (2000) at the request of the U.S. Congress, identified vocabulary as one of the five essential components of reading instruction. Because vocabulary knowledge is at the core of academic learning, it has been a central consideration of major reform efforts such as Reading First (No Child Left Behind Act of 2001, 2002) and the Common Core State Standards (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010).

Vocabulary knowledge is also a particularly important consideration for English learners (August & Shanahan, 2006; Goldenberg, 2013; National Center for Education Statistics, 2012; Snow & Kim, 2007) and for a number of children from low-income families, many of whom both enter and leave school with English vocabularies smaller than those of their native-English-speaking and higher income peers (Becker, 1977; Biemiller & Slonim, 2001; Chall et al., 1990; Fernald et al., 2013; Hart & Risley, 1995; Neuman & Wright, 2014; Templin, 1957; White et al., 1990). To comprehend what they read and to grow academically, students need to be able to grasp the meanings of the vast majority of words they encounter in their reading (Carver, 1994; Nation, 2006).

Choosing a Focus for Our Vocabulary Instruction

Clearly, vocabulary instruction should be an important component of the curriculum. But just what should the vocabulary curriculum consist of? Different sources, while not specifying a vocabulary curriculum, emphasize different aspects of vocabulary instruction. The Common Core State Standards focus on teaching individual words, English morphology, and learning words from context. Beck and McKeown, almost certainly the scholars most influencing vocabulary instruction in the United States at the present time, focus on teaching individual words and on "word consciousness" (an awareness and interest in words and their meanings). Beck and McKeown also deal briefly with using context but emphasize their belief that natural context seldom reveals meaning (see Beck et al., 2002, 2013). Stahl and Nagy (2006), two scholars who also have strongly influenced vocabulary instruction in the United States, again focus on teaching individual words, but note that a comprehensive approach includes teaching individual words, immersion in rich language, and developing generative vocabulary knowledge using word parts, context, and the dictionary. The most fully developed description of a comprehensive approach is that of Graves (2000, 2006, 2016), who provides a detailed description of an approach that includes (a) providing frequent, varied, and extensive language experiences; (b) teaching individual words; (c) teaching word-learning strategies, including the use of word parts, context, and the dictionary; and (d) fostering word consciousness. Thus, Graves's approach is broader than that provided by the Common Core State Standards, Beck and McKeown, or Stahl and Nagy. It includes all of the components suggested by these three sources. In addition, the curriculum Graves suggests gives equal attention to each of these components, privileging none of them because neither empirical findings nor theoretical considerations suggest that any of them are more important than the others. Graves's approach has been echoed in the curriculum recommended by Blachowicz et al. (2006); acknowledged as the basis of the curriculum recommend by Stahl and Nagy (2006); endorsed by Baumann and Kame'enui (2004); and used as the organizing principle in books by Baumann and Kame'enui (2004), Diamond and Gutlohn (2007), and Kame'enui and Baumann (2012). The funding and time frame for our project allowed us to focus on only one of these four components, and we chose to investigate the impact of teaching word-learning strategies because of the generative influence that strategies can have: that is, well-taught strategies will leave students with tools they can use independently over time to learn words.

Our Roles in the Project

The first author was the principal content consultant on the project from its inception. He identified the curriculum and worked with the SBIR principal investigator and an experienced staff of curriculum and instruction experts, instructional designers, and graphic artists to create a one-semester program. Once the program was created, he worked with

the SBIR research consultant on three small-scale studies of the program. During the Goal III phase of the project, which involved a randomized controlled trial over a 4-year period, he was actively involved in teacher training and other activities during the pilot study, and he has since been involved largely with writing about the project. As two of the lead investigators on the Goal III project, the second and third authors have worked closely with district and school administrators, as well as classroom teachers. They had interactions with district personnel during the recruitment phase of the project, which included setting up collaboration agreements and establishing data use agreements. There were frequent check-ins related to data sharing and project status. They also both personally observed and interviewed teachers about their instructional practices in teaching word-learning strategies over the course of the project.

The Curriculum

In this section, we describe the content of the word strategies curriculum and the recommended time allocations for the program as a whole and for each part of the curriculum. The actual process of designing the curriculum was a reciprocal one in which we repeatedly cycled back and forth between what the developers wanted to be taught and how much time teachers had for teaching.

Content

The curriculum focuses on three word-learning strategies—using word parts, using context, and using the dictionary—as well as on using these strategies flexibly and in concert.

