Rubric for Identifying
Authentic Direct Instruction Programs

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Contents

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Foreword

The purpose of this document is to articulate and illustrate most of the major principles or axioms that are followed in the development of Direct Instruction programs. This information is useful for the following reasons:

1. It permits a critic to look at material and judge whether it is true Direct Instruction or some form of imitation that does not adhere to the full set of axioms that characterize true DI.
2. It shows the level of detail associated with what students are told, how they are tested, what kind of practice is provided, and how the material is reviewed and expanded from one lesson to the next.

This document does not present a theory of instruction, nor does it attempt to address the technical details of strategies for showing students that two things are the same, that they are different, or that one may be transformed into the other. These issues of design are presented in *Theory of Instruction* by Engelmann and Carnine (1982). Everything in the current document, however, is consistent with details of the theory. The discussions are simply not detailed enough for someone to use the rubric to create a DI program.

Section 1 presents empirical information about the features of DI. This information describes student phenomena that will be observed if a DI program is taught according to specifications. The lessons will take about the same amount of time and will fit into a single period. The difficulty of lessons will not tend to increase as the student progresses through the program. Rather, what is presented later will be about as difficult as what is presented earlier, which means that if students are brought to mastery earlier, they will be able to progress through the program at mastery.

Finally, the number of "steps" or the amount of teaching effort required for students in a DI program to master a particular universe of examples is far less than that for either a traditional program or one that mimics some features of DI.

Section 2 presents axioms or principles of DI practices. These axioms are critical for identifying whether a program is DI (capable of producing the outcomes articulated in Section 1). The axioms start with the smallest unit of instruction, an explanation about something the student doesn't know, and proceeds to broader issues of instructional design.

The axioms are organized on seven levels:

1. Presentation of information
2. Tasks
3. Task chains
4. Exercises
5. Sequences of exercises (tracks)
6. Lessons
7. Organization of content

Note that a DI program meets all of these axioms on all seven levels, not simply some or most of them. Furthermore, none are inert or something that is done for arbitrary reasons. All are relevant to making the instruction more teachable.

Some of the axioms may seem repetitive because they seem to refer to the same feature; for instance, the axiom that what is presented earlier may not be contradicted by what is presented later. This axiom applies to the level of what the teacher says now and what is said three minutes from now. It also applies to what the teacher says on this lesson versus what is said four lessons later. Because these extremes require greatly different remedies, they require different axioms.

A recurring point on all levels is that the DI analysis is far more intricate than a casual examination suggests. The axioms reveal the variables that underpin what appears to be simple and obvious. The reason the final product may seem simple and obvious is because the axioms have been applied, and the result is that instruction proceeds smoothly (the way it is described in Section 1).

All axioms have been derived from empirical observations of student and teacher performance. The most revealing setting for demonstrations about the role and importance of any axiom is work with lower performers. While keeping all other details constant and violating any one of the axioms, it is possible to show specific performance problems are obviated when the axiom is followed.

Section 3 presents a critique of a three-lesson program segment that has many features of DI (specified teacher wording, group unison responses, tasks that appear to be like those in DI, etc.). Note, however, that the author never claimed that the program was DI. The program had not been tried out with students, and was not intended for publication until after a field tryout and revisions based on the tryout results. The program was selected because it has the appearance of DI, but it does not adhere to all the DI axioms.

An assumption of the rubric is that problems identified through the application of the axioms would also be verified by field-test data on the types of problems teachers and students encounter. Therefore many of the problems we identify would be validated by the performance of students and teachers in the field tryout.

Each deviation from DI axioms presented in Section 2 is referenced to the axioms. The critique of the program is organized on different levels the manner in which information is presented, the structure and pattern of tasks, task chains, exercises, sequences, and organization of content.

There is no critique of lessons because the critique presents only lesson segments, not entire lessons. Each lesson in a DI program teaches four or more topics that are either not related or remotely related. In the program critiqued only one topic is covered, verbs.

After each problem with the program is identified and discussed, the critique provides a replacement that is consistent with the axioms. For example, after describing problems with a verbal rule that is presented, the critique provides an example of a DI rule or procedure that deals with the same content the original rule presented.

As the critique proceeds to broader categories of axioms (task chains, exercises), the part being critiqued becomes broader and the illustration for how the part would be presented as DI becomes more elaborate. Note, however, that in all cases the replacement for the critiqued part of the program is based on all the assumptions of the original program. In other words, the replacement of a rule with a DI rule would obviate the problems identified for the rule in the original program but would function simply as a replacement for the rule. The rule might not be found in any DI program, however, because DI programs do not have the same organization of content as the critiqued program.

Section 4 presents a replacement of the entire three-lesson sequence. This replacement is consistent with all the axioms. It is fundamentally different from the original program because it is generated from a different analysis and different organization of content. The criteria for global features of this sequence are specified in Category 7, Organization of content.

None of the replacement parts presented in Section 3 (for presenting specific information, tasks, task chains, or exercises) appear in replacement sequence, however, because the original

sequence is based on a different analysis of content and how the content is efficiently organized.

Section 5 presents two basic strategies for applying the rubric to determine if a program is authentic DI. One strategy involves a detailed look at a small part of the program, possibly only a page (a "snapshot"). This analysis involves the axioms for information, tasks, task chains, exercises (Categories 1–4), and possibly lessons (Category 6). The other analysis provides a more global examination of the program. It is based on information about how the content is organized and sequenced and involves axioms for sequence (Category 5) and organization of content (Category 7). Both approaches lead to the same conclusion about the program.

Section 6 presents a conclusion about the fundamental purpose of DI programs and how they differ from traditional assumptions about the role of program material. Every detail of DI programs is designed with the assumption that the program is a not simply resource material for a teacher to use, but a sequential presentation that controls the wording, the examples, the sequence, and the practice students receive. It further assumes that if the details are properly controlled, even low performers will achieve mastery.

SECTION 1

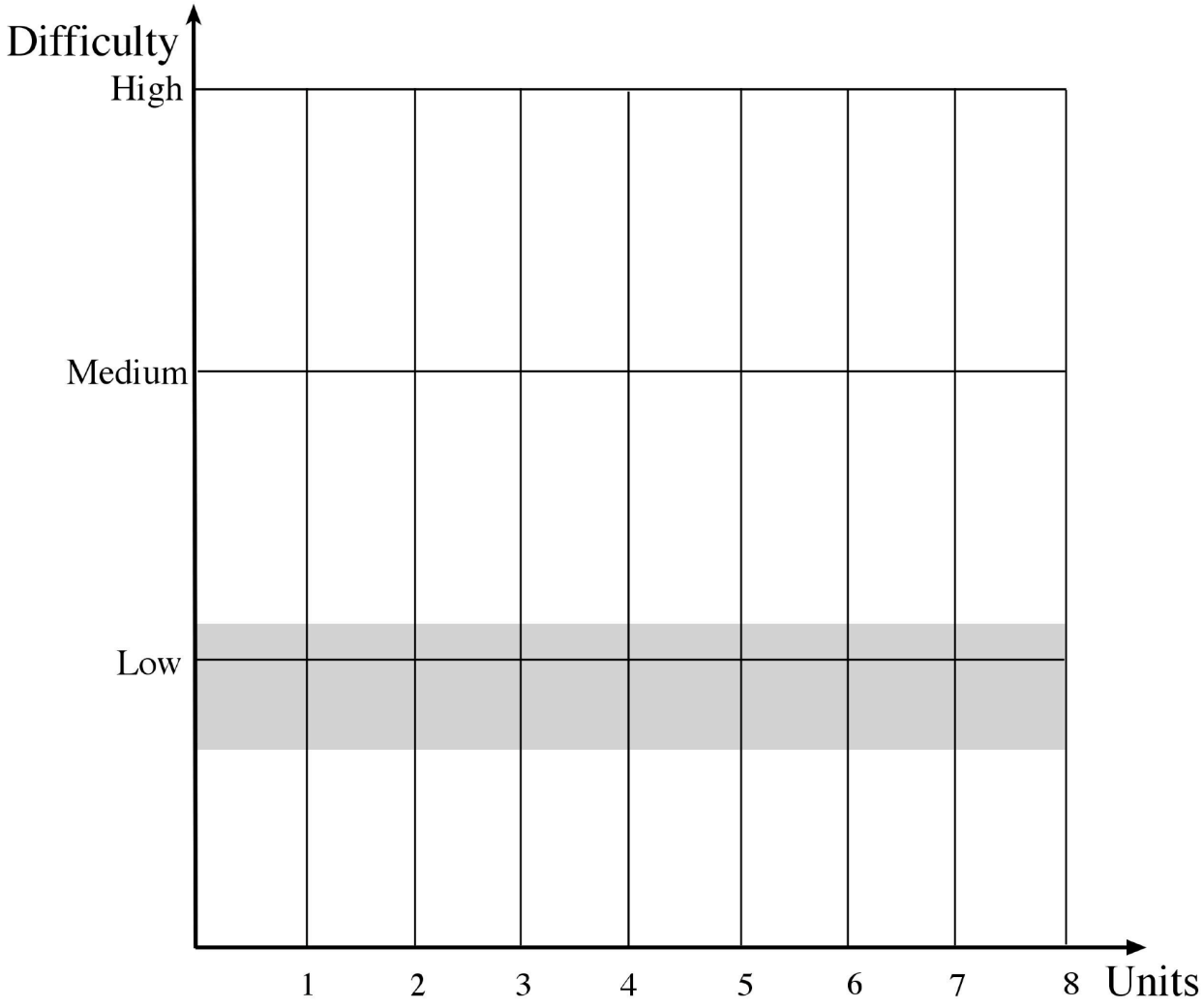
Empirical Features of DI

This section presents information about the performance of students that will be observed if a DI program is properly implemented, which means that students are appropriately placed in the program. This section does not discuss any details about how these empirical outcomes are achieved, simply that they will be observed if the program is properly implemented.

Rationale for the Empirical Outcomes

DI programs attempt to control all the variables that influence student performance within the context of a packaged program. If these variables are adequately controlled, more is taught in less time, and student learning is accelerated. The performance of students will meet four empirical criteria. These are expressed in Figures 1–4. The implication is that if the student performance meets these criteria, the content must have been organized successfully.

Figure 1 Difficulty of Inducing Mastery in DI Programs



Difficulty of Inducing Mastery in DI Programs, Figure 1

The shaded segment shows the range of difficulty of any developing skill or topic over time. The range is between "low difficulty" to "medium difficulty." The figure shows 8 units. These are groups of lessons that are sequentially ordered. The critical aspect of this trend is that difficulty does not change drastically from one unit (from one group of lessons to the next) even though more complex content is being introduced.

The difficulty is inferred from the performance of students. If they master the material at the rate it is parceled out (usually a lesson a day), the material meets the criterion of being not-too-difficult.

The difficulty may be *analytically* determined by following the various construction axioms indicated in Section 2. If all these axioms are followed, the presentation is analytically sound For Figure 1 to be possible, the student is not presented with too much new content or content that is too complicated (with respect to what the learner already knows).

How much is taught on a lesson is influenced by time constraints and the principle that what occurred on the preceding lesson must be reviewed or incorporated in what occurs on the current lesson.

Presentation Time per Track, Figure 2

In a DI program, there are four or more separate tracks or topics that are developed in small-step intervals from one lesson to the next. Each of these sequences or tracks requires 3 to 12 minutes each lesson. This time range is shown in the shaded area of Figure 2. Like the progression shown in Figure 1, the track remains within this time range from one lesson to the next.

Figure 2 Presentation Time per Track

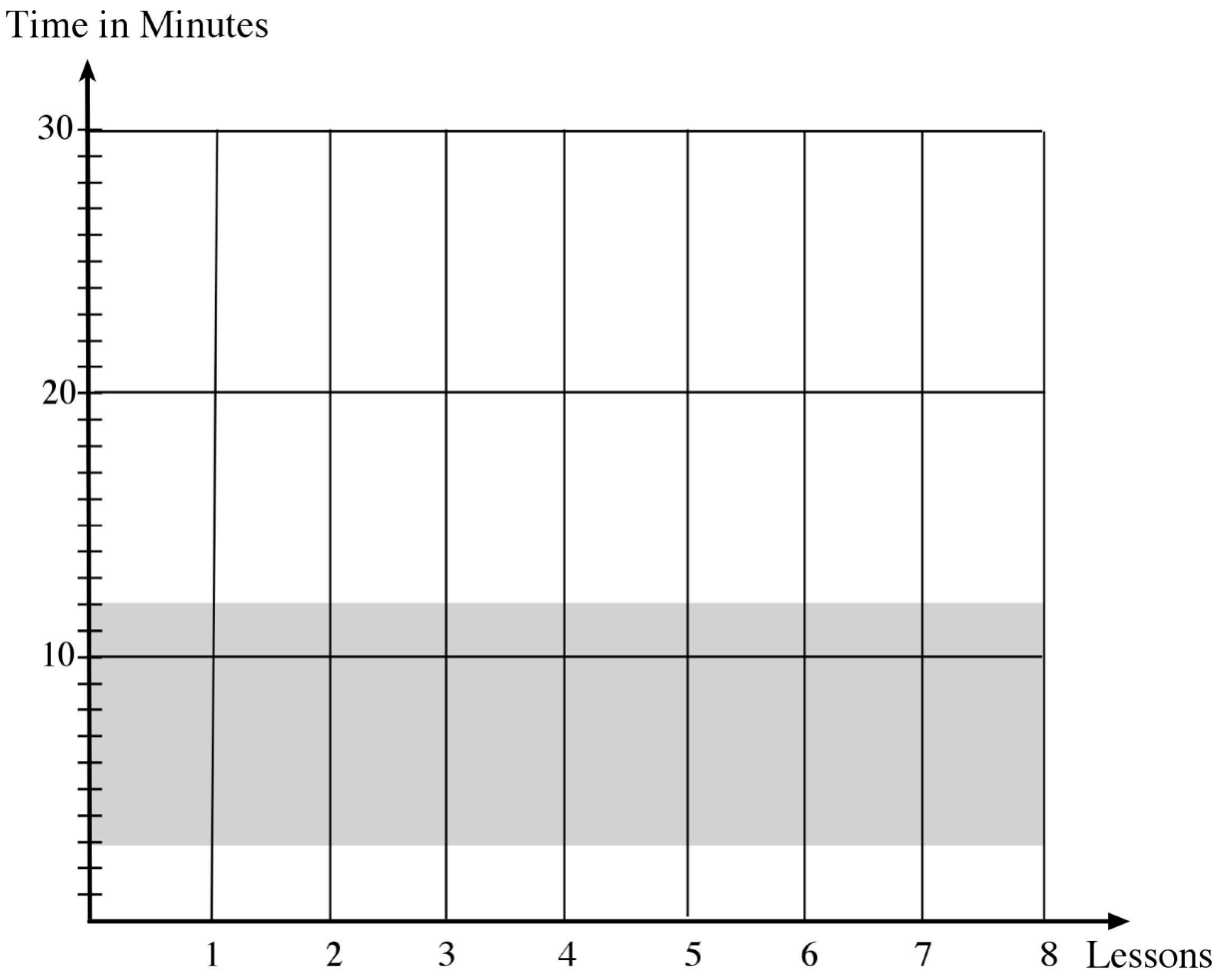
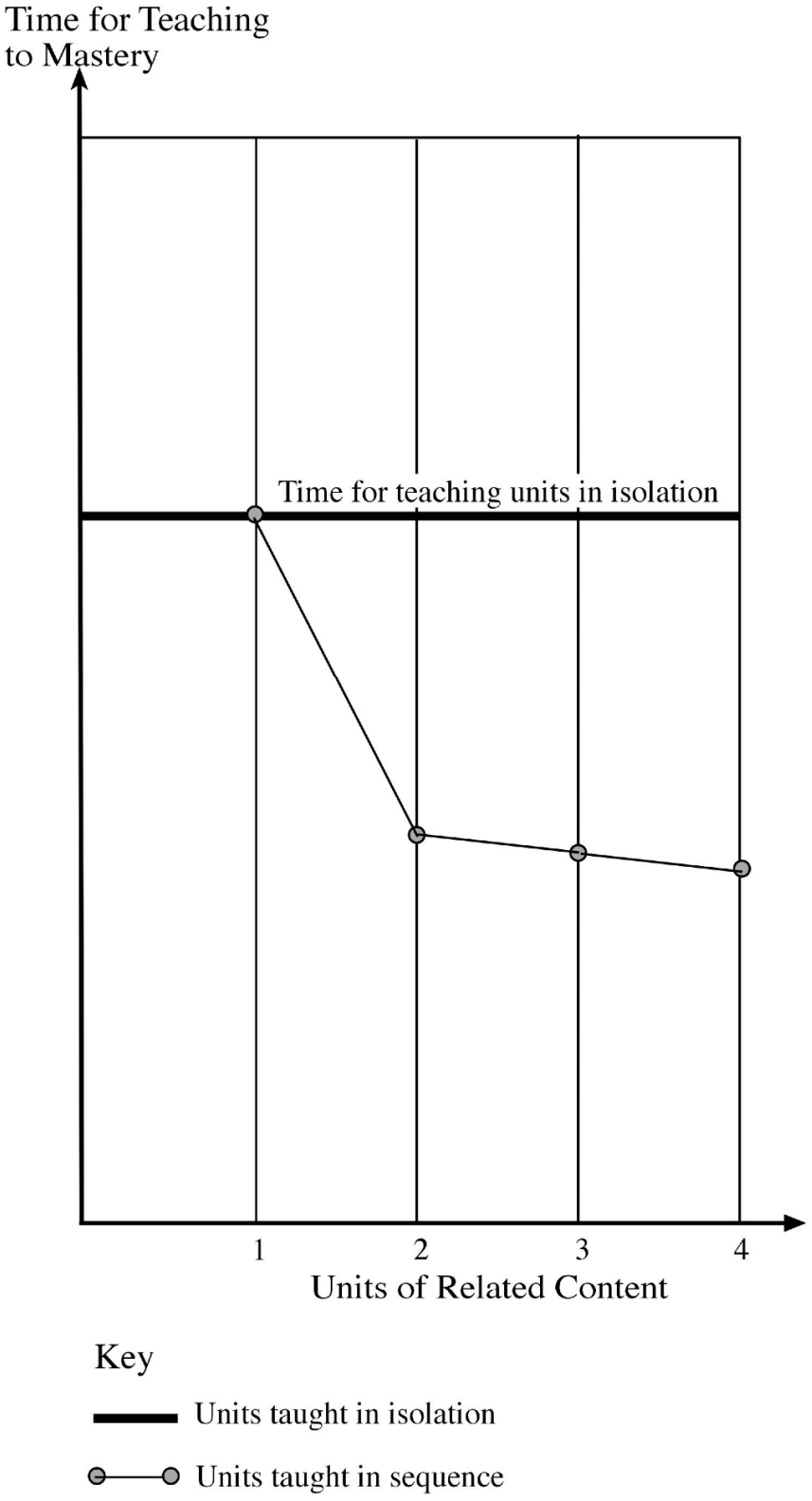


Figure 3a: Proper Pattern for Learning Related Content



Proper Pattern for Learning Related Content, Figure 3a

Figure 3a shows the amount of time required for students to learn a group of related units that have the same structure. This is the pattern observed in DI programs. The content is organized in a way that makes the presentation of later related units less time-consuming or easier than they would be if they were taught in isolation.

