

Rubric for Identifying
Authentic Direct Instruction Programs

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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.