Word parts. The word parts unit began with a 1-week segment on compound words. Our purpose here was to introduce and drive home the notion that words can sometimes be divided into meaningful parts. Following this, the word parts we focused on were those that White et al. (1989) found to be the most frequently occurring in material for school-age children. They included 10 prefixes (*un-, dis-, re-, mis-, over-, pre-, fore-, in-, im-, non-*), five inflectional suffixes (*-s, -ed, -ing, -er, -est*), and seven derivational suffixes (*-ful, -less, -able, -al, -ly, -er, -or*).

In addition to teaching these prefixes and suffixes, we taught four basic facts about prefixes: (a) a prefix is a group of letters that goes in front of a base word; (b) prefixes change the meaning of the word to which they are attached; (c) prefixes do not appear by themselves; and (d) sometimes, what looks like a prefix, is not one. We also taught five basic facts about suffixes: (a) a suffix is a group of letters that goes at the end of a word; (b) some suffixes change a word's meaning; (c) suffixes do not appear by themselves; (d) when you remove a suffix, you are left with a word, although sometimes the spelling is slightly changed; and (e) sometimes what looks like a prefix or suffix is not one.

Finally, we taught a four-part strategy for using word parts to infer word meanings: (a) decide if you can break the unknown word into parts; (b) think about the meaning of the parts; (c) combine the meanings of the parts to infer the meaning of the unknown word; and (d) try out your inference to see if it makes sense.

Context clues. The curriculum focuses on five types of context clues. Four of the types have been frequently used in instructional studies of context clues such as those of Baumann et al. (2002) and Jenkins et al. (1984) and are quite revealing. These are definition clues, synonym clues, antonym clues, and contrast clues. Unfortunately, while these types of clues are quite revealing, they occur primarily in programs written to teach context clues and much less frequently in naturally occurring text. We included them as the beginning part of our context clue program instruction to illustrate the concept of context clues and the fact that such clues can reveal word meanings.

The main type of clues taught in the word-learning strategies curriculum are what we call general clues. General clues are hints in the words surrounding an unknown word and occur frequently in natural text. Although general clues are sometimes included in instructional studies (for example, in Baumann et al., 2002), they are less frequently included. Again, however, they are the type of context clue found most frequently in authentic texts.

In addition to including these clue types, the curriculum provides a four-part strategy for using context to infer word meanings: (a) pause when you find an unknown word; (b) read the surrounding words and sentences to look for context clues; (c) use the clues to infer the meanings of the unknown words; and (d) try out your inference to see if it makes sense.

The dictionary. Perhaps because it seems such a simple task, use of the dictionary is not taught in most word-learning strategy programs. However, we believe it is a strategy that deserves some direct attention. In our curriculum, we stressed the importance of considering context when looking up a word, that many words have more than one definition, and that in reading dictionary definitions it is important to consider all of each definition, not just the first few words. The dictionary strategy itself thus consisted of three steps: (a) look up a word, keeping in mind the context in which you encountered it; (b) read every part of all definitions; and (c) decide which definition best fits the context.

The combined strategy. When reading, students need to use these strategies flexibly and in concert, and the curriculum prepares them to do so. The combined strategy consisted of four steps, which we suggested should generally but not always be taken in this order: (a) look for meaningful word parts; (b) look for context clues; (c) use a dictionary; and (d) ask someone.

Table 1. The Word-Learning Strategies Curriculum and Weeks Spent on Each Element.

Word parts	7 weeks
Compound words	
Prefixes	
Suffixes	
Word parts strategy	
Review and test	
Context	5 weeks
Types of context clues	
The context strategy	
Using the context and word parts strategy together	
Review and test	
Dictionaries	1 week
Types of dictionaries	
The dictionary strategy	
A combined strategy	2 weeks
Coordinated use of the word parts, context, and dictionary strategies	
Asking someone	
Review and test	

Time Allocation

Here, we consider three aspects of time allocation in the program: time allocated to the program as a whole, time allocated to various parts of the program, and pacing.

Time allocated to the program as a whole. The Word-Learning Strategies program is designed to last 15 weeks. We decided on this length based on three factors. First, given the requirements of the SBIR grant for multiple iterations and assessments of the program, the instruction needed to be completed in one semester. Second, our professional judgment was that a one-semester program was sufficient to give students a solid introduction to using word-learning strategies. Third, our professional judgment was that more than 15 consecutive weeks of instruction on word-learning strategies would be likely to dull both students' and teachers' engagement and enthusiasm for the program.