The horizontal bar on the graph shows the amount of teaching time for four related units if they were taught in isolation (not as part of a progression of four related units). The four units shown on the graph are assumed to be related to each other and of equal difficulty to teach if they are presented in isolation. In other words, if Unit 3 were taught not as the third item in a sequence but in isolation (or as the first item in a sequence) it would require the same amount of teaching time as Unit 1.

The curve on the graph shows the difficulty of the items when they are sequenced in a way that maximizes related features. The greatest amount of teaching is required for Unit 1. The others require less time to teach to mastery. This curve is achieved by arranging units so that their relationship is exploited. Related units are the same in some ways. An effective sequence is designed to make what is the same about these items obvious. Therefore, the student does not have to learn later units from scratch, but simply learn what is unique about each.

For this curve to be possible, nothing presented later contradicts anything presented earlier. The relative reduction in difficulty for Units 2 through 4 is not achieved through spurious means, but through legitimate economies. In the case of the grammar example presented in Section 4 of this rubric, establishing subject-predicate knowledge would facilitate the teaching of all the parts of speech because all may

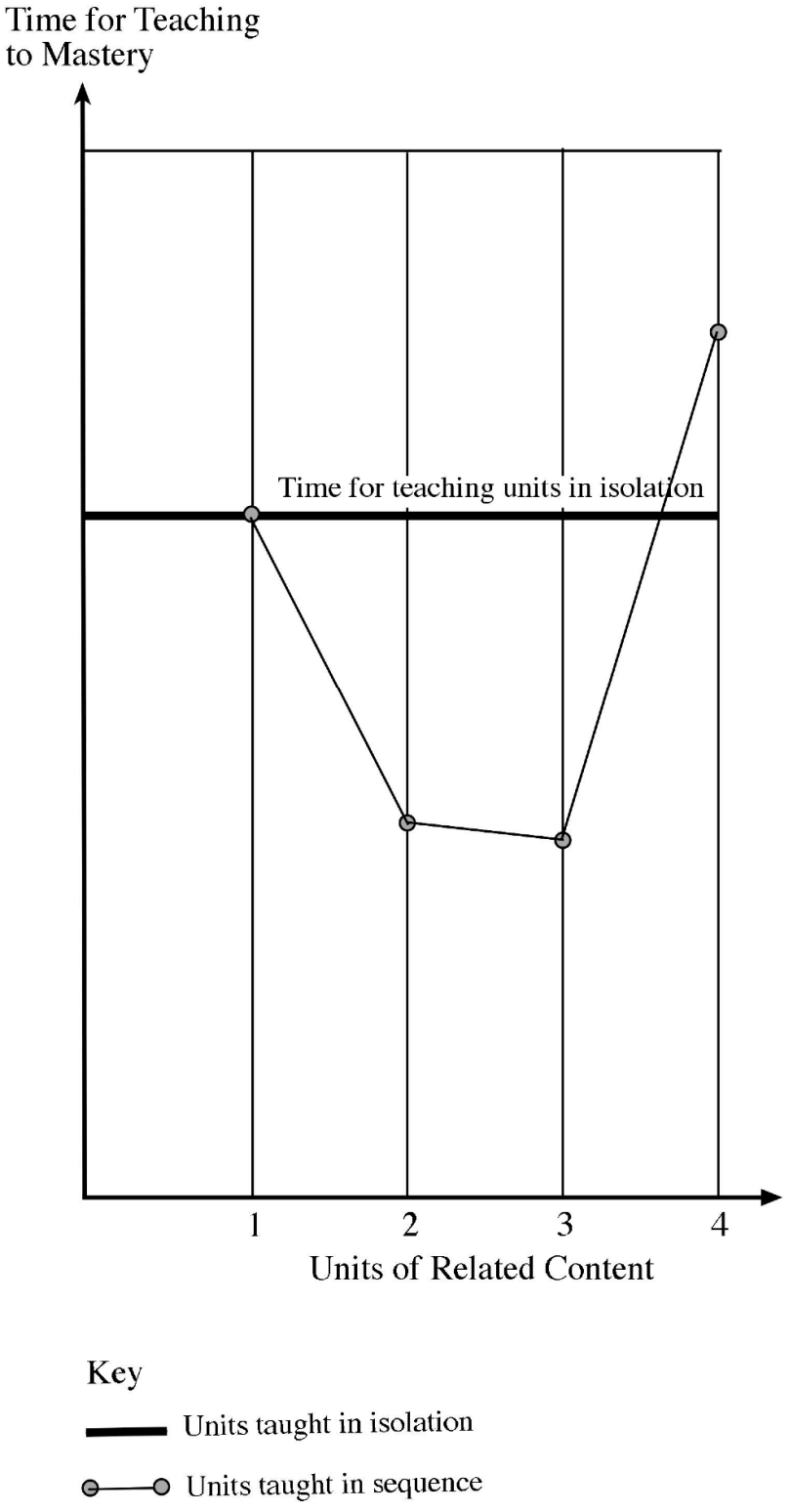
be referenced to specific parts of the subject and predicate. Therefore, if the example sets are appropriately designed, a larger segment of the universe of examples for any part of speech will require less teaching. Note that this curve is paramount to all Direct Instruction programming.

Improper Pattern for Learning Related Content, Figure 3b

Figure 3b shows the time required for learning related items in a poorly designed program. If the sequence is poor, as in this case, one (or more) later units not only becomes relatively more difficult for the students, but becomes more difficult than it would be if taught in isolation. In Figure 3b the fourth unit requires far more teaching than the second and third units. The sequence has made Unit 4 more difficult than it would be if it were taught in isolation or as the first unit. The reason is that the fourth unit contradicts or is in conflict with what the earlier units taught (either intentionally or accidentally). In other words, the program presented a spurious pattern that was clearly implied by the earlier units and how they were treated. The students learned this pattern. The fourth unit did not follow this pattern, so to learn Unit 4, the student has to unlearn the pattern consistent with Units 1 through 3 and also learn what is unique about Unit 4. That means that the teaching for Unit 4 is necessarily more elaborate than it would be if Unit 4 were presented as the first unit.

For instance, if naïve students are taught first to count to 3, with the directions, “Count to 3,” some of them will have trouble learning to count to 5. When the teacher says, “Count to 5,” they will say, “One to five,” because they have been unintentionally taught a correspondence between the words the teacher says, “Count to 3,” and the response, “One to three.”

Figure 3b: Improper Pattern for Learning Related Content

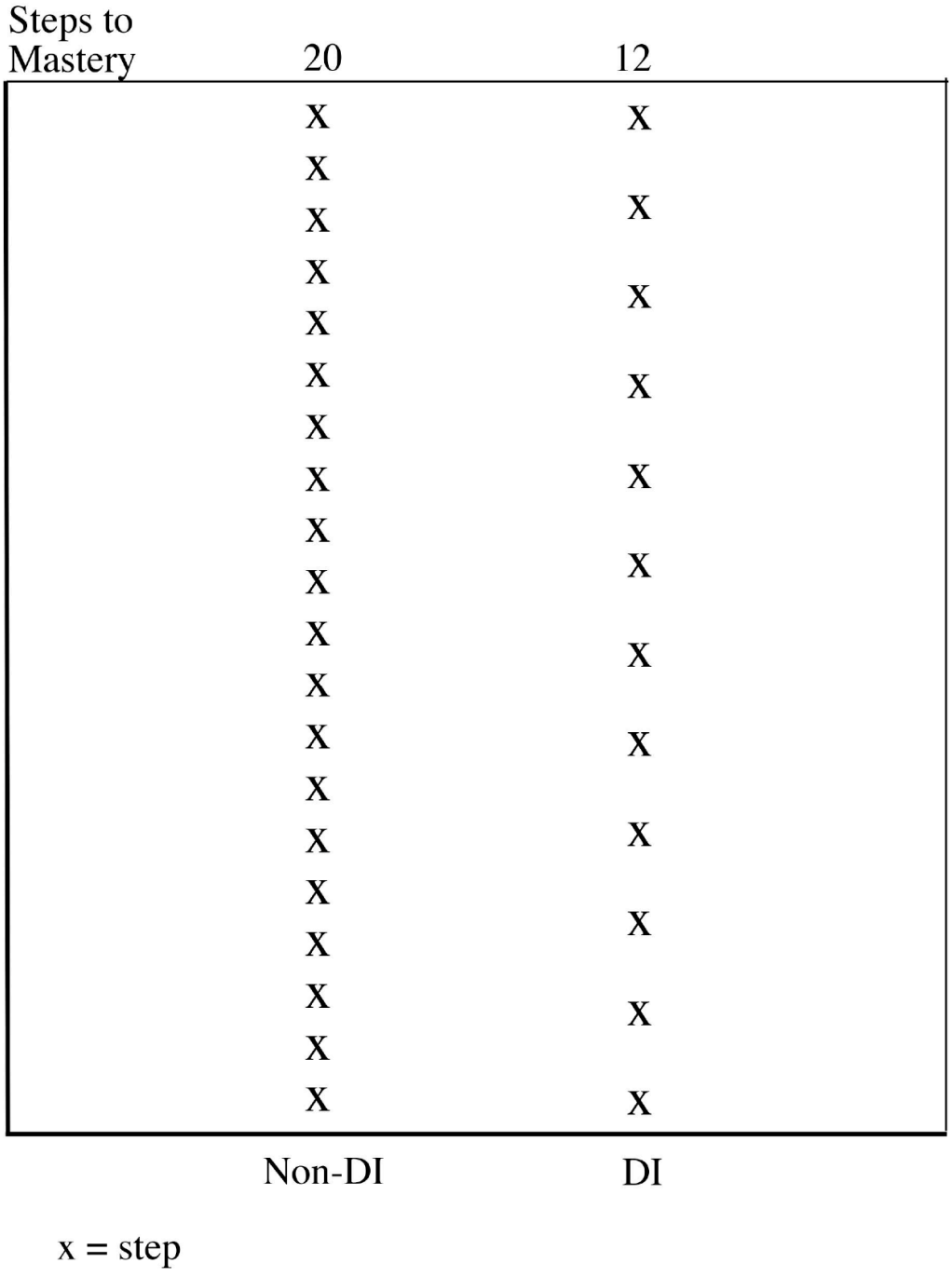


Another example involves fractions. If the introduction to fractions involves a series of exercises involving the fractions 1/2, 1/3 and 1/4, student performance will follow the curve for Figure 3b when the teacher introduces fractions that do not have a numerator of 1. The reason is that a high percentage of students learn a false relationship that involves not attending to the numerator. Students are able to apply this strategy to the worksheet activity of coloring a part of a picture that shows a fraction or the activity of writing the fraction from a picture. When students are later introduced to fractions that have a numerator other than 1, they have great difficulty, because now they must learn a completely new strategy for coloring parts or writing fractions from pictures. They can't ignore the numerator.

Another example occurs if the sequence presents many examples and all examples are fractions less than 1. When the sequence introduces fractions that equal whole numbers and fractions that are more than 1, students have such great difficulty that some of them are never able to accept the idea that a fraction does not necessarily describe parts of 1 whole. They understandably have trouble with a fraction that describes 27 wholes or 4 and a half wholes.

A final example is verbs. If verbs are taught with the emphasis that there are certain words that are verbs, the students will have difficulty learning about gerunds, or about a sentence like "The completely finished work was 11 pages long." What part of speech is the word *finished* in that sentence? It has to be an adjective because it is preceded by an obvious adverb. But probably most students who learn grammar rules apart from sentence structure never learn these distinctions, because for them a verb is a specific word and students possess no clear model that permits them to understand how it could be another part of speech.

Figure 4: Steps Required to Teach a Universe of Examples



***Steps Required to Teach a Universe of Examples,* Figure 4**

In Figure 4, both the non-DI and DI program teach the same amount of content to mastery. The steps involved in this teaching are shown as Xs. Note that the number of steps is determined analytically. The mastery, however, is an empirical issue. In Figure 4, the assumption is that each X requires about the same amount of time to achieve mastery, which means that the non-DI sequence requires far more time than the DI sequence. The DI program teaches all the examples through 12 steps. Therefore, the DI program accelerates the performance of students relative to the non-DI program. Students master the content in 3/5 the time required by the non-DI sequence.

Note that the non-DI teaching may have all the features shown in Figures 1, 2, and 3a. The instruction would satisfy the criterion of being not too difficult from lesson to lesson, the criterion of being parceled out at the rate of 3 to 12 minutes per lesson, and the criterion of achieving a curve that makes the subsequent units relatively easier than they would have been if taught in isolation. The difference, however, is that although the non-DI analysis was fundamentally sound, it was not translated into highly effective instruction. Instead it was parceled out too slowly, without organizing the content so that it could be communicated faster.

Unless a program meets all criteria illustrated in Figures 1, 2, 3a, and 4, it is not DI. The net result of meeting these criteria is that DI materials appear to be easy. Possibly the most difficult concept for observers of DI programs to understand is that although the programs seem simple, they meet multiple design criteria that make them simple. The superficial impression of a program done right is that the authors may not understand some of the complexities of the content. The complexities, however, have been addressed and have been

reduced to non-complexities that do not sacrifice the integrity of what is taught earlier or what is to be taught later.

If the criteria are met, the prediction is that the student will generalize to a specified set of examples including those that have not been taught.

SECTION 2

Axioms of Direct Instruction

The axioms of Direct Instruction provide detailed rubrics for identifying the essential features of Direct Instruction. As noted above, these axioms cover seven different categories of analysis:

1. Presentation of information
2. Tasks
3. Task chains
4. Exercises
5. Sequences of exercises (tracks) that involve the same topic
6. Lessons
7. Organization of content that generates the sequences, the exercises, and the tasks

As noted earlier, some of the axioms may seem redundant. For instance, there are axioms that address consistency and avoiding contradiction on the level of presenting information (1n), on the level of sequences of exercises (5c), on the level of lessons (6c) and on the level of organization of content (7e). The reason a variation of the same criterion appears on all these levels of analysis is that meeting the criteria requires a different solution on each level. It is possible for everything presented in an exercise to be consistent and have great inconsistency between that lesson and what occurs in a future lesson. It may be that what is presented throughout the program is perfectly consistent, but if the content is not organized to anticipate the complexity of what students will encounter later, the information presented in the program may overwhelm the students.

Category 1: Presentation of Information

For anything that is taught, the teacher first presents information to the student and then provides some type of task to determine whether the student has received and understands the information. The presentation of information (Category 1) and the task (Category 2) require the most specific levels of analysis.

The presentation of information must meet the following criteria:

1 a. The wording must be clear and concise.

1 b. The vocabulary presented is limited to what is immediately necessary for the discrimination or operation that is being taught.

1 c. The presentation assumes only knowledge or skill implied by what the student has done earlier.

1 d. The presentation is truthful and not misleading.

1 e. The presentation introduces all discriminations that are necessary for a reasonable test of what is taught and none that are not necessary.

1 f. The presentation introduces rules if the discrimination or operation being taught is more effectively presented as a rule.

1 g. The rule must be simple enough that the student could probably repeat it after several tries, and must avoid unnecessary abstract terms and unfamiliar or complicated syntax.

1 h. The presentation introduces examples without a rule or extensive verbal explanations if the content is more easily induced without a rule.

1 i. The set of examples that is demonstrated must sample a relatively large segment of the universe of examples to be learned.

1 j. The examples presented must contain no spurious prompts.

1 k. The information presented must be consistent with one and only one interpretation.

1 l. The amount of new information presented must be small enough that mastery could probably be induced in a few minutes.

1 m. The manner in which information is presented must not require a great deal of memory.

1 n. A rule or information must not be contradicted by what will be introduced later.

1 o. To shape understanding of what is the same about the examples in a set, greatly different examples are presented with a variation of the *same* wording.

1 p. To shape understanding of differences, minimally different examples are presented with wording that focuses on the *difference*.

Category 2: Tasks

The task consists of some form of direction or question that requires the student to produce a response. The task is related to the information that immediately precedes it or the information the student is assumed to have learned earlier.

- **2 a.** Only information presented either immediately before the task or earlier is to be tested.
- **2 b.** The presentation must directly and clearly link the tasks to preceding information. (The set of tasks implies exactly what information was presented earlier.)
- **2 c.** Any rule the student is expected to repeat must be simple enough for the student to master after a few trials.
- **2 d.** The task is efficient and uncomplicated.
- **2 e.** The task provides no spurious prompts.
- **2 f.** Tasks that have only one correct answer are presented to the group; tasks that have more than one correct answer to individuals.
- **2 g.** The wording of the task and the examples tested must be consistent with the wording provided by the earlier presentation of information.
- **2 h.** The wording must be clear and concise and introduce no inert vocabulary.
- **2 i.** The response the task calls for should be relatively simple so that tasks can be presented at the rate of about 9–20 per minute.
- **2 j.** If the presentation introduces new vocabulary, the task should incorporate that vocabulary, or should require the student to produce responses that incorporate that vocabulary.

2 k. The response may be prompted (modeled or led) only if the student is assumed not to be able to produce the response.

2 l. The tasks must address central discriminations, not peripheral content.

Category 3: Task Chaining

Three or more tasks are chained in an uninterrupted series to teach and test the student's knowledge of newly taught discriminations. The objective of the task chain is to prompt the student to apply what has been taught to the largest practical segment of the universe of examples that may be presented in 3 to 12 minutes. The tasks and examples in the task chain must meet the requirements of Categories 1 and 2. The rules governing the design of a chain of tasks are described in *Theory of Instruction.* Basically, to test the student on distinguishing one thing from another, minimally different task examples are juxtaposed. To test the student on sameness (applying what had been taught to new examples) greatly different task examples are juxtaposed.

3 a. All examples in the series have the same task form and variations of the same wording.

3 b. There is a sufficient *number* of tasks in the series to provide a good test of the *universe of examples.*

3 c. The set of examples provides a good *test* of the students' understanding of the rule or information that had been presented.

3 d. The wording of the tasks requires the student to *apply* the rule that had been taught or use the information that had been presented.

3 e. The tasks in the series either contain the new vocabulary presented or require the student to produce responses that have the new vocabulary.

3 f. The responses students make provide clear diagnostic information about what students understand and what students have not learned.

3 g. The examples in the set do not have spurious cues or patterns (such as a pattern of correct responses, yes, no, yes, no, yes, no).

Category 4: Exercises

Exercises are units that may be larger than a task chain. For something that is taught for the first time, the exercise would include the presentation of information followed by one or more task chains. Exercises that do not introduce anything new but simply expand or review what the student had learned on the previous lesson may involve one or more task chain.

4 a. An exercise usually requires 3 to 12 minutes.

4 b. Exercises that involve presentation of new information are designed to assume that the student is perfectly naïve.

4 c. The general progression in exercise types is that simple verbal series occur first, followed by tasks that require writing.

4 d. Exercises teach a manageable amount (an estimation of what a naïve student would be able to learn and apply in a relatively short period of time).

4 e. The exercise presents a good test of what the student is assumed to have mastered.

4 f. The exercise is based on an efficient analysis of the content.

4 g. What is presented in an exercise must be consistent with one and only one interpretation.