Time allotted to various parts of the program. Table 1 shows the time allotted to the various parts of the program. These allotments were based on our judgment of the importance of each part of the program and the complexity of what needed to be taught. One aspect of this schedule that we think is particularly worth noting is the emphasis on review. There is a week of review following the word parts instruction, a week's review following the context instruction, and a week's review following the combined strategy unit. In addition, the combined strategy unit itself constitutes a review.

Pacing. By "pacing," we refer to the number of days of instruction each week, the length of each instructional session, and the number or activities per instructional session. The plan was for students to work with the program 3 days each week, typically on Mondays, Wednesdays, and Fridays. This schedule has two advantages. First, if something precluded instruction on one or even 2 days, students could still receive three lessons each week. Second, scheduling instruction for every other day provided students with some variety but at the same time meant that they worked frequently with the program. Each instructional session was designed to be completed in 30 min. This provided students with a solid block of instruction but not so long a block that they grew bored. Finally, each instructional session included three to five activities. This kept the pace lively.

Our Subjective Assessment of the Curriculum

We strongly endorse both the content and the time allocation of our curriculum and would make only one major change if we were to redesign it. While the one-semester program was sufficient to introduce students to using word leaning strategies and provide them with some practice in doing so, we do not think it was sufficient to make use of these strategies a long-term and deeply engrained part of most students' behavior, particularly students who struggle with school. A program capable of achieving this goal is likely to require something like three semesters of instruction spread across 3 years. Since a good deal of time is spent on decoding during Grades 1 and 2 and most students move on to middle school in Grade 6, Grades 3, 4, and 5 seem like an opportune time for a 3-year program. The Word-Learning Strategies program in its present form could be used in Grade 3. Then, each subsequent year could include review of previous work as well as additional work on general context clues, instruction in some Latin and Greek roots, and instruction in using resources such as thesauruses and encyclopedia.

The Instruction

Here, we consider two aspects of our instruction: The theories and models underlying the instruction and the instructional principles growing out of these theories and models.

Theories and Models Underlying the Instruction

The primary theories and models underlying the instruction were Gagne's conditions of learning, direct explanation, constructivist theories, and our deep-seated belief in the centrality of motivation and engagement.

Gagné's instructional events. In *Conditions of Learning*, Gagne (1965) described nine instructional events, including, for example, gaining attention, presenting the stimulus, and assessing performance. This orientation is the approach typically used by many instructional designers, and it was the one most familiar to the instructional designers we worked with on the SBIR. Thus, it was the starting point in developing our model of instruction.

Direct explanation. Direct explanation is a straight-forward method of strategy instruction described by Duffy (2002) and Duke and Pearson (2002) and includes, for example, providing an explicit description of the strategy, modeling the strategy, and independent use of the strategy. This was the approach to strategy instruction most frequently used in the 1970s when strategy instruction was first introduced in the field of reading.

Constructivist theory. Although direct explanation has been shown to be effective, it has been perceived by some as too rigid and teacher oriented (Pressley et al., 1992; Wharton-McDonald, 2006). Among the more constructivist elements that Pressley and his colleagues recommended are giving students opportunities to construct knowledge, explaining and discussing the value of strategies with students, and continually working on transfer.

The centrality of motivation and engagement. In keeping with the recommendations of the National Research Council (2004) and scholars such as Wigfield et al. (2016) and Frankel et al. (2016), we see motivation and engagement as absolutely crucial to effective instruction, particularly for learners who have often failed to succeed in school. Becoming adept at using word-learning strategies requires sustained and substantial effort, and it is crucial that we motivate students to put forth that effort.

Instructional Principles Growing out of These Theories and Models

Consideration of these theories and models led us to five major principles that guided our instruction, which we term Balanced Strategies Instruction: (a) Make motivation and engagement an overarching concern; (b) explain and discuss the value of each strategy; (c) model the strategy; (d) gradually give students increased responsibility for using the strategy on their own; and (e) gradually increase the complexity of the task.

Make motivation and engagement an overarching concern. If students are going to put in the time and effort necessary to learn and internalize word-learning strategies, they must be motivated to do so; and unless they are seriously engaged, they are not going to master the challenging content we present. The program used a number of motivational elements. For example, it included three colorful superheroes featured on student materials and on posters, each of whom championed one of the strategies we were teaching. Lexicon, for example, is the superhero championing the dictionary strategy. Lexicon is an extremely intelligent being who knows the answers to all possible questions about word meanings.

Explain and discuss the value of each strategy. Far too often, students are asked to engage in learning activities without being given sufficient information about just why they are doing the activities. In fact, far too frequently, students are given virtually no information about why they are doing activities. Unless students see the value of word-learning strategies, they are very unlikely to put in the effort necessary to learn them fully and use them as appropriately. This is not something that can be dealt with at the beginning of the instruction and then ignored. Rather, it is something that students need to be repeatedly reminded of over the course of instruction.

Model the strategy. Here, we refer to a particular type of modeling, cognitive modeling. With cognitive modeling, teachers use explicit talk to reveal their thought processes as they use the strategy students are being taught to use. Cognitive modeling provides a window into the teacher's mind, giving students a revealing view of the task they must complete in using the strategy. In the following example, the teacher cognitively models how to use context to infer a word's meaning:

> Suppose I am reading aloud and come to this sentence: "It was raining heavily and water was standing in the street, so before he left for work Mr. Hassan put on his raincoat, buckled on his galoshes over his shoes, and picked up his umbrella." Let's see—g-a-l-o-s-h-e-s. I don't think I know that word. Hum. It's raining, and he picks up his raincoat and umbrella and buckles something over his shoes. Galoshes must be some sort of waterproof boot. I can't be certain of that, but it makes sense in the sentence, and I don't think I need to look it up.

Gradually give students increased responsibility for using the strategy on their own. In the initial phase of instruction on a strategy, the teacher does all the work, firmly scaffolding students' efforts so that there is little chance of failure. Then, gradually, over time, the teacher gives students more and more responsibility for using the strategy, until at the completion of the instruction the students are using the strategy independently.

Gradually increase the complexity of the task. Not only is it important that students become increasingly independent in using strategies, it is also important that they learn to

Table 2. The Components of Balanced Strategies Instruction.

Motivate students to use the strategy, explaining and discussing its value.
Provide a description of the strategy and information on when, where, and how it should be used.
Model use of the strategy for students on a text the class can share.
Work with students in using the strategy on a text the class can share.
Give students opportunities to construct knowledge.
Periodically discuss with students how the strategy is working for them, what they think of it thus far, and when and how they can use it in the future.
Guide and support students as they use the strategy over time. At first, provide a lot of support. Later, provide less and less.
Work over time to help students use the newly learned strategy in various authentic in-school and out-of-school tasks.
Periodically review the strategy and further discuss students' understanding of it and responses to it.

complete increasingly challenging tasks. For example, the complexity of the task in using word parts to infer word meanings is increased as student move from working with inflections, to prefixes, to derivational suffixes, and to Latin and Greek roots.

A more complete list of the components of Balanced Strategies Instruction is shown in Table 2.

Our Subjective Assessment of the Instruction

As is the case with our assessment of the curriculum, we strongly endorse both the theories and models underlying our instruction and the instructional principles and models growing out of these theories and models. Also, as in our assessment of the curriculum, we would make one major change if we were to redesign the program. Although we already put a great deal of emphasis on motivation and engagement, in revising the program, we would put even more emphasis on these two critical aspects of instruction. Some of the approaches we would use in doing so are making connections to students' cultures and lives outside of school, promoting academic values and goals, building positive attitudes, providing appropriate challenges while doing everything possible to ensure that students meet those challenges, and using cooperative activities to maximize participation.

Teacher Preparation

We prepared teachers to use the program through a teacher's guide and in-service training. Initially, we had planned to have a third and we believe very powerful component. The plan was to have teachers teach the entire program during 1 year and then teach it for a second time with a different group of students and use the results from the teachers' second year of instruction when they would be more familiar with the program in evaluating its effectiveness. Unfortunately, we needed to change the research design because in the year the grant was funded, the funding agency (IES) established new requirements for meeting the What Works Clearinghouse standards "without reservations," a ranking we definitely wanted to attain.

The Teacher's Guide

The teacher's guide was substantial, totaling more than 250 pages, and included detailed instructions for each of the 45 days of the program. Each lesson included four parts:

1. *Key messages*: The points to be emphasized with students during the lesson (e.g., "You can use smaller words inside compound words to explain their meanings.").
2. *Objectives*: A description of what students will be able to do by the end of the lesson (e.g., "Define compound word.").
3. *Lesson at a glance*: A brief overview of the predictable and consistent lesson structure (A. Focus, B. Teach, C. Practice/Apply, D. Wrap Up) with the number of minutes needed for each part of the lesson.
4. *Materials and equipment*: A list of supplies needed for the lesson.