4 h. The wording must be consistent throughout the exercise.

4 i. The exercise tests the student on all new information presented in the exercise.

Category 5: Sequences (Tracks)

The sequence is sometimes referred to as a track. The sequence involves exercises on the same topic that appear in a series of lessons. The sequence addresses the two questions: 1) How the simpler vocabulary and discriminations are taught and reviewed; 2) How the sequences permit simpler vocabulary and discriminations to become integrated in more complicated operations. A sequence may be short, requiring exercises on only three or four lessons, or may be extensive, requiring 30 or more lessons.

5 a. Nothing is taught in only one lesson, but occurs over two or more consecutive lessons, followed by reviews or applications.

5 b. Everything taught must be discriminated from any easily confused discrimination the student already knows.

5 c. What is introduced later may expand what had been taught earlier but will not contradict what had been taught earlier.

5 d. Everything that is taught is reviewed or incorporated in a more complex operation.

5 e. Only a small amount of new teaching occurs on each lesson in a sequence.

5 f. The sequence is efficient and involves a minimum of new discriminations and new vocabulary.

5 g. Mechanics and conventions the student is to follow are introduced as early as is practical in the sequence.

Category 6: Lessons

A lesson is a unit that is usually scheduled daily. Lessons for a program require a specified amount of time (30 minutes for teaching of beginning skills in the primary grades, 50 minutes for upper-elementary skills and above). Lessons are designed to teach; they are not simply resource material on different topics that a teacher may use as grist for teaching. To derive the benefits of the program, the lesson sequence must be followed starting with Lesson 1 and continuing through the program. Also, the script must be followed closely to assure consistent wording and concise examples.

6 a. Lessons are composed of 4 to 10 different exercises (each requiring 3 to 12 minutes and each from a different track.

6 b. Each lesson introduces only about 10% new material, which means that not more than one or two exercises introduce something new on a lesson).

6 c. Everything taught in a lesson must be consistent with what had been taught earlier.

6 d. Each lesson provides additional practice on everything introduced in the preceding one or two lessons.

6 e. Part of each lesson has some form of cumulative review or applications that address skills and information presented in earlier lessons.

6 f. Any lesson may be used as a test to determine whether students are placed appropriately and whether they are performing at a high level of mastery.

6 g. Performance on lessons may be used diagnostically to reveal problems with the teacher's presentation as well as problems of student performance and placement.

Category 7: Organization of Content

The organization of content refers to the way the instruction had been designed. The goal for any level of any program is to teach the students skills that enable them to perform successfully on any example within a specific universe of examples. The organization of content refers to:

- how the examples are grouped,
- how the language the teacher uses to refer to the examples is simplified,
- how the progression of small steps is designed to take the student from the various component skills and simple applications to more complicated examples that are accompanied by more sophisticated language.

7 a. If the organization of content is well conceived, the program will seem easy, possibly even too easy.

7 b. Content is organized so the student is required to learn a minimum number of discriminations and a minimum amount of new nomenclature.

7 c. The design permits the teaching of relatively large segment of the universe of examples through a relatively small amount of teaching.

7 d. The model must account for all the discriminations and operations the student is to master for the subject or content.

7 e. The design must generate all details of the program: sequences that do not introduce anything that will be contradicted later; task chains and task wording that are efficient.

7 f. The model should not try to teach nomenclature prematurely and should not introduce unnecessary nomenclature or nomenclature of questionable value.

7 g. The model should not introduce discriminations that are trivial early in the sequence, but as additions presented after the student has a firm understanding of critical discriminations.

7 h. The organization of content is designed so that student mastery of content introduced earlier predicts success with later content; failure with earlier content predicts failure with later content.

SECTION 3

Applications of DI Axioms

This section applies the axioms presented in Section 2 to a program that has many features of a well-designed DI program. The lessons are sequenced; tasks have clear objectives; and DI procedures such as model, lead, and test are incorporated in the lessons. However, the program does not meet various DI criteria. As noted earlier, the program was not published and the author would not publish the program before it had been validated to work well with the population of students for whom it had been designed. Many of the problems identified in the following critique would be observed in a field tryout, and the data would suggest specific revisions in the program.

Parts of the first three lessons of a beginning grammar program are presented. Each part addresses the teaching of verbs. Following each lesson segment is a discussion that indicates departures from DI axioms. Because the example does not present full lessons, simply exercises that address verbs, only a few of the axioms that relate to lessons do not apply to the example, they are still valid and serve as firm guidelines for creating lessons in a DI sequence.

After each departure from the axioms in the following critique is a replacement, which simply addresses the problem identified and shows how the part would appear if it were consistent with the axioms. Note that none of these replacements would necessarily appear in any DI program because the content may be organized differently for a DI program. Therefore, the information, tasks, chains, and exercises would be different.

Each departure from the axioms is signaled with a code that identifies axioms. The code consists of a number and a letter. The

number refers to the categories (1–7). The letter refers to the axiom within that category (a–p). The first time an axiom is referred to in the critique, the axiom is stated. For subsequent references to that axiom, only the code is presented.

As noted earlier, the program was not published and not intended to be published in its current form. It had not been field–tested and the author would not publish the program before it had been validated to work well the population of students for whom it had been designed. Many of the problems identified analytically would be observed in a field tryout.

Below are the exercises from the first lesson of the program being critiqued, followed by a discussion of that lesson segment.

Lesson 1

EXERCISE 1

NAMING GRAMMAR TERMS

1. **(Hand out students' workbooks)**
   Open your work book to Lesson 1.
   Put your finger on Part A. **(Check.)**
   - The word *verb* is defined in two ways. Here is the first rule: *A verb is an action. Anything you can do is called a verb*.
   Say the rule with me.
   (Signal.) "A verb is an action. Anything you can do is called a verb."
   Your turn to say the rule.
   (Signal.) "A verb is an action. Anything you can do is called a verb."
   Yes, *a verb is an action. Anything you can do is called a verb.* The verb is underlined in the first two sentences.

2. I'll read sentence 1. Tell me which word is a verb. *He ran home.* Which word is the verb?
   (Signal.) "Ran."
   Yes, *ran*. That word is underlined in sentence 1. The word *ran* is an action. You can do running.

3. Sentence 2. Tell me which word is a verb. *She ate an apple*. Which word is the verb?
   (Signal.) "Ate."
   Yes, *ate*. That word is underlined in sentence 2. The word *ate* is an action. You can do eating.

4. Sentence 3. The verb is not underlined in this sentence. Tell me which word is a verb. *I fell out of the boat.* Which word is the verb?
   (Signal.) "Fell."
   Yes, *fell*. It was not underlined. Good finding *fell*. The word *fell* is an action. You can do falling.

5. Sentence 4. The verb is not underlined in this sentence. Tell me which word is a verb. You slept like a baby. Which word is the verb?
   (Signal.) "Slept."
   Yes, *slept*. It was not underlined. Good finding *slept*. The word *slept* is an action. You can do sleeping.

6. Look back at your workbook. Put your finger on TERMS.
   - The word *verb* is defined in two ways. Here is the second rule: *A verb is a state of being. Being means the words: be, been, being, is, are, was, and were*.
   - Say the second rule with me.
   (Signal.) "A verb is a state of being. Being means the words: be, been, being, is, are, was, and were."
   Your turn to say the rule:
   (Signal.) "A verb is a state of being. Being means the words: be, been, being, is, are, was, and were."
   - Yes, *a verb is a state of being. Being means the words: be, been, being, is, are, was, and were*. The list of being words is on the left side of the page

- Say the being words with me.
  (Signal.) "Be, been, being, is, are, was, and were."
  Yes, *be, been, being, is, are, was, and were.*
  Your turn to say the being words:
  (Signal.) "Be, been, being, is, are, was, and were."
  Yes, *be, been, being, is, are, was, and were.*

7. Look at Part B. The verb is underlined in the first two sentences.
   I'll read sentence 1. Tell me which word is a verb. *I am silly.* Which word is the verb?
   (Signal.) "Am."
   Yes, *am*. That word is underlined in sentence 1. The word *am* is a state of being word. It is on the being word list.

8. I'll read sentence 2. Tell me which word is a verb. *She is sad.* Which word is the verb?
   (Signal.) "Is."
   Yes, *is*. That word is not underlined in sentence 2. The word *is* is a state of being word. It is on the being word list.

9. Good naming verbs.

EXERCISE 2

NAMING GRAMMAR TERMS

1. Look back at your workbook. Put Your finger on Part C. **(Check).**
   There are three sentences in Part C. Each sentence has a verb in it.
- Let's read the first sentence together.
  (Signal.) "The dog eats ice cream."
  Yes, *The dog eats ice cream*.
  Now, I'm going to skip around. Read the second sentence
  (Call on student). "The house is old."
  Yes, *the house is old.*
  Still skipping around. Read the third sentence.
  (Call on student). "I swim across the big lake."
  Yes, *I swim across the big lake.*

2. Listen to the instructions for Part C:
   Use your pencil to circle the verb in each sentence.
   What are you circling?
   (Signal.) "The verbs in each sentence."
   Yes, circle the verb in each sentence.
   Put your pencil down when you're finished. Begin now.
   (Observe students and correct individual mistakes when possible)

1. You're going to report which words you circled. Look at sentence 1. [3]
- Everyone, which word did you circle?
  (Signal.) "Eats."
  Yes, *eats*.
  Why is *eats* circled in that sentence?
  (Call on student). "Eats is an action."
  Yes, *eats* is an action. You can do eating.
- Look at sentence 2. Everyone, which word did you circle?
  (Signal.) "is."
  Yes, *is*.
  Why is *is* circled in that sentence? **(Call on student).** "Is is on the being word list."
  Yes, *is* is the being word list. It is a state of being.
- Look at sentence 3. Now, I'm going to skip around. Which word did you circle?
  (Call on student). "Swim."
  Yes, *swim*.
- Still skipping around. Which word did you circle?
  (Call on student). "Swim."
  Why is *swim* circled in that sentence?
  (Call on student). "Swim is an action."
  Yes, *swim* is an action. You can do swimming.

- Good circling the correct verb Aspect in those sentences. If you answered two out of three sentences, correctly, award yourself 1 bonus point. If you answered all three sentences correctly, award yourself 2 bonus points.
- Record your bonus points on the points chart.

Critique of Lesson Segment 1

Step 1, bullet 1 of the exercise indicates:

- **The word *verb* is defined in two ways. Here is the first rule: *A verb is an action. Anything you can do is called a verb.***

Problems:

1. **1 b. [The vocabulary presented is limited to what is immediately necessary for the discrimination or operation that is being taught.]**

   The text indicates that verbs are defined two ways. Yet, they are defined in only one way. So the reference to two ways should be deleted.

2. **1 e. [The presentation introduces all discriminations that are necessary for a reasonable test of what is taught and none that are not necessary.]**

   The second sentence, **Here is the first rule: *A verb is an action,*** violates this criterion. The rule is stated in a way that implies *all* verbs are actions. It doesn't say that one type of verb *names* actions.

3. **1 d. [The presentation is truthful and not misleading.]**

   A verb is not an action. It is a **word**. A correction would present altered wording, such as, **A verb is a word that tells about anything you can do** or **A verb is a word that tells about an action**. Note that this correction addresses only problem 3. The presentation would still be inconsistent with axioms 1b and 1e.

4. **1 c. [The presentation assumes only knowledge or skill implied by what the student has done earlier.]**

   The assumption is that the students know that the word *action* means "anything you can do." This assumption may not be true and introduces possible confusion.

5. **1 b.**

   The reference to *action* is inert and is never used later. (The confirmation of *verb* is that *you can do* _____*ing.*) The reference to **action** should be deleted.

6.

   The introductory sentence refers to defining. Yet the word *defining* is replaced by "a rule." A consistent presentation would present either a definition or a rule.

Replacement:

Here would be an efficient replacement for the three sentences:

- **You're going to learn about *verbs.***
  Here is a rule: Words that tell about
  something you can do are verbs.

This presentation is truthful. It doesn't imply that all verbs tell about action, but that if a word tells about something you can do, it is a verb.

Step 1 of the original program continues:

Say the rule with me. (Signal.) "A verb is an action. Anything you can do is called a verb."

Your turn to say the rule. (Signal.) "A verb is an action. Anything you can do is called a verb."

Yes, a verb is an action. Anything you can do is called a verb.

Problems:

1. **2 c. [Any rule the student is expected to repeat must be simple enough for the student to master after a few trials.]**

   Some students who would be perfectly capable of learning to identify verbs would not be able to say this rule after three or more trials. Also, the rule consists of two sentences. Generally, DI presents rules that are expressed in only a single sentence.

2. **1 d.**

   The rule is misleading: Anything you can do is not called a verb. Verbs are not actions but words.

3. **2 k. [The response may be prompted (modeled or led) only if the student is assumed not to be able to produce the response.]**

   In a DI sequence, the lead step (say it with me) is used only if there is a high likelihood that the students would not be able to say something. Leading is appropriate for the two-sentence rule, but not for a well designed sequence that calls for simpler responses.

Replacement:

Here is a replacement of the whole first part of Step 1 done as DI.

- **You're going to learn about *verbs.***

  What are you going to learn about?

  Listen: Words that tell about

something you can do are *verbs.*

Listen again: Words that tell about something you can do are *verbs.*

- **Say the rule.** (Signal.) "Words that tell about something you can do are *verbs.*"
- **If a word tells about something you can do, what do you know about it?** (Signal.) "It's a verb."

Yes, it's a verb.

The rule is manageable and students could likely achieve mastery after three repetitions. If students make more than one or two mistakes on this part, it would not be laborious to repeat the whole part.

The replacement avoids all the problems identified with the original program.

Step 1 of the original exercise continues:

The verb is underlined in the first two sentences.

The series consists of four sentences on the workbook page. The verb in the first two are underlined.

PART A

1. **He <u>ran</u> home.**
2. **She <u>ate</u> an apple.**
3. **I fell out of the boat.**
4. **You slept like a baby.**

For all these sentences, the teacher presents the task, **"Which word is the verb?"**

Problems:

1. **1 i. [The set of examples that is demonstrated must sample a relatively large segment of the universe of examples to be learned.]**

   These examples present a very limited segment from the universe of all sentences to which the rule applies. The verbs in all sentences are *irregular* past tense verbs. There are no regular verbs like *handed, stopped, loved, greeted*, and no present-tense or two-word verbs. (According to the way in which verbs are "defined" by the program, there could not be any two-word verbs.) Also the sentences seem to vary in irrelevant features—the pronoun in the sentences—I, you, he, she. This variation is far less important than variations in verbs (the range of action verbs).

2. **2 e. [The task provides no spurious prompts.]**

   The underlining should be unnecessary. It functions as a spurious prompt because students could perform correctly on the first two sentences simply by reading the underlined words, not by applying the information presented by the rule. So if students respond correctly to these examples, the teacher has no clean information about what they know and what they are attending to.

3. **3 b. [There is a sufficient *number* of tasks in the series to provide a good test of the *universe of examples.*]**

   Only two items are actually tested. That number is too small to give any kind of indication of how the student would respond to other items from the universe of examples.

4. **2 g. [The wording of the task and the examples tested must be consistent with the wording provided by the earlier presentation of information.]**

   The wording of the tasks is not consistent with the information. The rule for verbs is expressed in the present tense (anything you can **do**). Yet there are no examples of somebody doing something. All sentences are written in the past tense.

5. **3 g. [The examples in the set do not have spurious cues or patterns (such as a pattern of correct responses, yes, no, yes, no, yes, no).]**

   The sentences share a spurious common feature of having **the verb as the second word.** A student who picked up on this cue could learn that the verb is always the second word in the sentence. Nothing presented contradicts this misrule.

Replacement (examples):

Here's an adequate series for the rule and for the way "verb" has been defined by the program. (**A verb is an action. Anything you can do is called a verb.)**

Sentence 1: The old man shovels snow.
Sentence 2: Her car slid down the hill.
Sentence 3: Kim worked very hard.
Sentence 4: Those horses run around the field.
Sentence 5: A flock of blackbirds makes a lot of noise in the morning.
Sentence 6: The winner of the race set a new record.
Sentence 7: I rode for 12 hours.
Sentence 8: Sandra studies.

The series presents the same kind of sentences presented in the original example (subject–predicate order). The replacement presents a

wider range of variation. The verb appears as the second, third, fourth, fifth, and sixth word in sentences. Some of the sentences are in the past tense, some in the present. Some verbs are regular; some are irregular.

The replacement series is limited. It is restricted by the manner in which the program conceives of verbs. Verbs are defined as a single word, which prevents the series from showing much variation in verbs.

Replacement (teaching presentation):

The tasks are implied by the definition. The definition refers to what you (can) do. So the task refers to words that indicate what you do.

- **Sentence 1: The old man shovels snow.**
  Which word tells what he does? (Signal.) "Shovels."
  So the word *shovels* is a verb. What do you know about the word *shovels?* (Signal.) "It's a verb."
- **Sentence 2: Her car slid down the hill.**
  Which word tells what the car did? (Signal.) "Slid."
  So what do you know about the word *slid?* (Signal.)
  "It's a verb."
- **Sentence 3: Kim worked very hard.**
  Which word tells what Kim did? (Signal.) "Worked."
  So what do you know about the word *worked?* (Signal.) "It's a verb."
  (The format is repeated with the remaining examples.)

Note that for each example in this series, the response to the second question the teacher asks is the same, "It's a verb." This is not a spurious cue. It simply provides students with practice in using the word *verb* and relating it to observed features of each example. The question would be spurious if it were the only question asked.

The second question is designed to prompt the correct answer, but it does not present a spurious cue. It names the subject of the sentence. In all cases, the verb is the next word in the sentence. For example question 3 asks, "What word tells what Kim did?" The answer is the word in the sentence that follows the word Kim. The question exploits a basic feature of subject-first sentences.

The series is an improvement over the original because it provides 8 test examples. So the series provides far more diagnostic information than the original.

The series presents some verbs that do not involve obvious actions (make, set). This variation also implies that the student who masters the series would be able to identify a larger segment of the universe of verbs.

The sequence could be followed by a short series that requires the student to use the word *verb* in a discriminated context. For example, the teacher says different words from a sentence and directs students to identify each word as a *verb* or *not a verb.*

Example sentence: **Her car slid down a hill.**
Say the sentence.
Is *her* a verb?
How do you know? (It doesn't tell about an action.)
Is *car* a verb?
How do you know? (It doesn't tell about an action.)
Is *slid* a verb?
How do you know? (It tells about an action.)
Yes, it tells about an action.

Lesson 1, Exercise 1, Step 6 of the original program introduces a new rule*:*

- **The word *verb* is defined in two ways.**
  Here's the second rule...

Problems:

1. **1 m. [The manner in which information is presented must not require a great deal of memory.]**

   For students to relate this information to what had been presented earlier, they would have to remember the beginning of the exercise, when the teacher said, **"The word *verb* is defined in two ways. Here is the first rule**…**"** Given that students never responded to the question, "How many ways is verb defined?," this reference to the second rule amounts to inert wording. DI instruction is purposely designed so that it does not require a great deal of memory of remote events or information unless they were brought to a level of mastery.

2. **1 a. [The wording must be clear and concise.]**

   Students would have to understand that when the teacher says, "Here is the first *rule*," it means, "Here is the first *definition*." A goal of DI is to make sure that everything the teacher says is understandable to the student.

Replacement:

A better transition would refer to what the students have just done. For example:

- **We have worked with verbs that tell about actions. There is another kind of verb that does not tell about actions.**

  This introduction avoids the problems noted above. It requires very little memory. It introduces the next type of verb, and it clearly indicates how the new kind of verb differs from the ones they have just worked with.

Step 6 of the original continues:

Here is the second rule: *A verb is a state of being. Being means the words: be, been, being, is, are, was, and were.*

- **Say the second rule with me.**

Problems:

The rule has the following problems.

1. **1 a.**
   The wording of the rule contains abstract words that are not explained or defined—*state of being.* A basic principle of DI is that no unfamiliar abstract words or expressions are used.

2. **1 d.**
   The rule is misleading. *Being* does not *mean* the words *be, been…*etc. *Being* is *expressed by* the words… .

Replacement:

Translated into simple language the introduction would be, **"Here are the words that tell about being: …."**

3. **1 n. [A rule or information must not be contradicted by what will be introduced later.]**

   From the students' standpoint, the rule contradicts what they have just been taught. All the verbs the students have encountered are one-word verbs. Some of these "being" verbs (virtually) never occur alone—*be, been being.* The others (*are, was,* and *were*) may occur alone but often don't (*are running*, *was sleeping, were eating*). Therefore, the presentation suggests that verbs are one word, whether or not they are being verbs or action verbs. Note: strictly speaking there is a difference between being verbs and "helping verbs." The issue is not whether the discrimination is valid but whether the program should be

designed to make this distinction explicit or to avoid it by not teaching the label, “being” verbs.

Also, the rule defines being as a list of words, but the list is possibly not exhaustive (depending on the way grammar is conceived). For some schemes the list would be: *is*, *am*, *are*, *was*, *were*, *be*, *being*, *been*, *seem*, *look*, *feel*, *become*. Even more problematic, however, is that modal auxiliary verbs *(have, has, had, may, might, would, should,* etc.) function the same way that being verbs do when they are linked to action verbs. Because the student will have to master these combinations later, their presentation will either contradict the rule or make the conventions far more complicated than they need to be for students to identify verbs in sentences.

4. **4 d.** **[Exercises teach a manageable amount (an estimation of what a naïve student would be able to learn and apply in a relatively short period of time).]**

   Step 6 introduces far too much new information to be appended to the information about action verbs. The goal of any exercise is to teach to mastery. It would be challenging to teach the first rule to mastery. The addition of the second rule makes mastery highly unlikely for many students.

5. **1 g.**

   Students are expected to say the rule. Many students would not be able to recite this rule after 7 or more trials.

Replacement:

Here is an alternative explanation that is less complicated, that requires less vocabulary, and that covers a broader universe of examples.

- **Some verbs do not tell about actions.**

  The list shows some of them….

6. **1 h.** **[The presentation introduces examples without a rule or extensive verbal explanations if the content is more easily induced without a rule.]**

This rule is not efficient or necessary. It is possible to present a sequence that involves no rule, presents no abstract language, introduces no list of words.

Replacement:

Some verbs don't tell about actions. Those verbs work just like action verbs.

Listen, the boy sat in the park.
What's the verb?
New sentence: The boy was in the park.
What's the verb?
New sentence: The boy is in the park.
What's the verb?
New sentence: The boys were in the park.
What's the verb?
New sentence: I am in the park.
What's the verb?
(Repeat the format with 4 or more examples.)

Compared to the original, the series introduces more verbs that can stand alone. Note that the series does not address the discrimination of whether the verb is an action verb or a state of being. The reason is that this distinction is not important. What is important is for the students to be able to identify which word in the sentence is a verb. Furthermore, the discrimination of *action* verb versus *being* verb does not appear in the original sequence. (The student does not identify verbs as either action verbs or state-of-being verbs.)

Technically, the series starts with a verb known to the students and systematically replaces the verb with other verbs. The series does not model any examples, simply presents minimally different examples that show a different verb word after "the boy."

Even though the series is efficient, it is not highly desirable because the scope is limited by the restriction that all the verbs are to consist of one word. That limits the examples to *is, am, are, was, were.* Note that no sentences contain been or being because these words do not stand alone in sentences. In any case, the series is better than the presentation the original program provides.

Lesson 1, Exercise 1, Step 7 of the original program continues:

7. Look at Part B. The verb is underlined in the first two sentences.
I'll read sentence 1: Tell me which word is a verb. *I am silly.* Which word is the verb?
(Signal.) "Am."
Yes, *am.* That word is underlined in sentence 1. The word *am* is a state of being word. It is on the being word list.

PART B

1. **I <u>am</u> silly**
2. **She is sad.**

Problems:

1. **1 a.**
   The directions are wordy. There are two references to the underlined verbs. Only one is necessary.

2. **2 e.**

The list provides a spurious prompt. The behavior that is being reinforced is looking at the list. The appropriate behavior would involve applying information that has been presented without referring to the list.

3. **3 g.**

There are spurious patterns that would not occur in a DI sequence.

a) The verb is reliably identified by position.
b) Both sentences are in the present tense.
c) Both are three-word sentences, with the verb in the middle. (Versus Is she sad?)

(There's a mistake in the presentation because the introductory directions state that both verbs are underlined, but the second verb is not underlined. Also, the verb *am* is not on the original list.)

Lesson 1, Exercise 2:

Exercise 2 is supposed to be an integration of the two verb types. Three sentences are introduced.

2. **Listen to the instructions for Part C: Use your pencil to circle the verb in each sentence.**

- **What are you circling?**

The sentences are: **The dog eats ice cream, The house is old,** and **I swim across the big lake.**

After students circle the verb in each sentence, they are presented with the tasks:

Which word did you circle?

Why is _____ circled in that sentence?

In Step 1, the teacher directs the group to read the first sentence together. Then the teacher indicates, **"Now I'm going to skip around. Read the second sentence." (Call on student.)**

Problems:

1. **3 b.**

   There are only three sentences. Given that there are many action verbs and at least five state-of-being verbs that could be used, three sentences do not provide adequate practice. Also, all sentences are in the present tense.

2. **3 f. [The responses students make provide clear diagnostic information about what students understand and what students have not learned.]**

   The responses do not provide information about what the students have learned about the universe of examples already presented.

3. **2 f. [Tasks that have only one correct answer are presented to the group; tasks that have more than one correct answer to individuals.]**

   The tasks are arbitrarily assigned to the group or individual students. In DI, tasks that have only one answer are presented to the group first, then to individuals whose performance is questionable.

4. **3 a. [All examples in the series have the same task form and variations of the same wording.]**

   The teacher cannot generalize from what is specified for one example to what will be done with other examples of the same kind. The skipping around consumes more time and makes the **teacher** unnecessarily dependent on the script. DI tries to avoid problems of mechanical inconsistency.

Exercise 2 continues with a work check procedure:

Everyone, which word did you circle?...

Why is *eats* circled in that sentence?

Which word did you circle?...

Why is *is* circled in that sentence?

Problems:

1. **2 a. [Only information presented either immediately before the task or earlier is to be tested.]**

   The response required by the second question in each pair presumes that the students will have retained the first rule (Why is *eats* circled? *Eats* is an action) and will be able to apply this rule to Sentences 1 and 3 and will apply the second rule to Sentence 2. (Why is *is* circled? *Is* is on the being word list.)

2. **2 b. [The presentation must be directly and clearly related to the tasks that follow. The presentation reveals exactly what will be tested.]**

   There are other reasonable answers to the second question in each pair. The most obvious is that a word is circled because it is a verb.

Replacement:

Here's a replacement that would let students know what kind of response they were to produce. Again, this replacement is based on the assumptions of the program.

You're going to tell me if the verbs in these sentences are being verbs or action verbs.
Sentence 1: What's the verb in that sentence?
Is that a being verb or an action verb?
Sentence 2: What's the verb in that sentence?
Is that a being verb or an action verb?
(Repeat with more examples.)

Problems:

3. **3 f.**

A problem with the individual turn rather than a group turn is that the individual turn does not provide a good sample of what the others in the group know.

2 a.

There is only one example that requires the response "___ is on the being word list." Yet that was what has been most recently taught.

3 c. [The set of examples provides a good *test* of the students' understanding of the rule or information that had been presented.]

Replacement:

If this entire exercise were done as DI, there would have been at least 6 items that were not prompted by underlining; the sentences would show a greater variety of structural differences; the tasks would call for simpler responses; the check would call for unison responses.

- **Read the sentences to yourself. Circle the verb in each sentence. Raise your hand when you're finished. (Observe students and give feedback.)**

- **Check your work.**

  I'll read each sentence. You'll tell me the verb and tell me if it's an action verb or a being verb.

- **Sentence 1: Four cows were near the fence.**

  What's the verb? (Were.)

  Is that an action verb or a being verb? (Being verb.)

- **Sentence 2: That house is really old.**

  What's the verb? (Is.)

  Is that an action verb or a being verb? (Being verb.)

- **Sentence 3: The man next to me laughs a lot.**
  What's the verb? (Laughs.)
  Is that a being verb or an action verb? (Action verb.)

- **Sentence 4: I was sick last week.**
  What's the verb? (Was.)
  Is that a being verb or an action verb? (Being verb.)

- **Sentence 5: I work in the yard.**
  What's the verb? (Work.)
  Is that a being verb or an action verb? (Action verb.)

- **Sentence 6: She had a bad cold.**
  What's the verb? (Had.)
  Is that a being verb or an action verb? (Action verb.)

- **Sentence 7: The girls in the swimming pool**
  made noise.
  What's the verb? (Made.)
  Is that a being verb or an action verb? (Action verb.)

- **Sentence 8: A lot of people were in the store.**
  What's the verb? (Were.)
  Is that a being verb or an action verb? (Being verb.)

The series adequately tests what had been taught. The series presents both past-tense and present-tense sentences. They are in an unpredictable order. The position of the verb varies in the series. The series provides

good diagnostic information about the students and what they know. The tasks are clean, and the responses called for are relatively simple.

Again, this is not a great sequence because of the restrictions imposed by the manner in which the content is presented to the students. A predictable problem is that the students would fail the test unless the earlier information and teaching in the program taught students to mastery on identifying the verbs in each category. If students received only the instruction provided by the original program, this exercise would show areas in which the original program would have to change.

Lesson 2

EXERCISE 1

NAMING GRAMMAR TERMS

1. **(Hand out students' workbooks)**
Open your workbook to Lesson 2
Put your finger on Part A. **(Check)**

- Let's review the rules for the definition of a verb: *A verb is an action. Anything you can do is called a verb*.
- Say that with me.
(Signal.) "A verb is an action. Anything you can do is called a verb."
Your turn:
(Signal.) "A verb is an action. Anything you can do is called a verb."
Yes, *a verb is an action*. Anything you can do is called a verb.
- Here is the second rule: *A verb is a state of being. Being means the words: be, been, being, is, are, was, and were*.
- Say that with me.
(Signal.) "A verb is a state of being. Being means the words: be, been, being, is, are, was, and were."
Your turn:
(Signal.) "A verb is a state of being. Being means the words: be, been, being, is, are, was, and were."
Yes, *A verb is a state of being. Being means the words: be, been, being, is, are, was, and were*. The list of being words is on the left side of the page
- Say the being words with me.
(Signal.) "Be, been, being, is, are, was, and were."
Yes, *be, been, being, is, are, was, and were.*
Your turn: say the being words without me.
(Signal.) "Be, been, being, is, are, was, and were."
Yes, those are the being words.

2. Listen: we have a new term: *compound verb*. *A compound verb is made by joining two verbs with a conjunction*.
• Repeat the definition of a compound verb with me.
(Signal.) "A compound verb is made by joining two verbs with a conjunction."
• Your turn: say the definition of a compound verb.
(Signal.) "A compound verb is made by joining two verbs with a conjunction."
Yes, *A compound verb is made by joining two verbs with a conjunction*.
Good defining compound verb.

3. The compound verb is underlined in the first two sentences.
• I'll read sentence 1. Tell me which words are the compund verb. *He ran and walked home.* Which words are the verb?
(Signal.) "Ran, walked."
Yes, *ran, walked*. That word is underlined in sentence 1. The words *ran, walked* are actions.
• Sentence 2. Tell me words are the verb. *She peeled and ate an apple*. Which words are the verb?

(Signal.) "Peeled, ate."
Yes, *peeled*, *ate*. Those words are underlined in sentence 2. The words peeled, *ate* are actions.
• Sentence 3. The verb is not underlined in this sentence. Tell me which words are the verb. *I stood and fell out of the boat.* Which words are the verb?
(Signal.) "Stood, Fell."
Yes, *stood*, *fell*. It was not underlined. Good finding *stood*, *fell*.
• Sentence 4. The verb is not underlined in this sentence. Tell me which words are the verb. You rolled over and slept like a baby. Which words are the verb?
(Signal.) "Rolled, Slept."
Yes, *rolled*, *slept*. It was not underlined. Good finding *rolled*, *slept*.

[4] 3. Look back at your workbook. Put your finger on Part B. **(Check).**
• The word *verb* is defined in two ways. Here is the second definition: *A verb is a state of being. Being means the words: be, been, being, is, are, was, and were*.
• Say that with me.
(Signal.) "A verb is a state of being. Being means the words: be, been, being, is, are, was, and were."
• Your turn:
(Signal.) "A verb is a state of being. Being means the words: be, been, being, is, are, was, and were."
Yes, *A verb is a state of being. Being means the words: be, been, being, is, are, was, and were*. The list of being words is on the left side of the page
• Say the being words with me.
(Signal.) "Be, been, being, is, are, was, and were."
Yes, *be, been, being, is, are, was, and were.* This time, say the being words without me.
(Signal.) "Be, been, being, is, are, was, and were."
Yes, those are the being words.

4. Look back at Part B. The verb is underlined in the first two sentences. [5]
I'll read sentence 1. Tell me which word is a verb. *I am silly.* Which word is the verb?
(Signal.) "Am."
Yes, *am*. That word is underlined in sentence 1. The word *am* is a state of being word. It is on the being word list.
• I'll read sentence 2. Tell me which word is a verb. *She is sad.* Which word is the verb?
(Signal.) "Is."
Yes, *is*. That word is underlined in sentence 2. The word *is* is a state of being word. It is on the being word list.
• Good naming verbs.

Critique of Lesson Segment 2

On Lesson 2 students review what was presented on Lesson 1. Exercise 1, Step 1 has expectations that are probably too high. Students are expected to say the being words without teacher help. (It is not clear however, whether they are to read the verbs or recite them from memory.) The main problem with the review, however, is that it does not address whether students are able to identify verbs in sentences.

Exercise 1, Step 2 introduces what is labeled as "compound verbs." The definition presented: **A compound verb is made by joining two verbs with a conjunction.**

Problems:

1. **4 b. [Exercises that involve presentation of new information are designed to assume that the student is perfectly naïve.]**

   It is unlikely that students know what a *conjunction* is. Furthermore, the program provides no test of their ability to identify *conjunctions.* Also, conjunctions are never explained in the exercise. The program therefore assumes that students know what conjunctions are. DI would not make such an assumption.

2. **2 l.**

   The discrimination of compound verbs is unimportant from an instructional standpoint. This is not to say that this description of compound verbs is not recognized in conventional grammar. The problem is that it applies to a very small segment of the universe of verb examples. It may be viewed as describing a sentence type not actually a verb type (two independent verbs that refer to the same subject). The rule the program provides implies that the entire unit is a verb rather than two verbs that refer to the same subject.

3. **1 g.**

   The rule introduces abstract terms, like **compound verb** and **conjunction**. Neither is necessary. Furthermore, it is unlikely that students would be able to repeat the rule after only a couple of trials.

4. **1 f.**

   The rule is not necessary. The concept could be handled with a simple statement about sentences that have more than one verb.

5. **1 e.**

   The rule would be introduced only if the vocabulary presented in the rule were to be tested. In the examples that follow, students are asked only to identify which "words are 'the verb'." The rule would be necessary only if the examples that followed asked about the number of verbs and something about the conjunction between verbs. If this restriction were honored, however, the tasks that followed would refer to *compound verb* and *conjunction.*

Replacement:

She slipped and fell on the sidewalk.

What's the conjunction? (And.)

What's the compound verb? (Slipped, fell.)

Obviously, this task is not attractive because it calls for difficult responses; however, this kind of task is needed to justify the rule.

Exercise 1, Step 3 of the original program presents 4 examples of sentences with compound verbs:

1. **He <u>ran</u> and <u>walked</u> home.**
2. **She <u>peeled</u> and <u>ate</u> an apple.**
3. **I stood and fell out of the boat.**
4. **You rolled over and slept like a baby.**

Problems:

1. **1 i.**

   The set of examples stipulate that two verbs must straddle the conjunction, with no interference. In fact, the universe of sentences with compound verbs includes these:

- **The baby crawled across the floor and then stood up in front of the door.**
- **The snow came down in large flakes, stuck to the sidewalks, and made them slippery.**

Also, the set of examples stipulates that the verbs are action verbs and that each is a one–word verb. This is not the case.

Replacement:

If the rule were taught as DI it would show a substantial range of sentence variation.

- **Martha ran and chewed gum.**
- **Martha ran in the park and chewed her gum rapidly.**
- **Martha sat in the park, but felt cold.**
- **Martha ran home, fixed some hot soup, and ate it.**
- **Alex rode past Martha, waved at her, and almost fell off his bike.**
- **Tom rides his bike or walks to school.**

  Etc.

2. **3 g.**

   The set of original examples insures that a high percentage of students would misidentify the verb in the fourth sentence **(You rolled over and slept like a baby).** For each of the other examples, **and** is between verbs that have one word. Ran **and** walked, peeled **and** ate, stood **and** fell. In Sentence 4, the part that immediately precedes **and**

is **rolled over.** Therefore, an absolute prediction is that some students will identify the verb as **rolled over**, or **over**, not **rolled**.

3. **1 a.**

   The examples are ambiguous. **He ran and walked home.** That sentence has three possible meanings. He first ran, then he walked home. He intermittently walked and ran on his way home. He performed some kind of locomotion that involved both walking and running at the same time. Other items have similar problems. Ironically, the best item with respect to clarity is item 4 because the two actions are clearly marked as being temporally ordered (rather than a combination or unrelated events). However, this sentence has serious problems within the context of the set of sentences.

4. **2 l.**

   The rule applies to a very small segment of the universe of verbs, a subset of verbs in "complex sentences." In strict grammatical terms the subject is said to have a compound verb. If the students haven't learned to identify subjects, they are all but preempted from understanding the difference between sentences that have a compound verb and sentences that have two subjects and two verbs (compound sentences).

5. **3 c.**

   The rule refers to conjunctions, but the examples present only **and.** To make the examples fit the rule, the set should include sentences that have other conjunctions. (**He plays or sleeps. She feels tired, but is happy.**)

6. **2 j. [If the presentation introduces new vocabulary, the task should incorporate that vocabulary, or should require the student to produce responses that incorporate that vocabulary.]**

   None of the language presented in the rule is tested. Students are not required to discriminate between "sentences that have a compound

verb" and those that don't. Students are not required to identify the conjunction.