Each lesson began with a brief "Focus Activity" designed to capture students' attention and motivate them to learn. This consisted of a quick game, some thought-provoking questions, or a brief review. The main instructional activities, the bulk of the lesson, were the "Teach" and "Practice/Apply" activities. These activities varied depending on where students were in each unit. Earlier in the units, teachers devote more time to teaching, modeling, and guiding. As the unit progressed, direct teaching time decreased, and the time dedicated to practice increased. The final part of each lesson was the "Wrap Up" section, during which teachers brought the lesson to a close, provided corrective feedback, summarized what students should have learned, and/or gave students a chance to reflect on their learning. In addition, assessments occurred every 2 to 3 weeks. On feature of the lesson plans that we gave particular attention to was

providing teachers with suggested wording for explaining strategies, giving directions, posing questions, and interacting with students.

Inservice Training

As noted, teacher preparation also included inservice training. This training differed for inservice training done during the SBIR portion of the work and that done during the pilot for the 4-year efficacy study. Teacher preparation for the SBIR studies consisted of (a) a 1-hr orientation by one of the program developers, (b) a 1- to 2-hr interactive online training program that teachers completed at their own pace, and (c) a 1 hr debriefing and question and answer session by the same developer. The first face-to-face session dealt with the rationale for the WLS program, the development of the program, word-learning strategies, our approach to instruction, and an overview of the curriculum. The interactive online training provided further rationale for teaching word-learning strategies, details on the curriculum, and details on the instruction. As teachers worked their way through the online course, they were invited to speculate about why word-learning strategies are important, explore information about the strategies, check their knowledge, and watch demonstration and testimonial videos of teachers experienced with the program. The second face-to-face session dealt with teachers' questions and comments resulting from the online course, a closer look at a lesson, teaching for transfer, and other parts of a comprehensive vocabulary program.

Recruiting participants for the IES study proved to be a challenge, and we were forced to recruit participants from throughout our state rather than just from districts proximate to the research headquarters. Because of this, face-to-face training became problematic and issues of scalability needed to be addressed. It was decided to replace the face-to-face training with webinars that teachers could complete from their various locations in the state. These webinars, created by the research team and designed to prepare teachers to teach the WLS program effectively and with fidelity, focused on (a) background information about vocabulary development, instruction, and the use of WLS; (b) a demonstration of useful classroom practices; and (c) key components of curriculum implementation (e.g., following the teacher manual, dosage, and pacing). We also provided a guided tour of the previously developed online training modules and made them available to teachers for the duration of the study.

Our Subjective Assessment of the Teacher Preparation

We believe that the detailed teacher's guide was very supportive of teachers' use of the program and teachers' use of the guide in all of our classroom observations as well as their comments on the guide reinforced that belief. One feature of the guide we debated on including was the use of sample teaching language (scripts), our concern being that teachers might find them too prescriptive or even insulting. To make that less likely, we always introduced the scripts with a phrase like "You might say something like . . . ." We received no complaints about the scripts.

The developer and researchers differed on our assessments of the two approaches to the inservice training. The developer believes that the earlier approach—the one that included the self-paced, interactive online training and two face-to-face sessions—was more effective. The researchers believe that the later approach—with the webinars that teachers could conveniently attend wherever they were teaching—was more scalable and sustainable.

Concluding Remarks

In introducing these observations on our word-learning strategies program, we suggested that many of them are relevant to strategy instruction more generally and that some of them are relevant to other types of instruction. In these concluding remarks, we discuss what we consider the most important generalization we would make based on each major element of our program. Most of these generalizations would probably be labeled "common sense" and that label is in a sense appropriate. At the same time, in our combined 96 years of experience in education, they all too frequently have failed to be common practices.

First, considering the content of the curriculum, the generalization is that focusing on a relatively small body of content and teaching it well is almost always a better approach than presenting a larger body of content but teaching it less well. Second, considering the time allocation in the curriculum, the generalization is that for long-term instruction on a topic, the time allocation of something like 30 min per sessions, presented 3 days per week, over the period of a semester (along with recognition that that several additional semesters of instruction may be needed in subsequent years) makes good sense. Third, considering the theories and models underlying the instruction, the generalization is that when adopting newer theories and models, it is frequently not necessary and is sometimes detrimental to discard everything from older theories and models. Fourth, considering instructional principles, the generalization is that in planning instruction for school-age children, fostering students' motivation and engagement should be the preeminent concern. Fifth, considering teacher's guides, the generalization is that teacher's guides are a vital part of instructional programs and need to be carefully constructed and given as much attention as the programs themselves. Finally, considering inservice training, the generalization is that, in both research and practice, it needs to be recognized that part of inservice training should include teachers actually teaching a program and receiving feedback on their

efforts and that a teacher's initial experience in using an instructional program is virtually never going to represent his or her best use of the program.

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