7. **1 n.**
   The task "Which words are the compound verb?" is misleading. It implies that these verbs are somehow linked. According to the rule, a compound verb is made by joining two verbs with a conjunction. If that entire arrangement is labeled a compound verb, **and** must be included as part of the formula. This is not the case.
8. **1 e.**
   Complete teaching would require demonstrating the difference between compound sentences and complex sentences.

Replacement:

If the goal is to teach students that some sentences have more than one verb, DI instruction would avoid the inert reference to **compound verb** and **conjunction**.

- **Some sentences have more than one verb. Listen to this sentence: Jim worked in the yard. That sentence has one verb.**
- **Listen to this sentence: Jim worked in the yard and played in the yard. That sentence has more than one verb.**

Exercise 1, third step presents examples. In the first two examples the verbs are underlined. In the last two they are not underlined.

Problems:

The wording for each task is "Which words are the verb?"

1. **1 n.**

   This wording contradicts what students have learned earlier, which is that each verb word is a verb. They have not been introduced to two-word verbs.

Replacement:

He ran and walked home. Which two words are verbs?

This task tests the critical discriminations, and does so without reference to compound verbs.

2. **3 b.**

   The third step tests only two examples.

Replacement 1:

If the goal is to teach students to identify verbs in a complex sentence, the entire segment could be replaced by a DI sequence that requires no new vocabulary and that provides a far better range of examples. Note that the following sequence is based on the assumption that the verbs are linked and that each verb consists of one action word.

- **Some sentences have more than one action verb.**
- **Listen: They sat and talked.**
  What's the first action verb?
  What's the next action verb?
- **The girls sang and danced in the yard.**
  What's the first action verb?
  What's the next action verb?
- **Here's a sentence with more than two verbs.**
  The clowns slipped, fell, and laughed at each other.
  What's the first action verb?
  What's the next action verb?
  What's the next action verb?

- **The boys went to the lake and climbed a tree.**
  What's the first action verb?
  What's the next action verb?
- **The dogs hunt for foxes or chase birds.**
  What's the first action verb?
  What's the next action verb?

Replacement 2:

If the goal of instruction is to teach compound verbs as implied by the examples presented in the program (not by the definition), the teaching would be quite different. It would introduce the name "compound" verb, would address all discriminations students need, and would provide a good test.

- **Compound verbs are action verbs joined by the word *and*, the word *or*, or the word *but.***
  What's the first joining word?
  What's the next joining word?
  What's the next joining word?
  (Repeat until firm.)
- **Here's a compound verb: run or walk.**
  Say it.
  What are the action verbs? (Run, walk.)
  What is the joining word? (Or.)
- **New compound verb: stand or sit.**
  What are the action verbs?
  What's the joining word?
- **Listen: ate and talked.**
  What are the verbs?
  What is the joining word?
- **Listen: ran and chewed.**

What are the verbs?

What's the joining word?

- **Here's a sentence that has a compound verb:**
  She ran and chewed gum.
  What are the verbs?
  What's the joining word?
- **New sentence: Bob slept and dreamed.**
  What are the verbs?
  What's the joining word?
- **New sentence: They laughed and joked around.**
  What are the verbs?
  What's the joining word?
  Etc.

The approach shown in Replacement 1 (framing compound verbs without the label) is efficient; however, it probably would not appear in a DI program or would certainly not appear on the second lesson that introduces verbs. Replacement 2 is closer in form to what would occur in a DI program; however, the label compound verb wouldn't. Therefore, Replacement 2 would be unlikely.

Lesson 3

EXERCISE 1

NAMING GRAMMAR TERMS

1. (Hand out students' workbooks) Open your workbook to Lesson 3. Put your finger on the section TERMS. **(Check.)**
• We have learned two definitions of verbs. Here is the first definition*: A verb is an action. Anything you can do is called a verb.*
• Everybody, what is the first definition of verb?
(Signal). "A verb is an action. Anything you can do is called a verb."
Yes, *a verb is an action.*
• **(Write "jump" on the board.)** Is the word *jump* an action verb?
(Call on student). "Yes, jump is a verb." Yes, *jump* is an action verb. Why is it an action verb?
(Call on student). "Jump is an action."
Yes, *jump* is an action.
• **(Write "green" on the board.)** Is the word *green* an action verb?
(Call on student). "No, green is not a verb."
No, *green* is not an action verb. Why is it not an action verb?
(Call on student). "Green is not an action."
Yes, that's right. *Green* is not an action.
• **(Write "ugly" on the board.)** Is the word *ugly* an action verb?
(Call on student). "No, ugly is not an action verb."
No, *ugly* is not an action verb. Why is it not an action verb?
(Call on student). "Ugly is not an action."
Yes, that's right. *Ugly* is not an action.

2. Everybody, What is the second definition of a verb?
(Signal). A verb is a state of being. Being means the words: be, been, being, is, are, was, and were."
Yes, *A verb is a state of being. Being means the words: be, been, being, is, are, was, and were*.
• Listen: *Being verbs are also called Helping Verbs when they are next to Action Verbs. Helping Verbs help complete the action.*
• Say that with me.
(Signal.) "Being verbs are also called Helping Verbs when they are next to Action Verbs. Helping Verbs help complete the action."
Yes, *Being verbs are also called Helping Verbs when they are next to Action Verbs. Helping Verbs help complete the action.*
• Your turn:
(Signal.) "Being verbs are also called Helping Verbs when they are next to Action Verbs. Helping Verbs help complete the action."
Yes. Good reading the definition of Helping Verbs. Everybody, look at the list of Helping Verbs. Notice that more words have been added to the list of being verbs. All of these words are Helping Verbs. The list of Helping Verbs is on the left side of the page. This is a long list, but you can learn it.
• Say the Helping Verbs with me.
(Signal). "Be, been, being, is, are, was, and were. Was being, should be, had been,

might have been. Do, does, did. Have has had. Shall, should, will, would, can could, May, might, must."
Yes, *be, been, being, is, are, was, and were. Was being, should be, had been, might have been. Do, does, did. Have has had. Shall, should, will, would, can could, May, might, must.*
• Your turn. Say the Helping Verbs.
(Signal). "Be, been, being, is, are, was, and were. Was being, should be, had been, might have been. Do, does, did. Have has had. Shall, should, will, would, can could, May, might, must."
Yes. Good saying the Helping Verbs. It is a long list of words.
• **(Write "will" on the board.)** Is the word *will* a Helping Verb?
(Call on student). "Yes, will is a verb."
Yes, *will* is a Helping Verb. Why is it a Helping Verb?
(Call on student). "Will is on the Helping Verb list."
Yes, *will* is on the Helping Verb list.
• **(Write "green" on the board.)** Is the word green a Helping Verb?
(Call on student). "No, green is not a Helping Verb."
No, green is not a Helping Verb. Why is it not a Helping Verb?
(Call on student). "Green is not on the Helping Verb list."
Yes, that's right. Green is not on the Helping Verb list.
• **(Write "jump" on the board.)** Is the word *jump* a Helping Verb?
(Call on student). "No, jump is not a Helping Verb."
No, *jump* is not a Helping Verb. Why is it not a Helping Verb?
(Call on student). "Jump is not on the Helping Verb list."
Yes, that's right. *Jump* is not on the Helping Verb list.

3. Listen: I'll read Part A, Sentence 1. Tell me which word is a Helping Verb. *He will run home.* Which word is the Helping Verb?
(Signal). "Will."
Yes, *will*. That word is underlined in sentence 1. The word *will* is a Helping Verb. It is on the list.
• Listen: I'll read sentence 1 again. Tell me which word is an Action Verb. *He will run home.* Which word is the Action Verb?
(Signal). "Run."
Yes, *run*. That word is also underlined in sentence 1. The word *run* is an action. You can run.
• Listen: Sometimes, a Helping Verb can be more than one word. I'll read Sentence 2. Tell me which words are the Helping Verb. *She has been eating an apple.* Which words are the Helping Verb?
(Signal). "Has been."
Yes, *has been.* Those words are underlined in Sentence 2. The words *has* and *been* make the helping verb. Sometimes, a Helping Verb can be more than one word. Those words are both on the list.
• Listen: I'll read Sentence 2 again. Tell me which word is an Action Verb. *She has been eating an apple.* Which word is the Action Verb?
(Signal). "Eating."
Yes, *eating*. That word is also underlined in sentence 1. The word *eat* is an action. You can eat.

3. Everybody, look at Part B, Sentence 1. [4]
(Check.) The verbs are not underlined in this sentence.
• Tell me which word is a Helping Verb. *I might have fallen out of the boat.* Which words are the Helping Verb?
(Signal). "Might have."
Yes, *might have*. It was not underlined. Good finding *might have*. The words *might* and *have* make the helping verb. Sometimes, a Helping Verb can be more

than one word. Those words are both on the list.
• Everybody, look at Sentence 1 again.
(Check.) Tell me which word is an Action Verb. *I might have fallen out of the boat.* Which words is the Action Verb?
(Signal). "Fallen."
Yes, *fallen*. It was not underlined. Good finding *fallen*. The word *fallen* is an action. You can fall.

[5] 3. Everybody, look at Sentence 2.
(Check.)
The verbs are not underlined in this sentence.
• Tell me which word is a Helping Verb. *She should have slept like a baby.* Which words are the Helping Verb?
(Signal). "Should have."
Yes, *should have*. It was not underlined. Good finding *should have*. The words *should* and *have* pair up to make the helping verb. Sometimes, a Helping Verb can be more than one word. Those words are both on the list.
• Everybody, look at Sentence 2 again.
(Check.) Tell me which word is an Action Verb. *She should have slept like a baby*. Which words is the Action Verb?
(Signal). "Slept."
Yes, *slept*. It was not underlined. Good finding *slept*. The word *slept* is an action. You can sleep. Good naming Helping Verbs and Action Verbs.

EXERCISE 2

IDENTIFYING GRAMMAR TERMS

[1] 3. Everybody, look back at your workbook. Put our finger on Part C.
(Check.)
There are three sentences in Part C. Each sentence has a Helping Verb and an Action Verb in it.
• Let's read the first sentence together.
(Signal). "The dog is eating ice cream."
Yes, *The dog is eating ice cream.*
Now, I'm going to skip around. Read the second sentence:
(Call on student). "The house has been renovated."
Yes, *the house has been renovated.*
Still skipping around. Read the third sentence:
(Call on student). "I could be swimming across the big lake."
Yes, *I could be swimming across the big lake.*

[2] 3. Everybody, listen to the instructions for Part C: Use your sheet of paper. Copy the sentence to your paper. Use your pencil to circle the Helping Verb in each sentence. A Helping Verb may have more than one word.
[3] 4. What are you to circle?
(Signal). "The Helping Verb in each sentence."
Yes, *circle the Helping Verb in each sentence*. Can there be more than one word in a Helping Verb?
(Signal). "Yes."
Yes, A Helping Verb may have more than one word.
• Start working on Part C now. Put your pencil down when you're finished.
(Observe students and give feedback.)

[4] 3. Everybody, you're going to report which words you circled. Look at sentence 1.
• Everyone, which word did you circle?
(Signal). "is."
Yes, is. Why is *is* circled in that sentence?
(Call on student). "Is is on the Helping Verb list."
Yes, *Is* is on the Helping Verb list. Good finding the Helping Verb.
• Everybody, look at sentence 2.
Everyone, which words did you circle?
(Signal). "has been."
Yes, *has been.*

Why is *has been* circled in that sentence?
(Call on student). "Has and been are on the Helping Verb list."
Yes, *has* and *been* are on the Helping Verb list.
• Everybody, look at sentence 3.
Now, I'm going to skip around.
Which pair of words did you circle?
(Call on student). "Could be."
Yes, *could be.*
Still skipping around. Which words did you circle?
(Call on student). "Could be."
Yes, *could be.*
Still skipping around. Why is *could be* circled in that sentence?
(Call on student). "Could and be are on the Helping Verb list."
Yes, *could* and *be* are on the Helping Verb list. Everybody, good finding the Helping Verbs in those sentences.

Critique of Lesson Segment 3

Lesson 3 introduces helping verbs. Students recite the definition of state-of-being verbs, then Step 2 introduces a rule for helping verbs:

- **Listen: Being verbs are also called Helping Verbs when they are next to Action Verbs. Helping Verbs help complete the action.**

  Students are directed to say this rule.

Problems:

1. **1 g.**

   The rule is circular and contains abstract references such as "complete the action." Furthermore, many students would not be able to say the rule after 4 or more trials.

2. **5 c. [What is introduced later may expand what had been taught earlier but will not contradict what had been taught earlier.]**

   This explanation presents a contradiction. Being verbs were supposed to stand alone and describe the state without help. Now, they have a new label, *helping verbs*, and a new role, being next to action verbs. Also, the verb *am* does not appear on the Helping Verb list.

3. **5 b. [Everything taught must be discriminated from any easily confused discrimination the student already knows.]**

   The relationship between being verbs and helping verbs is unnecessarily complicated. All being verbs are in the class of helping verbs. The class of helping verbs functions in the same way as verbs that had not been presented earlier (should, could, etc.). Furthermore, some "being verbs" do not occur in isolation but are only in the class of "helping verbs." The relationships are complicated and are not necessary. If the instruction followed axiom 5b, helping verbs would be discriminated from being verbs, action verbs, and combinations of two-word verbs that link being verbs and action verbs.

Exercise 1, Step 2 also introduces an expanded list of verbs: be, been, being, is, are, was, were; was being, should be, had been, might have been; do, does, did; have, has, had; shall, should, will, would, can, could; may, might, must.

Students are directed to say the helping verbs.

Step 2 continues by directing students to:

- **Say the Helping Verbs with me….**
- **Your turn: Say the Helping Verbs.**

Problems:

1. **2 c.**
   The rule is unmanageable. Many students would not be able to say it even after 20 or more trials.

2. **4 i. [The exercise tests the student on all new information presented in the exercise.]**

   If the exercise were to test the students on all new information presented in it, not only would students be tested on saying the rule; they would also be tested on the content— whether verbs were being verbs, helping verbs, or action verbs. The discriminations tested would possibly include whether the verb is "next to" an action verb or whether the verbs were linked with a "conjunction."

Replacement:

- **Listen: He worked hard and was tired.**
  What are the verbs?
  Are they both action verbs?
  Are there any helping verbs?
  Are there any being verbs?
- **Listen: He worked hard and felt tired.**
  What are the verbs?
  Are they both action verbs?
  Are there any helping verbs?
  Are there any being verbs?
- **Listen: He was working hard.**
  What are the verbs?
  Are they both action verbs?
  Are there any helping verbs?
  Are there any being verbs?
  Etc.

This replacement presents an unacceptable chain, but it shows that the sequence of what students are taught includes bits of information that is not adequately articulated.

3. **4 h. [The wording must be consistent throughout the exercise.]**

   After students say the rule, the teacher says, "Good *reading* the definition of helping verbs." If students are to read the rule, the directions should be unambiguous: "READ the rule with me... Read the rule by yourself…."

4. **1 d.**

   The rule is inaccurate. The helping verbs are *usually* "next to" the action verbs, but they may be separated by adverbs. "He will usually work in the afternoon." " He may not finish until six." Also, some "helping verbs" are paired with other "helping verbs" not with action verbs. for example, "She might have it." "It could be over there." "He has been there for hours."

   Many combinations are not listed, such as **may have been, should have, could have, might be,** etc. Also missing from the list are a group of verbs that have the word to: **have to leave, ought to try, need to run**.

   Finally, the rule is not specific enough about the order of the verbs. The words "next to" imply that the helping verb could occur before the action verb or after it. A more precise description would indicate something like, "The helping verb comes before the action verb."

In Step 2, students are tested. The teacher writes three words on the board and asks about them.

- **(Write "will" on the board.) Is the word *will* a Helping Verb?**
  (Call on a student.) "Yes, will is a verb."
  Yes, *will* is a Helping Verb. Why is it a Helping Verb?
  (Call on a student.) "Will is on the Helping Verb list."

Problems:

1. **2 d.** **[The task is efficient and uncomplicated.]**
   There is no reason to write the word on the board. The teacher could say the words. **Listen: will. Is will a helping verb?**

2. **4 g.** **[What is presented in an exercise must be consistent with one and only one interpretation.]**

   The word is completely removed from the sentence context, which makes the word possibly ambiguous. In the sentence "She had a strong will," the word *will i*s not a verb. Because students will need to discriminate *will* in sentence contexts, the instruction is not well designed to avoid later contradictions of helping verbs not being verbs.
3. **3 g.**
   The task series presents a spurious pattern. If the answer to the first question **(Is _____ a Helping Verb?**) is yes, the answer to the second question, **Why is it a Helping Verb**?, is **"_____ is on the Helping Verb list."** If the answer to the first question is no, the answer to the second question is "_____ **is**

not on the Helping Verb list." The second questions are therefore unnecessary.

4. **2 f.**
   The teacher calls on individual students for each answer. That procedure requires more time and limits information the teacher receives about the performance of students who do not respond.
5. **3 f.**
   The responses don't reveal much about what the students know. An adequate test of the information presented would require many items.
6. **7 d. [The model must account for all the discriminations and operations the student is to master for the subject or content.]**
   The only criterion for helping verbs is that they are on the helping verb list. This criterion does not account for the discriminations or features that make them helping verbs.
7. **2 b.**
   The presentation does not present various discriminations that are implied by the new information presented.

Replacement:

Here would be how DI would test students' understanding of the relationship between the list and helping verbs:

Listen: will.

Everybody, what word?

Look at the helping-verb list and see if *will* is on the list.

Everybody, is *will* on the list?

So what kind of verb is *will?*

This procedure avoids the various procedural and wording problems listed above. It is more efficient, and provides the teacher with more information about the performance of students.

8. **3 b.**

   The teacher presents only three words, and only one is positive. The number of positives is inadequate. The types of negatives are questionable. One is not a helping verb because it is an action verb. One is not a helping verb because it is not a verb. An adequate set would contain many more positive and negative examples. Furthermore, the presentation would be modified to stress the distinction between the words on the list and action verbs.

Replacement:

An adequate set might consist of the following examples and explanation:

Run
Are
Should
Sleep
Was
Smile
Scratch
Can
Must

- **I'll say verbs. Some are action verbs.**
  Some are helping verbs. Remember,
  if it's not on the list, it's an action verb.
- **Listen: run. What word?**
  Is it on the helping verb list?
  So what kind of verb is it?

- **Are. What word?**
  Is it on the helping verb list?
  So what kind of verb is it?
  (As above for the remaining examples.)

Note the sequence is an improvement because the first two examples provide the students with information about the relationship between the two types of verbs and the list of helping verbs. They know that they are to reference any verb to the list. If it's not on the list, it's an action verb.

This replacement does not address negatives like **green** because the discrimination being taught has nothing to do with whether it is a verb. It has to do with the type of verb presented; therefore all examples are verbs, but only some are helping verbs.

Note also that although this sequence is technically sound, it would not appear in a DI program because the discrimination is trivial and doesn't lead to a good understanding of verbs.

In the next steps of the original program, students work with two pairs of sentences. They identify the helping verbs. In the first pair of sentences, the helping verbs are underlined. In the second pair, no verbs are underlined.

The sentences are:

PART A

1. **He <u>will</u> <u>run</u> home**
2. **She <u>has</u> <u>been</u> <u>eating</u> an apple.**

PART B

1. **I might have fallen out of the boat.**
2. **She should have slept like a baby.**

For the first two sentences, the teacher presents two tasks. The tasks are:

Tell me which word is a Helping Verb. *He will run home.* Which word is the Helping Verb?
Listen: I'll read sentence 1 again. Tell me which word is an Action Verb. *He will run home.* Which word is the Action Verb?

The tasks are interrupted by explanations.
Listen: Sometimes, a Helping Verb can be more than one word. I'll read Sentence 2. Tell me which words are the Helping Verb. *She has been eating an apple.* Which words are the Helping Verb?

Problems:

1. **2 h. [The wording must be clear and concise and introduce no inert vocabulary.]**

   The wording of the tasks is awkward. It contains inert vocabulary. The teacher presents the directions to tell "which word is the helping verb" twice for each item. It should be presented only once.

Wording Replacement:

- **You're going to tell me which verbs are helping verbs. Listen: He will run home. Tell me the helping verb.**
  Listen: She has been eating an apple. Tell me the helping verbs.

2. **3 b.**

   The series in Step 3 does not sample a large segment of the universe of examples that is implied by the information the students received.

3. **3 a.**

   The task series is interrupted with teaching. If teaching is required in the middle of a series, it means that the designer is putting elements out of order. First, students are taught something; then they are tested on what has just been taught.

4. **5 d. [Everything that is taught is reviewed or incorporated in a more complex operation.]**

   If students have learned to identify action verbs, there is no reason to underline them. With adequate teaching students should be able to use information they know to discriminate between action verbs and those that accompany action verbs.

Replacement:

If the earlier teaching had been successful, a more economical and thorough series could have been used to fashion the relationship between action verbs and helping verbs.

- **Each of these sentences has helping verbs followed by an action verb. What comes first? What comes next?**
  (Repeat until firm.)
- **Sentence 1: She has been looking for her dog.**
  Say the sentence.
  Tell me the first helping verb.
  Tell me the next helping verb.
  Tell me the action verb.

- **Sentence 2: She will be looking for her dog.**
  Tell me the first helping verb.
  Tell me the next helping verb.
  Tell me the action verb.
- **Sentence 3: I should give her some help.**
  What's the helping verb?
  What's the action verb?
- **Sentence 4: My brother was riding his bike in the park.**
  What's the helping verb?
  What's the action verb?
- **Sentence 5: His dog may have found a bone.**
  What's the first helping verb?
  What's the next helping verb?
  What's the action verb?

Again the series is presented only to show how the program could have been designed to meet the apparent objectives in Step 3. It would never appear in a DI program because the manner in which the content had been formulated is different from the way it would be analyzed for a DI program.

In the next step students review two sentences that do not have underlining:

PART B

1. **I might have fallen out of the boat.**
2. **She should have slept like a baby.**

Problems:

1. **2 a.**

   The first sentence has the verb, **might have fallen** and therefore tests students on something they have not been

taught. Students identify **fallen** as the action verb, but it is not really a stand-alone action verb, and no verb like **fallen** (irregular past participle) has been presented earlier.

In Exercise 2 students review three sentences in their workbook.

1. **The dog is eating ice cream.**
2. **The house has been renovated.**
3. **I could be swimming across the big lake.**

The teacher and students read each sentence together. Then students follow the directions:

Copy the sentence to your paper. Use your pencil to circle the Helping Verb in each sentence. A Helping Verb may have more than one word.

Problems:

1. **2 h.**

   The directions are possibly ambiguous and more elaborate than necessary. Students have been taught that *each* helping verb is called a verb. They have not been introduced to the idea that a part composed of more than one word is referred to as a singular *verb*. The directions are also wordy.

2. **5 g. [Mechanics and conventions the student is to follow are introduced as early as is practical in the sequence.]**

   This is Lesson 3. If there were some rules that the students had to learn about mechanics, using the paper and the pencil, a DI sequence would have presented them in Lesson 1.

Replacement:

A more efficient set of instructions would be:

- **Copy each sentence. Circle every helping verb. Do not circle action verbs.**

A better set of directions would be based on the discrimination that had just been introduced. Those directions would require students to respond to the helping verbs and the action verbs.

- **Copy each sentence. Underline the action verb. Then circle every helping verb.**
  What are you going to underline?
  What are you going to circle?
- **Work the items.**

Note that this procedure emphasizes the action verb because the helping verbs are referenced to the action verb.

3. **3 e. [The tasks in the series either contain the new vocabulary presented or require the student to produce responses that have the new vocabulary.]**

   One sentence has the verb *renovated*, which some students may not know.

Replacement:

Here's a reasonable replacement:

The house has been painted.

Summary of Section 3

DI addresses the details of what the program presents during each lesson, how much it presents, and how it presents and tests the information. DI assumes that continuity and efficiency are necessary to make the program teachable to even lower performers.

This section analyzed the program a detail at a time. It presented replacements for parts that were inconsistent with the DI axioms. The replacement of these details would improve the teachability of the parts, but would not create a substantial improvement in the overall effectiveness of the program because the analysis accepted

the program's goals, organization of content, and sequence for conveying the content to students.

SECTION 4

Reorganization of Content

A major feature of DI programs has to do with the way the content is analyzed and translated into sequences of exercises. This feature is rarely recognized and is invisible when the program is well designed. The material seems simple; however, a great deal of analysis went into making it simple. The organization of content and how it is sequenced are central because they determine the tasks, wording, task chaining, and exercises.

Following are the axioms related to organization of content and illustrations of how they result in broad changes in the way verbs would be introduced in a DI program.

1. **5 a. [Nothing is taught in only one lesson, but occurs over two lessons or more lessons, followed by reviews or applications.]**

   In the original grammar program, something new is taught in every lesson. A DI sequence would not assume that any new material presented to the student had been learned in a single lesson. For fundamental skills at the beginning of a sequence that teaches something like verbs, there would be nothing new introduced until students had practiced the teaching introduced on Lesson 1 on one or more subsequent lesson.

2. **5 b.**

   Furthermore, anything introduced in a true DI sequence either becomes a component in a more complicated operation or is reviewed regularly.

3. **7 e. [The design must generate all details of the program: sequences that do not introduce anything that will be contradicted later; task chains and task wording that are efficient.]**

After the content has been analyzed, the designer should be able to create a program that avoids all the problems identified in the original grammar program. Note that this analysis is constrained by multiple criteria, especially those from Category 7.

- How the approach organizes the sequences so that nothing taught earlier will not be contradicted by what will be taught later
- How the approach efficiently introduces early instruction that accounts for a relatively large segment of the universe of examples
- How the approach achieves this through exercises that require a relatively small amount of instruction.
- How the content is configured so that the students are required to learn a minimum of new vocabulary to perform on a large range of examples.

It is not sufficient to address only some of the criteria in Category 7. Unless all are addressed, the approach may present a relatively large segment of the universe of examples but may require a great deal of teaching and may present difficult discriminations, or the result may be that a relatively small amount of instruction is involved, but the segment of the universe of examples covered may be relatively small. If none of the Category 7 axioms are followed, the resulting program will address a relatively small segment of the universe of examples, present laborious procedures, inconsistent wording, unnecessary wording, material that is contradicted later, and technically weak presentations (expressed in Categories 1–6).

Perhaps the best way to view the problem of content is to consider how much actual teaching occurs and how much labor was involved. The labor cost is reduced if the analysis reveals how the procedures may be simplified. For example, verbal rules in the grammar program may be eliminated and the scope of examples broadened so that roughly the same amount of teaching results in students understanding a broader segment of the universe of examples.

Consider what the original program taught during three lessons. Are we convinced that the students who go through the program and apparently learn the material have learned what action verbs are? The data is scant because there were inadequate tests of student understanding. We should also be skeptical about their understanding of helping verbs because students simply refer to a list that specifies some of the helping verbs.

Descriptions of DI in the literature suggest that it is a method of rote learning that involves drill, oral responses, and a teacher script. The *sine qua non* of any DI program is that it is organized so it is relatively easy for students to master a significant segment of content in a relatively short period of time. This means that what is taught initially is placed in the perspective of what the student will be expected to learn later. It is impossible for creators to configure the program effectively if they have only a casual understanding of the content. They must understand it in sufficient technical detail to identify generative strategies that introduce things early that will not be contradicted later or strategies that do not interface efficiently with later content.

DI Reorganization of Content

The following sequence teaches verbs. It teaches everything needed for the functional understanding of verbs the original program attempted to teach. It avoids all the discriminations involving *being verbs, action verbs* or *helping verbs*. Instead, it focuses on discriminations that permit students to identify verbs *in sentences*, and it provides adequate practice on a broad segment of the universe of examples. This means that the teacher receives adequate information about what students are learning.

This program has never been field tested; however, the assumption is that because it follows the DI axioms, which have been abundantly tested, it would work relatively well with students. Certainly details of it would be modified by information about student performance, but overall, the prediction is that it would be far easier to bring students to a high level of mastery in this program than it would with the original program.

Note that we assume that this sequence is the student's first exposure to grammar (parts of speech or subject–predicate analysis of sentences). This assumption would not hold if the overall topic of teaching grammar were considered rather than simply the pursuit of teaching an introduction to verbs. This assumption, is imposed by the original program.

Lesson 1

Presentation

EXERCISE 1 VERBS IN SENTENCES

1. You're going to learn about verb words.
   What kind of words?
2. Listen: **The dog runs in the park.**
   Say the sentence.
   The verb is **runs.** It tells what the dog does.
   What's the verb in that sentence?

- Listen: **The dog ran in the park.**
  Say the sentence.
  What's the verb in that sentence?
  Yes, **ran** tells what the dog did.
- Listen: **The dog was running in the park.**
  Say the sentence.
  The verb words are **was running.**
  What are the verb words?
  That tells what the dog was doing.
- **The dog is running in the park.**
  Say the sentence.
  What are the verb words?
- **The dog was in the park.**
  Say the sentence.
  What's the verb word?
- **The dog is in the park.**
  Say the sentence:
  What's the verb word?
- **The dog has been running in the park.**
  Say the sentence.
  What are the verb words? (Has been running.)
- **The dogs might be running in the park.**

Say the sentence.

What are the verb words?

- **The dogs could have been running in the park.**

  Say the sentence.

  What are the verb words?

- **The dogs could have been in the park.**

  Say the sentence.

  What are the verb words?

- **The dog will be in the park.**

  Say the sentence.

  What are the verb words?

- **The dog will sit in the park.**

  Say the sentence.

  What are the verb words.

- **The dog may sleep in the park.**

  Say the sentence.

  What are the verb words.

3. (Repeat parts of sequence on which students made mistakes.)
4. Find Part A on your worksheet.

   These are some of the sentences we went over.

   Read each sentence to yourself. Underline all the verb words in these sentences.

   (Observe students and give feedback.)
5. Check your work.

   I'll read the sentences. Tell me all the verb words.
6. Sentence 1: The dog may run in the park.

   What are the verb words?

- Sentence 2: The dog has been running in the park.

  What are the verb words?

- Sentence 3: The dog runs in the park.
  What is the verb word?
- Sentence 4: The dogs are in the park.
  What is the verb word?
- Sentence 5: The dog will be in the park.
  What are the verb words?
- Sentence 6: The dog may sleep in the park.
  What are the verb words?
- Sentence 7: The dog would have been in the park.
  What are the verb words?

Lesson 1 — Worksheet

PART A

1. **The dog may run in the park.**
2. **The dog has been running in the park.**
3. **The dog runs in the park.**
4. **The dogs are in the park.**
5. **The dog will be in the park.**
6. **The dog may sleep in the park.**
7. **The dog would have been in the park.**

Critique of DI Lesson 1

This series avoids the possible confusion of the original program. It does not present an array of sentences, but a sequence that has a variation of the same subject (the dog, or the dogs) and part of the same predicate (in the park). The only details that vary are the words that make up the verb. These are identified by defaults as any words that occur between reference to the dog and the words *in the park*. Although the sequence does not introduce a great range of subjects and predicates, it introduces a great range of verbs—single word action verbs, single word being verbs, combinations of two-word, three-word, and four-word verbs.

The exercise not only avoids some of the problems created by the original program, but greatly simplifies the wording, the student responses, and the order of events.

4 c. [The general progression in exercise types is that simple verbal series occur first, followed by tasks that require writing.]

First, students are brought to criterion of mastery on a series of *verbal* examples. These are more direct and efficient than written examples. Then students perform on written examples.

4 e. [The exercise presents a good test of what the student is assumed to have mastered.]

Both performance on the oral examples and written examples provide a good test of whether students are able to identify verb words in the sentences.

1 h.

The instruction does not introduce rules about the verb. The series of verbal examples presents minimum-difference changes that isolate the part of the sentence that constitutes the verb. This discrimination is easy to show through a series like the one above, but very cumbersome to explain. The explanation would

have to describe the sentence type (in a subject-first sentence), describe the function of the verb (the verb expresses an action or state of being), and describe the relationship with the part of the predicate that is not the verb (the verb is usually the first word or words of the predicate, which may be followed by words that refine the action or state of being). All of the above are shown through a sequence that presents a narrow range of variation in subject and non-verb part of the predicate.

5 c.

The sentences are subject-first because all transformations that students will later learn are referenced to the regular word order that occurs in subject-first sentences. If you know the verb words in subject-first sentences, it is easy to learn the verb in sentence forms that do not begin with the subject: **In the park, the dog is running.** The subject is still the dog, and the verb immediately follows the subject. Also, **Is the dog running in the park?** has the same verb words as the subject-first statement but one word of the verb occurs first in the sentence. What the examples, "The dog(s) _____ in the park," stipulate is that anything between those parts is the verb. This is largely true and applicable to most sentences. The exception is that the verb words may be split by adverbs: **The dog is not running in the park; The dog is always running in the park.** The number of common exceptions is so small that later, the program could present a rule for identifying the imposters that students who went through the program would understand. **Words that tell about *how often* or that mean *not* are not verb words.** This caveat would require relatively little teaching if the foundation of verbs in regular-order sentences is well conceived.

7 c. [The design permits the teaching of relatively large segment of the universe of examples through a relatively small amount of teaching.]

If students perform well on the chain of tasks, they have learned (in a limited context) the following:

1. Verbs may be one word or more than one word.
2. One-word verbs may consist of an action word (run) or simply a state-of-being word (is, was).
3. The verb occupies the space between the word or words that name (The dog, dogs,) and the words that "complete the action" (in the park).

Objective 3 is probably the most important feature of verbs with respect to what students are to learn later.

7 e.

By the time the students in the original program completed lesson 3, they had to relearn what a verb is (first it's a single word, then it consists of more than one word), relearn what a being verb is (first it's a single word; then it's more than one word, which overlaps in some undefined way with "helping verbs").

Replacement Lesson 1 might not strike the casual observer as being very complicated or thoughtful. The observer might see that the students have very little trouble identifying the verbs, but that may not surprise the observer because the series seems fairly simple.

7 f. [The model should not try to teach nomenclature prematurely and should not introduce unnecessary nomenclature or nomenclature of questionable value.]

The exercise introduces a minimum of new vocabulary*, "verb,"* even though extensive vocabulary exists. None of this vocabulary is presented because it is not necessary.

4 g.

This requirement is one of the more important for any program that teaches new skills to naïve students. If each exercise analytically creates one and only one interpretation and if the exercise would not require a great deal of new vocabulary learning, the prediction is that this exercise would be effective, which means that any third grader who is at grade level would be able to learn to identify the verbs presented in the exercise. Because the exercise is consistent with only one interpretation, no student who masters the tasks presented could come away with a wrong interpretation of how a verb functions in the set of examples presented. This does not mean that the learner understands verbs in other sentence contexts, but that expanding the range of examples of verbs would not challenge or contradict what they have already learned about verbs.

A further prediction is that the learner would be able to apply the knowledge conveyed by this exercise to other verbs that could be placed within the framework of "The dog _____ in the park," for instance, "The dog ambulated in the park." Students would identify the verb. They might say that they don't know what it means, but they would identify it as a verb. Again, this prediction is based on analysis of the exercise, not empirical data.

Lesson 2

Presentation

EXERCISE 1 VERBS IN SENTENCES

1. You learned to identify verb words in sentences.
   I'll say sentences. You'll tell me the verb words.
   Be careful because some of the sentences end with the verb.
2. Listen: **The dog was running in the park.**
   Say the sentence.
   Say the verb words. (Was running.)

- **Three cats were running in the park.**
  Say the sentence.
  Say the verb words.
- **The horses were running.**
  Say the sentence.
  Say the verb words.
- **I was walking.**
  Say the sentence.
  Say the verb words.
- **My uncle and my brother are sleeping.**
  Say the verb words.
- **He is in the park.**
  Say the verb word.
- **She might be on the roof**
  Say the verb words.
- **She has been in a chair.**
  Say the verb words.
- **Mr. Michaels' dog was playing.**
  Say the verb words.
- **Andy was sleeping.**
  Say the verb words.

- **He plays.**

  Say the verb word.
- **I sit.** Say the verb word.
- **She could be working.**

  Say the verb words.

3. Find Part A.

   These are like the sentences we just did.

   Read each sentence to yourself. Underline all the verb words.

   (Observe students and give feedback.)
4. Check your work.
5. Read Sentence 1.

- What did you underline?

6. (Repeat step 5 for remaining sentences.)

   Key:

   1. **She <u>was</u> <u>sitting</u>.**
   2. **My dog <u>sat</u> in a chair.**
   3. **Her mother <u>jogged</u> in the park.**
   4. **My uncle <u>would</u> <u>be</u> <u>jogging</u>.**
   5. **Dan and Murry <u>are</u> <u>laughing</u>.**
   6. **Doris <u>will</u> <u>eat</u>.**
   7. **They <u>jumped</u>.**
   8. **She <u>could</u> <u>have</u> <u>been</u> <u>working</u>.**
   9. **I <u>am</u> <u>standing</u> on a rock.**
   10. **She <u>could</u> <u>be</u> <u>reading</u>.**

Lesson 2

Worksheet

PART A

1. **She was sitting.**
2. **My dog sat in a chair.**
3. **Her mother jogged in the park.**
4. **My uncle would be jogging.**
5. **Dan and Murry are laughing.**
6. **Dorris will eat.**
7. **They jumped.**
8. **She could have been working.**
9. **I am standing on the rock.**
10. **She could be reading.**

Critique of DI Lesson 2

1 o, 1 p. **[To shape understanding of what is the same about the examples in a set, greatly different examples are presented with a variation of the same wording.]**
[To shape understanding of differences, minimally different examples are presented with wording that focuses on the difference.]

This sequence starts with a sentence of the form of those presented on Lesson 1, **The dog _____ in the park**. This sequence shows a transformation by presenting minimum–difference examples early in the chain (to show difference) and then juxtaposed examples that have greater differences (to show sameness across verbs). The chain presents two changes. The first is to introduce different subjects of the sentences; the other is to create some variations in the predicate. The sequence does not introduce transitive verbs (She ran the machine). All are intransitive, but not all have an indirect object.

4 d. **[Exercises teach a manageable amount (an estimation of what a naïve student would be able to learn and apply in a relatively short period of time).]**

The particular choice of how the original sentence form is expanded is arbitrary, but the amount of new information presented is not. This exercise could have presented a series that reviewed the original context and then introduced transitive verbs.

For example this series could start with these sentences:

The dog was running in the park.

The man was running in the park.

The man was running a machine.

The man was driving a car.

My mother drives a new car.

Etc.

Analytically, it is not possible to determine which of the two directions is more effective, but analytically it is possible to determine roughly whether the exercise introduces too much new learning.

7 h. [The organization of content is designed so that student mastery of content introduced earlier predicts success with later content; failure with earlier content predicts failure with later content.]

Based on the sequences presented in Lesson 1 and Lesson 2, the prediction of generalization to new examples would be that students who achieve mastery on both exercises would be able to perform correctly on sentences not taught. These would be basic subject-first sentences that end with the verb and sentences that end with a simple indirect object. The prediction would not hold that students would be able to perform on sentences that have a direct object. Possibly they would, but neither the Lesson 1 nor Lesson 2 exercise addressed this subtype.

Lesson 3

Presentation

EXERCISE 1 VERBS IN SENTENCES

1. I'll say sentences.
   You'll tell me the verb words in each sentence.
   In some of these sentences, the verb is only one word. So be careful.
2. **I am sitting in a chair.**
   What's the verb? (Am sitting.)

- **I am in a chair.** What's the verb?
- **I am a chair.** What's the verb?
- **She had a chair.** What's the verb?
- **She had bought a chair.** What's the verb?
- **They are chairs.** What's the verb?
- **I broke a chair.** What's the verb?
- **I painted a house.** What's the verb?
- **They are happy.** What's the verb.
- **We are busy.** What's the verb?
- **My uncle is big.** What's the verb?
- **He loves holidays.** What's the verb?
- **He met a fireman.** What's the verb?
- **His dog has black spots.** What's the verb?
- **Some little squirrels have long tails.**
  What's the verb?
- **We are sitting near a chair.**
  What's the verb?
- **We were looking for a chair.**
  What's the verb?
- **We were thinking about a vacation.**
  What's the verb?

- **We had some cookies.** What's the verb?
- **We could be eating some watermelon.**
  What's the verb?
- **Her brother bought a new car.**
  What's the verb?

3. Find Part A.
   These are like the sentences we just did.
   Read each sentence to yourself. Underline
   all the verbs.
   (Observes students and give feedback.)
4. Check your work.
5. Read Sentence 1.
   What did you underline?
6. (Repeat step 5 for remaining sentences.)

Key:

PART A

1. **He <u>was</u> tired.**
2. **My dog <u>is looking</u> for a bone.**
3. **I <u>could have been</u> in the house.**
4. **She <u>has</u> a chair.**
5. **The boys <u>were</u> in the house.**
6. **My sister <u>has</u> a new car.**
7. **Two little students <u>were swimming</u>.**
8. **My dog <u>is</u> brown.**
9. **We <u>have been working</u>.**
10. **We <u>are</u> tired.**

Lesson 3 Worksheet

PART A

Underline the verb in each sentence.

1. **He was tired.**
2. **My dog is looking for a bone.**
3. **I could have been in the house.**
4. **She has a chair.**
5. **The boys were in the house.**
6. **My sister has a new car.**
7. **Two little students were swimming.**
8. **My dog is brown.**
9. **We have been working.**
10. **We are tired.**

Critique of DI Lesson 3

4 b. [Exercises that involve presentation of new information are designed to assume that the student is perfectly naïve.]

This exercise introduces two new subtypes of sentences, those that have a direct object (She has a chair) and those that have an adjective after the verb (My dog is brown).

4 d.

This exercise, like the others, teaches verbs through induction, not through verbal rules. The amount of new learning implied by the sequence is relatively small.

1 o, 1 p.

The examples that immediately precede the first new type is a known type, and the new type is minimally different (**I am in a chair** followed by **I am a chair**). The verb in the first sentence is am, the verb in the second sentence is am.

The subsequent examples present juxtapositions of items that are more greatly different.

5 a.

The work on sentences that end in adjectives would have to be extended over the next lessons, and would not be considered to be at mastery. In fact, the same type of series presented in this lesson could occur for two or three lessons before another verb type is added to the early set of verb types. (The next type could be sentences that do not begin with the subject.)

5 d.

In lesson 1 the written work tested students only on examples that had been presented verbally. In Lesson 3, none of the items on the worksheet was presented earlier in Lesson 3 or in any other lesson. The reason untaught items are presented now is that if the students are able to perform at mastery on the verbal series presented in Lesson 3, their performance implies that they

have mastered the earlier types taught and have mastered the types presented in this lesson. Therefore, they should be expected to perform on any example from the segment of the universe that had been taught. This is a conservative inference, based on information about student performance on the verbal part of Lesson 3. If they perform at mastery, they would just about have to perform well on the worksheet items. The only demure would be that they might make mistakes on the items that end in an adjective. (And they might have trouble identifying verbs for this type quickly in the verbal series.)

Comparisons of Approaches

The three-lesson replacement sequence has the following advantages over the original:

7 a. [If the organization of content is well conceived, the program will seem easy, possibly even too easy.]

The replacement program is analytically a lot easier. The tasks are easier and more clearly stated; the sequence presents examples that are analytically simple; there is less teacher talk and more students responding; the responses are analytically more easily produced. The sequence requires no memorization of rules.

7 b. [Content is organized so the student is required to learn a minimum number of discriminations and a minimum amount of new nomenclature.]

The replacement sequence requires far less learning of types, lists, and discriminations. No recitation tasks are presented; and no tasks require students to indicate what category a verb is in (action, being, helping, and compound). The examples in the replacement program present all the verb types of the original

program and some that are not directly addressed in the original (sentences that end in adjectives or end in a transitive verb).

7 d.

The content is presented in a way that anticipates the kind of mistakes that students would make with the information presented earlier and buttresses against these mistakes. For example, if students learn verbs in sentences that end in the verb, "She is sleeping," they will tend to have problems with sentences that end in an adjective, such as **"She is happy."** They will identify the verb as **is happy**. The remedy is to juxtapose the two types so that students learn that if the last word doesn't end in *ing* (or *ed*) it is not a verb.

3 f.

There is a sufficient sample of the students' verbal responses to judge whether they have achieved mastery and if not, what type of confusion they are experiencing. The written work provides further confirmation that each student performs at a high level of mastery. If students complete any of the worksheets without a mistake, the teacher is able to clearly infer what the students have learned. If students perform perfectly on the last worksheet, the teacher has evidence that they are able to generalize their knowledge of verbs to examples not presented earlier in the program.

The Broadest Content View

The exercises above are based on a very narrow analysis of content. They assume that verbs are independent of other parts of speech and other features of sentences. An analysis of the content discloses that this is not the case. Therefore, the replacement sequence above is not among the more efficient sequences possible,

simply among the more efficient based on the assumption that there is no clearly implied preskills that could be taught to make the teaching of verbs more manageable and elegant. Verbs occur in sentences, and the features of sentences have profound implications for teaching verbs and other parts of speech So if the goal is not simply to teach verbs, but to teach beginning grammar, the most efficient approach would start with the basic information about sentences that sets the stage for teaching verbs as well as other parts of speech.

If we adopt the goal of teaching grammar efficiently, at least some details of how verbs are taught would change. In the replacement lessons above, no rules were presented. If verbs are taught within the context of starting with basic information about sentences, it is possible to introduce simple rules about sentences that generate simple rules that relate different parts of speech to features of sentences.

The first instruction students receive would show that regular-order sentences have two parts—the part that names and the part that tells more about what is named. These parts are the subject and the predicate. However, this nomenclature is not necessary for the teaching.

Here's part of possible initial teaching:

1. Listen. Sentences have two parts: the part
   that names and the part that tells more.
   What's the first part?
   What's the other part?
   (Repeat until firm.)
2. Listen: **The boy had fun.**
   That sentence names the boy. Then it tells
   more about the boy: had fun.
3. Once more: **The boy had fun.**
   What's the part that names?
   What's the part that tells more about the boy?
   (Repeat step 3 until firm.)
4. New sentence: **That little girl had fun.**
   What's the part that names?
   What's the part that tells more?
5. New sentence: **They had fun.**
   What's the part that names?
   What's the part that tells more?

The exercise would continue with these sentences:

She had fun.
She lives on a farm.
My uncle lives on a farm.
That uncle plants onions.
The farm is not small.
He likes to watch TV.
My mother fixes great dinners.
The table has a broken leg.
She likes to run.
He runs.

It stinks.

That bird flies.

My sister is flying.

After students have practiced with series of this type on two or three consecutive lessons, it would be possible to introduce a simple rule about verbs in regular–order sentences:

1. You're going to learn about verbs.
   What are you going to learn about?
2. Listen: The first words in parts that tell
   more are verbs.
   What are they? (Verbs.)

- Once more. The first words in the part
  that tells more are verbs.
- Verbs are the first words in which part?
  (Repeat step 2 until firm.)

3. Here's a sentence:
   The dog was running in the park.
   What's the part that names?
   What's the part that tells more?

- The verb words are **was running.**
  What are the verb words?
- Once more. **The dog was running in**
  the park.
  What's the part that tells more? (In the park.)
  What's the verb?
- Yes, **was running** tells what the dog did.

4. New sentence: **The dog is running in the woods.**
   What's the part that tells more?
   What's the verb?
   Yes, **is running** tells what the dog did.
5. New sentence: **The dog runs in the woods.**
   What's the part that tells more?
   What's the verb?
6. New sentence: **The dog will be running in the street.**
   What's the part that tells more?
   What's the verb?
7. New sentence: **The boys are running on the sidewalk.**
   What's the part that tells more?
   What's the verb?
8. New sentence: **Her father walks on the sidewalk.**
   What's the part that tells more?
   What's the verb?
   Yes, that verb has only one word.
   (Repeat step 8 for:)
9. **Her father is on the sidewalk**
10. **Her father has a sidewalk.**
11. **Her father had a dog.**
12. **The boys have dogs.**

The sequence and range of examples for this program could be fashioned after those in the three-lesson sequence that appears on pages 84-98. On the second lesson transitive verbs would be introduced. On the third lesson, the range of examples would be expanded.

Because students have learned to identify the parts of sentences, and have learned that the verb is the first words in the part that tells more, it would be possible to teach very sophisticated concepts that are often confusing to students who have gone through traditional grammar programs. For instance, after the third day of instruction on verbs students could learn about gerunds and infinitives (but not the nomenclature). Here's a possible exercise:

1. Listen: **That is fun.**
   What's the part that names? (That.)
   What's the part that tells more? (Is fun.)
   What's the verb? (Is.)
2. Listen: **This is fun.**
   What's the part that names?
   What's the part that tells more?
   What's the verb?
3. Listen: **Playing is fun.**
   What's the part that names?
   What's the part that tells more?
   What's the verb?
4. Listen: **Playing in the park is fun.**
   What's the part that names?
   What's the part that tells more?
   What's the verb?

5. Listen: **To play in the park is fun.**
   What's the part that names?
   What's the part that tells more?
   What's the verb?
   Etc.

This sequence shows at least one of the benefits of identifying the part of the sentence that names and the part that tells more. In the sentence **Playing is fun**, the word *playing* is not a verb. It is the part that names. In the sentence **To play in the park is fun**, *to play* is not the verb. Traditionally-taught students often fail to learn these constructions because they operate from the notion that verbs are specific words, rather than words that have a specific function in the sentence. Note that no differentiation of verbs is needed. Students don't need to be concerned about whether the verb is an action verb, a state of being verb, a compound verb or helping verb. They need only to learn that verbs have a particular location in a sentence. If verb words are not in that location, they no longer function as verbs.

As axioms **1n**, **5c**, and **6c** indicate, nothing taught earlier is to be contradicted later. Therefore, the manner in which the introduction to verbs is conceived must be consistent with some of the potentially difficult discriminations students will be expected to make later. If students are familiar with the two parts of the sentence, it is relatively easy to name them as **subject** and **predicate**. Note that this is an explanation of what was taught earlier, not something essential for initial teaching. Also, if students understand verbs within the context of parts of a sentence, it is relatively easy to teach labels like infinitive, gerund, and participle. These are simply new names for what students already know. For example, students know that in the

sentence “Sleeping under the stars is invigorating,” the part that names is *Sleeping under the stars*. The explanation:

- The part that names has a word that ends in **ing.**
  What’s that word?
- **Sleeping** sounds like a verb because it ends in **ing.** If a part that names has a word that ends in **ing,** that part is called a **gerund.** What’s it called?
  Yes, if the part that names has a word that that ends in **ing,** the part is a gerund.
- Here’s a sentence: **Laughing makes me feel good.**
  What’s the part that names? (Laughing.)
  That word sounds like an **ing** verb.
  So what do we call the part that names?
  Etc.

The final advantage of conceiving the content in a way that avoids later unnecessary relearning is that all later teaching becomes relatively simple. If we consider what students know about verbs in regular order sentences, we can teach any other sentence types, other parts of speech, and more complicated mechanics as simple extensions of what they already know, because they know the largest segment of the universe of examples of sentences. With this knowledge, it is easy for students to identify “commands.” These are simply sentences that do not have a part that names. Questions can be transformed into regular-order sentences. All the words in the question have precisely the same function they have in the regular-order sentence. All that is required for this extension are some chains that give students practice in rephrasing questions as regular-order sentences.

- I'll say questions, you'll tell me statements with the same words.
- Listen: **Is he happy?** The statement with the same words is: **He is happy.**
- New question: **Were the men working hard?** Start with **The men** and say the statement.
- New question: **Are those ducks going to land here?**
  Start with **Those ducks** and say the statement.
  Etc.

Later additions would address questions that are transformed into unusual sentences.

Where was he going?
He was going where.
Who is that man over there?
That man over there is who.

In the end, students learn that parts that name contain nouns and pronouns and that parts that tell more contain verbs and adverbs. Any unit with a part that names and a part that tells more is a *clause*. **Before he ate breakfast, he ran five miles.** *Before he ate breakfast* has a part that names, **he**, and a part that tells more, **ate breakfast**, so it is a clause. Any group of words that perform the role of a single part of speech is a phrase. *Was handicapped* is a verb phrase, *in the park* is an adverbial phrase (which also happens to have the name prepositional phrase) *the man with the hat* is a noun phrase.

Note that the arrangement of the items and the sequence of what is taught first and next is not based on whimsy but on

calculated strategies. At all points along the way, "difficult" discriminations may be made relatively easy.

For example:

- **He walked slowly.**
  Slowly tells something about walking.
  Therefore, it is an adverb.
- **He walked daily.**
  What's **daily?** (An adverb.)
  How do you know?
  (It tells something about walking.)
- **He walked around.**
  What's **around?**
  How do you know?
- **He walked around the park.**
  What's **around the park?** (An adverb.)
  How do you know?

This sequence shows that what most students learn as "prepositional phrases" are simply adverbs.

Most traditionally-taught students learn "prepositions" as words like **around** and **before**, but these words are only prepositions if they are followed by an object.

- My turn:
  The boat went under the bridge, *under* is a preposition.
  The boat went under, *under* is not a preposition.
  The boat turned around. Is *around* a preposition?
  The boat turned around the pier. Is *around* a preposition?
  Etc.

These potentially difficult discriminations may be made far easier by juxtaposing examples that clearly show the difference and by providing sufficient practice that anticipates related content and discriminations the student will be expected to master later.

For example, in the traditional teaching of math, there is very little thought to the issue of how what is taught at first interfaces with what is to be taught later. Only proper fractions are introduced first. This is very narrow range of the universe of examples. Through stipulation, it conveys serious misunderstanding to many students and later they will basically have to relearn what fractions are.

SECTION 5

Strategies for Applying the DI Rubric

The purpose of this rubric is to enable one to test programs and determine the extent to which they are authentic Direct Instruction. The rubric does not address simple format issues, such as whether a task calls for a verbal response, and whether a page looks as if it is DI. Rather the rubric focuses on a full range of details that function because they make it more likely that the student will learn what the teacher intends to teach.

Any application of the rubric to evaluate an instructional program may take at least half an hour. If you identify parts of the program that present scripted tasks, you can probably make a quick judgment about the extent to which the tasks follow the axioms of the rubric, and therefore, whether the program is authentic DI. To judge whether the content is analyzed the way it would be in authentic DI design (Category 7, organization of content) requires more probing. The teacher's guide, scope and sequence charts, and program introductions provide information that suggests whether the program is DI.

We will show two ways to determine whether a program is authentic DI. The first, and simplest, is to take a *snapshot* of the program. The easiest snapshot is the first lesson that attempts to teach something. The procedure is to analyze a page or two. If you can identify five or more departures from the axioms, the program is not authentic DI.

The other analysis is more time consuming, but should lead to the same conclusion. This approach requires an analysis of the program description, provided by the teachers' guide.

We will apply both approaches to a program that is not authentic DI; to determine why not, you will apply the rubric.

Strategy 1 — Snapshot

Below is the first page of Lesson 1 of a program designed to teach writing skills to students in grades 1 or 2. This fact is very important in assessing whether the program has realistic assumptions about what the students, particularly low performers, would know, and what kind of writing skills they would be expected to have at the beginning of the program.

PROOFREADING

Lesson 1

Analyzing a Revised Draft

Background

Before starting any unit in the beginning level of [this writing program], your students must know and understand what a sentence and a paragraph are. If your students can't identify a sentence or a paragraph, teach them the concepts, using the following procedures.

[1] **A sentence is a complete thought that tells who or what and what happens. What's a sentence?** *A sentence is a complete thought that tells who or what and what happens.*

[2] Make two columns on the board. Head one column "Who" and the other "What." **When you tell who, you name people. What do you name when you tell who?** *People.* ***Lisa, his father, Joey,*** **and *she* name people. Tell me some other words that name who.** Ideas: *Farmer, her mother, Mia, Earl, the king, a man.* Write responses under the heading "Who."

[3] **When you tell what, you name things or places. *A house, that kangaroo, the tall plant,* and *town* name what. Tell me some other words that name what.** Ideas: *Stove, glasses, dog, baseball field.* Write responses under the heading "What."

[4] **Remember that a sentence is a complete thought that tells who or what and what happens. What's a sentence?** *A sentence is a complete thought that tells who or what and what happens.*

Write the following sentences on the board.

> Tom runs fast.
> Those friendly cows eat grass.
> Myra is my friend.
> The cat slept in the sun.

[5] Read the first sentence aloud. **This group of words is a sentence because it's a complete thought that tells who and what happens. Tom tells who. What does *Tom* tell?** *Who.* ***Runs fast*** **tells what happens. What does *runs fast* tell?** *What happens.*

[6] Read the second sentence aloud. **This group of words is a sentence because it's a complete thought that tells what and what happens. *Those friendly cows* tell what. What does *those friendly cows* tell?** *What.* ***Eat grass*** **tells what happens. What does *eat grass* tell?** *What happens.*

[7] Read the third sentence aloud. **This group of words is a sentence because it's a complete thought that tells who and what happens. What word in the sentence tells who?** *Myra.* **What words in the sentence tell what happens?** *Is my friend.*

[8] Read the fourth sentence aloud. **This group of words is a sentence because it's a complete thought that tells what and what happens. What words in the sentence tell what?** *The cat.* **What words in the sentence tell what happens?** *Slept in the sun.*

[9] Point to the capital letter at the beginning of each sentence. **A sentence begins with a capital letter. How does a sentence begin?** *With a capital letter.* Point to the period at the end of each sentence. **These sentences end with a mark called a period. How do these sentences end?** *With a period.* Repeat this exercise, using different examples until the students understand what a sentence is.

Write the following paragraph on the board.

> Winter is my favorite season. I love to make a snowman when it snows. My sister and I laugh as we speed down the hill on our sled. We always build a snow fort in the winter. This is why winter is my favorite season.

[10] **A paragraph is a group of sentences that tell about one topic. What is a paragraph?** *A paragraph is a group of sentences that tell about one topic.* **The topic of a paragraph tells what the paragraph is about. What does the topic of a paragraph tell?** *What the paragraph is about.*

Before reading our critique, read the page and see if you can identify five or more departures from the DI axioms. Pay attention to the reasonableness of the information presented to a first or second grader. Consider the axioms for presenting information (Category 1, pages 21–22), those for tasks (Category 2, pages 23–24), and those for exercises (Category 4, pages 25–26).
Remember that the stated goal of the program is to teach writing skills.

Snapshot Key

Following is a detailed description of the various problems:

Step [1]:
A sentence is a complete thought that tells who or what and what happens. What's a sentence? *A sentence is a complete thought that tells who or what and what happens.*

The wording is neither clear nor precise (**1a**, **1g**, page 21). The rule contains abstract words *(…is a complete thought).* If you know what a sentence is, you know what the writer is calling a "complete thought," but trying to appeal to the students' knowledge of "complete thoughts" to understand a sentence is presumptuous. One can have a complete thought about a burning fire that is certainly not a sentence or anything that could be translated into a sentence.

Also, the presentation is not truthful (**1d**, **1n**) — not all sentences fit this description, particularly questions, which means that the rule will be contradicted by what is taught later. A more manageable definition of a statement might be along the lines of the one used in DI language programs. A statement names and tells more.

Note that it could name a what or a who, and it could tell more in a variety of ways beyond "what happens."

The wording of the rule would not be clear to a naïve learner. It contains the words *and* and *or.* The rule is wordy. The likelihood of some students understanding it is slim. The likelihood is low that many students would be able to repeat it after several trials (**1g**, **2c**).

Step [2]:

Make two columns on the board. Head one column "Who" and the other "What." **When you tell who, you name people. What do you name when you tell who?** *People.* ***Lisa, his father, Joey,*** **and** ***she*** **name people. Tell me some other words that name who.** Ideas: *Farmer, her mother, Mia, Earl, the king, a man.* Write responses under the heading "Who."

The tasks presented are not clearly linked to the information presented in Step 1 (**2b**). The tasks are awkward because they are written on the board, which takes time (**2d**, **2i**). Furthermore, the presumption is that students will name "whos" that are usable (**2a**).

Step [3]:

When you tell what, you name things or places. ***A house, that kangaroo, the tall plant,*** **and** ***town*** **name what. Tell me some other words that name what.** Ideas: *Stove, glasses, dog, baseball field.* Write responses under the heading "What."

The same problems indicated for Step 2 hold true for Step 3.

A task more closely related to the rule would be something like this:

- Sentences tell **who** or **what.** I'll say words that
  tell **who** or **what.**
  Listen: **tree.** Who or what?
  Mr. Green. Who or what?
  Etc.

Note that it would be quite possible for students to perform on the board tasks specified in the program without attending to the wording *who* or *what* (**4e**). It would be impossible for the students to perform on the replacement task without attending to *who* or *what.*

Another problem is that the discrimination of "who or what" is not necessary. If the rule referred simply to something that **is named,** the only discrimination would be "what does that statement name?"

Step [5]:

Read the first sentence aloud. **This group of words is a sentence because it's a complete thought that tells who and what happens. Tom tells who. What does *Tom* tell?** *Who.* ***Runs fast*** **tells what happens. What does *runs fast* tell?** *What happens.*

The explanation has inert wording (**2h**).

The vocabulary is not limited to what is immediately necessary (**1b**). The information could be more manageably packaged by eliminating some wording:

- (Read the first sentence aloud:)

  Tom runs fast.
  That's a sentence because it tells who and what happens. *Tom* tells who. *Runs fast* tells what happens.
  What does *Tom* tell?
  What does *runs fast* tell?

Note the two tasks are designed to test knowledge of the sentence rather than repeating the words the teacher had just said (**2l**).

Step [7]:

Read the third sentence aloud. **This group of words is a sentence because it's a complete thought that tells who and what happens. What word in the sentence tells who?** *Myra.* **What words in the sentence tell what happens?** *Is my friend.*

This step presents the first tasks that test for the discrimination being taught. The teacher asks,

What word in the sentence tells who? *Myra.*
What words in the sentence tell what happens? *Is my friend.*

The rule about sentences does not clearly apply to this example. The words *is my friend* does not tell what happens. It tells what is (**1d**, **1n**).

Step [9]:

Point to the capital letter at the beginning of each sentence. **A sentence begins with a capital letter. How does a sentence begin?** *With a capital letter.* Point to the period at the end of each sentence. **These sentences end with a mark called a period. How do these sentences end?** *With a period.* Repeat this exercise, using different examples until the students understand what a sentence is.

The wording is problematic. Does the teacher present this verbal routine for *each* sentence, or just once?

This exercise teaches a much larger amount than a DI exercise would (**4d**). It has already introduced the rule about sentences, the application of this rule to sentences that begin with who, to sentences that begin with what, and now to the orthographic features of a sentence: it begins with a capital and ends with period.

Step 9 also has a serious time problem. The teacher is to write a 45-word paragraph on the board. Even if the teacher could average writing a word every two seconds, the process would require a minute and a half. That is a long time for the teacher to have her back to the students (**2i**).

Step [10]:

A paragraph is a group of sentences that tell about one topic. What is a paragraph? *A paragraph is a group of sentences that tell about one topic.* **The topic of a paragraph tells what the paragraph is about. What does the topic of a paragraph tell?** *What the paragraph is about.*

This step introduces another definition, one about a paragraph. The teacher tells the definition, and then asks the students, "What is a paragraph?"

The stated student response is, *"A paragraph is a group of sentences that tell about one topic."* Some students would require quite a few trials to achieve mastery on this wordy response (**1a**, **1g**, **2c**).

In the same paragraph, the teacher explains the topic: "The topic of a paragraph tells what the paragraph is about." Not only is this definition circular; it contains abstract references. The discrimination of a topic is quite difficult for students in middle school, let alone 1st or 2nd grade. It may be most easily taught through a series of examples that compare sentences that are on a specified topic with those that are not. Even if the wording of this step were reasonable, the amount of new information provided by this exercise is unreasonable.

A final problem is that the overwhelming number of tasks in the lesson are simply repetition tasks, not tasks that effectively test or apply the information that is presented (**4i**). To do a thorough job, the lesson would need quite a few series of examples to address the discriminations introduced.

Note that the excerpt of the exercise ends here, but the exercise has three steps that refer to the paragraph the teacher had written on the board.

Snapshot Conclusions

The number of departures from axioms demonstrated in this Snapshot analysis clearly indicates that this program is not authentic DI. No further analyses are necessary. As a general rule, if you can identify five or more "departures" from the axioms on a page, the program is not DI.

Strategy 2 — Analysis of Program Features

For this approach you focus generally on the axioms for Categories 5-7 (sequence, lessons, and organization of content). For this approach, you scan the program for information that would suggest the reasonableness of what is taught, whether it is efficient, whether the information load is reasonable, and whether there is the kind of continuity from lesson to lesson that is consistent with the DI axioms.

If 20% or more of the material you examine is not consistent with DI axioms, the program is not authentic DI.

We will summarize parts of the description rather than present the original material. Try to identify at least one way in which each part described deviates from DI.

The program being critiqued is described in the teacher material as being based on "the writing process" which has the six steps:

Prewriting activities
Drafting
Editing
Proofreading
Publishing
Presenting.

The beginning level of the program starts with exercises involving proofreading. On Lesson 1, students first learn the rule about sentences and paragraphs. Then they watch as the teacher proofreads a story (the first part of *The Three Little Pigs*, ending with the wolf eating up the first little pig). Next the teacher introduces 11 proofreading symbols.

Proofreading Marks

Begin a new paragraph. 

Change to a capital letter. 

Add a period. 

Take out a letter or a punctuation mark. 

Change to a lowercase letter. 

Add a question mark. 

Add an apostrophe. 

Add quotation marks. 

Take out a word or a sentence.

Add a word or a letter. 

Check spelling. 

Note that some are minimally different from others (such as whether the caret is below or above the line of text).
According to the scheme the program presents, proofreading involves six steps:

1. Find the paragraphs.
2. Find the sentences (use beginning capitals and end marks).
3. Check for capital letters (which are not at the beginning of a sentence, but that involve titles and proper names).
4. Check the punctuation (apostrophes and quotation marks).
5. Check for word usage.
6. Check for spelling.

In the explanation for how to proofread a story, the teacher indicates that the first thing to do is find the paragraphs. She explains that paragraphs should be indented and writes the proofreading symbol. The teacher introduces the rule that each time a different character speaks, you must begin a new paragraph and indent.

Next, the teacher continues to proofread. Students are directed to "figure out what I'm looking for as I read this time." She makes the proofreading mark for changing a lower case letter to a capital letter at the beginning of each sentence. She also adds proofreading marks for punctuation.

Next, the teacher draws a caret on the board and explains it.

The teacher uses a "take out mark" to take out a period that is not needed. The teacher explains that this mark can also be used to take out a letter from a word.

After reading the selection, the teacher asks students what they think the purpose is for each mark.

The teacher points out apostrophes and quotation marks.

She next introduces the notion of grammar and that things that are not grammatical are to be taken out or replaced.

Next the teacher refers to spelling and the symbol used to show misspelling (the word is circled).

Finally, the teacher passes out blackline masters (BLMs) with the story she had marked up and directs students to complete a worksheet that shows the 11 proofreading symbols and has spaces for students to copy each proofreading mark.

The sentences in the story have multiple errors. For instance, the last sentence in this part is: *And that is jest what he did the eated up the first little pig.*

• • •

Based on this description of the program, identify at least five departures from DI axioms before continuing. Category 5 axioms appear on page 26, Category 6 on page 27, and Category 7 on pages 28–29.

Check your answers:

The development of information is inconsistent with the following DI axioms on sequence.

5b. No practice was provided for the minimally different symbols.

5e, 5f, 6b. The program introduced far too much information and provided far too little practice on what was introduced. New discriminations and vocabulary abound.

6a. The lessons were not composed of 4–10 different exercises.

6f. There were no measures of student mastery on anything introduced. From the students' terminal performance, we would be able to judge only whether they were able to copy the marks. There were no tests on the information about grammar, spelling, punctuation, or about the specific use of the various proofreading symbols. Students held up cards, but the tasks did not require students to discriminate which card to hold up, and the tasks were highly prompted by the reading context.

6g. There was virtually no feedback for possible misunderstandings the students could have from this presentation.

7a, 7b, 7f. The program does not give the impression of being easy. It presents a great deal of new information. The student is apparently required to learn a large number of discriminations and a great deal of nomenclature. The nomenclature was apparently taught prematurely because it was never used.

7g. Most of the discriminations introduced are trivial in the sense that it would be easy to teach the students to correct mistakes in writing without referring to any of the proofreading symbols.

The examples that students were to edit are not clear. The sentence, "And that is jest what he did the eated up the first little pig," does not unambiguously show mistakes. How do students know

that **the eated** should be changed to **_he eated** (not **the <u>wolf ate</u>**) unless somebody tells them?

The most pervasive problem with the approach is that it addresses writing from the standpoint of the six steps that are supposed to constitute the writing process. However, writing can be taught effectively by starting with writing behavior, not with nomenclature and references that are far removed from writing. Is it necessary to teach anything presented in this lesson to teach students how to write effectively? The answer is no.

The second lesson is similar to the first. Students hold up cards to show the appropriate proofreading symbol for each mistake in a story (the next part of *The Three Little Pigs*). The teacher first indicates which of the symbols they are to hold up. First students identify paragraph flaws, then the story is read for capitalization and ending marks. The teacher explains apostrophes and quotation marks, and the story is read for these punctuation marks. Next the teacher reads for incorrect word usage, and finally for spelling.

Finally, students complete a BLM in which the proofreading marks are provided. Students are to correct four types of errors. Each type is represented with one example. The worksheet presents the vocabulary, *proofreading practice, capitalization error, punctuation error, word error, and spelling error.*

• • •

Based on this description, identify three or more departures from the DI axioms.

Check Your Answers:

The main problem has to with the organization of content. The content is not organized so the student is required to learn a minimum number of discriminations and a minimum amount of new nomenclature. Again the test is whether it would be possible to teach first and second graders beginning writing skills without the nomenclature this approach presents.

Also, the content is not organized so that there is a systematic addition of 10% new material introduced on each lesson. It would be very difficult to determine the amount of new information presented on Lesson 2, because Lesson 1 was not designed so the teacher had good information about what students learned and what they didn't learn. The information the teacher had was on tasks that were largely repetitions of what the teacher had just presented.

Even if we accepted the notion that proofreading is a reasonable starting point, it doesn't follow that all 11 categories should be presented at once, along with additional information about grammar. The central instructional question posed remains: What does all of this have to do with learning to write?

The students are exposed to *The Three Little Pigs*, which is not a very compelling model of writing for the beginner. The story simply serves as a basis for the students to see a hoard of ways a passage must be changed before it is acceptable.

By the end of the second lesson, students have not written sentences or stories. They have simply received demonstrations of the 11 dimensions of mistakes writers make in trying to follow acceptable conventions. So instead of simplifying the writing process

demonstrating the features of acceptable writing through practice in writing, the program presents skills that might be used to edit.

There is no single right way to teach writing skills because there are many layers of criteria for good writing. The DI approach would be to simplify the layers, to start at a point where students will learn useful writing skills and will be able to succeed with simple examples of writing before being introduced to more complicated examples.

One efficient way is to start with writing simple sentences from pictures. For instance, a picture shows three workers constructing a house. One is nailing up dry wall, another carrying boards, and a third installing a light fixture.

This is a legitimate context for writing, a stimulus that is observable by the teacher and the students rather than something that is in the student's mind, but not readily available to the teacher or other students. The simplest exercise would be for students (probably second or third graders, not students in K or 1) to write a sentence that tells what the men are doing. The directions for writing the sentence refer to the men, so the first words of the sentence the students write are *The men.* They complete the sentence by telling the main thing the men *are doing* (building a house). So they write this sentence: **The men are building a house.** They apply the rule about the first word being capitalized and a period at the end. Within possibly four minutes, the students have constructed a sentence that expresses a main idea (what the men are doing).

This process could be articulated so that the teacher presents quite a few tasks each minute.

In ten more minutes, the students could write two or three more sentences. To write these sentences, they follow the same pattern as they did to write the first—name the characters and tell what they are doing in the picture.

This starting point generates many possible small-step progressions to more complicated sentences, sentences in which somebody talks, paragraphs, and so forth.

For example, after students have mastered simple sentences that report on what the characters or things are doing, the program could introduce sentences that tell what happened, not what is happening. Another simple addition would be sentences in which characters say things. This variation could be first introduced with speech balloons in the picture. Students could write two sentences, the first indicating what the character did, the second what the character said, such as, **The men got ready to eat lunch. Melvin said, "I'm really hungry."**

This task requires students to apply all the conventions they have learned for reporting in the past tense and for punctuating direct quotes. Students still apply what they have learned about simple regular-order sentences (the first sentence). The variation with direct quotes is a clear extension of the basic type. If the program introduces various examples of the new type, students will receive repeated practice at using everything they have learned so far about punctuation.

After possibly three lessons of writing sentence pairs, the program could introduce basic paragraphs. A simple form would present a picture of a group of three people doing variations of the

same thing. For instance, the picture could show three students (labeled Bob, Fran and Tina) washing a dog. Students would first write a sentence that tells what the students did, followed by sentences that tell what each member of the group did. Students would name the group in the first sentence.

For example:

The students washed a dog. Bob held the dog in the tub. Tina put soap on the dog. Fran rinsed the dog with a hose.

A list of vocabulary words would prompt the sentences:
Water
Rinse
Soap
Hose
Tub

Note that at this point, students are writing paragraphs and following the indenting convention. Although the paragraph is relatively simple for students to construct, it is sophisticated in that it operationally teaches what a topic sentence is. The teacher doesn't have to mention "topic sentence" or "Main idea" for this teaching to occur. The directions, "Start your paragraph with a sentence that names the group and tells the main thing the group did," clearly describe a main idea.

Again, this extension involves one small step beyond what students have learned.

The next extension could show a comic-book sequence of three pictures, with characters saying something in one or more of the pictures. To perform on this extension, students would need to learn only one new convention. "When a new person talks, you start a new paragraph."

This design sequence is not the only possible or practical one, but it is one that addresses the need to introduce only about 10% new material per lesson, and to minimize vocabulary and rules that students are expected to learn. This is possible only if the program starts with the most basic example type and provides a systematic extension of this type, and does it in a way that requires students to apply everything they have learned.

This proposed program does not teach proofreading because proofreading is not necessary for students to write. Also the "writing process" involves extensive vocabulary and it does not permit students to produce repeated examples of writing. Certainly editing is a function that must be considered in the design of the sequence, but editing should be nothing more than a simple track that accompanies the main part of each lesson, which involves writing. The design of the first writing exercises are referenced to what students are expected to know when they begin the program. Also, the sequence does not assume that students know anything more than what the first examples require. The design of the sequence guarantees that if they can perform on these examples, they will be able to perform on all subsequent examples the program introduces.

SECTION 6

Conclusion

A DI program is not simply information that is presented to the student from a script. It is information that has been analyzed from the standpoint of how it communicates both to the teacher and the student. If it doesn't communicate to the teacher, the proper messages will not reach the student. If it doesn't communicate to the student, it does not meet its primary objective.

Traditional programs are based on general and often spurious notations of what a program should do. The current idioms have to do with entertaining the student, luring the student into the lessons, making the information interesting, often at the expense of the fidelity of the information and the fidelity of what students actually learn. Traditional textbooks are simply resource books, based on the assumption that the teacher is able to explain the material, design some form of tests that reveal what the students learn, and make what is taught today consistent with what will occur in the future. That the teacher is able to do this is an elitist assumption, because it requires the teacher to perform a task that clearly most are not prepared to accomplish. There is no empirical base to suggest that teachers are able to create effective teaching from text material that is not carefully sequenced.

For the shaping of skill and knowledge to occur over a broad range of student skill, the content must be analyzed and meted out in manageable doses. The exercises within the sequence must be designed to make the information clear and manageable. The

exercises also provide tests of the students' mastery. Both the information that is presented and how the students are tested are technical issues and will lead to successful designs only if all the axioms in this rubric are carefully addressed. When the product is designed in this manner and is further shaped by field tryouts, it is an authentic Direct Instruction program.