

INTRODUCTION

Christina Cox, Jerry Silbert, and Jean Stockard

Parents, teachers and administrators all seek one ultimate goal for kids: success. They want all students to have the highest levels of achievement and positive self-images. Yet, in spite of educators' sincere efforts, too many students do not achieve at satisfactory levels and are not enthusiastic about school or their ability to learn.

There is an answer – an answer that has been proven many times over. *All* students can be successful, *all* students can learn, and *all* students can develop self-confidence in their abilities. Teachers can help their students catch up with their peers. Administrators can promote school environments that nurture achievement, appropriate behavior, and strong commitments to learning. The answer is Direct Instruction; and this book, written by the developer of Direct Instruction, shows how educators can make these changes happen.

THE HISTORY AND PHILOSOPHY OF DIRECT INSTRUCTION

The origins of Direct Instruction (DI) lie in the genius of Siegfried Engelmann, who chose to study learning and instruction from a new vantage point. In the early 1960s, Engelmann worked in advertising where he began analyzing what type of input was required to help children remember material to which they were exposed. From his work on marketing strategies, he began to develop techniques for teaching children, starting with his own offspring.

Engelmann realized that what his children learned depended on how he instructed them. Among other things, he found that small details in his wording and the order in which material was presented determined the degree to which the children understood the concepts he was attempting to teach. He applied this growing knowledge in work with the education researcher, Carl Bereiter, at the Institute for Research on Exceptional Children in Champaign, Illinois. Together, in 1964, they formed the Bereiter-Engelmann preschool, where they began using and testing Direct Instruction

techniques with disadvantaged children. While conducting this research, Engelmann developed the central tenet of Direct Instruction: *if a student fails to learn it is not the fault of the student, but rather the instruction*. Engelmann concluded that students can quickly progress and acquire new skills if instruction builds on their starting points and is explicit and systematic. As students are successful learners, they become more and more self-confident.

From these early experiments, Engelmann developed a large number of instructional programs. The programs address a wide variety of areas including reading, language, math, and spelling. All of the programs incorporate five key philosophical principles:

1. All children can be taught.

The most important DI principle is that *all children can be taught*. DI assumes that if children haven't learned, the instruction is to blame – not the student. All children can learn when instruction is systematic, explicit, and efficient. Poor achievement occurs when material is presented in a confusing, illogical, or inconsistent manner.

2. All children can improve academically and develop a stronger self-image.

If students are given appropriate instruction, those who are behind grade level *can catch up*. They will also come to see themselves as smart learners. Students who are advanced academically also benefit from Direct Instruction. They can progress even further and at a faster pace when given explicit and systematic instruction, allowing them to not only achieve, but surpass grade-level expectations.

3. All teachers can succeed if provided with adequate training and materials.

Just as DI assumes that all students can learn, DI also assumes that all teachers can be effective instructors if they are given appropriate training and appropriate materials. Direct Instruction programs include specific guidelines for teachers in how to present the material in ways that are logical, clear, and systematic. By

providing the most effective and efficient way to present materials, teachers are free to provide the support students need. When teachers don't have to worry about the order of their lessons or their wording of instruction, they can devote their energy to ensuring that their students are placed appropriately and receiving the instruction they need. They can also concentrate on providing consistent reinforcement to their students for their accomplishments and nurture their students' development. It takes time for teachers to learn how to teach with Direct Instruction materials, but with appropriate help and practice, all teachers can be successful and find even greater enjoyment in their professional activities.

4. Low performers and disadvantaged learners must be taught at a faster rate if they are to catch up to higher-performing peers.

If low performing and disadvantaged students are to catch up, they need to learn more in less time. The efficient design of DI programs can make this happen. Students taught with DI learn more in a shorter amount of time. In addition, the DI programs have explicit instructions for teachers and administrators on how to help their students catch up. The programs show teachers how to schedule and group students so they can learn as much as possible. Additionally, specific programs are designed to fill in learning gaps for students in the upper grades.

5. All details of instruction must be controlled to minimize students' misinterpretations and to maximize learning.

Years of research on how children learn show that even minor changes in teachers' wording can confuse students and slow their learning. If children are to learn as much as possible and as quickly as possible, all of the factors related to instruction must be controlled. The DI programs do this through their very careful attention to the way every single element of a lesson is taught. The programs provide very detailed guidelines for areas such as the order in which concepts should be presented, the wording teachers should use, and the ways teachers should check to make sure students understand the material.

DIRECT INSTRUCTION IS HIGHLY EFFECTIVE

Over the last five decades, hundreds of studies of the efficacy of Direct Instruction have been conducted. These studies have involved all aspects of the DI curriculum across core academic areas including reading, math, language and spelling. They have included students in rural, suburban, and urban settings and students from preschool to adulthood. Students with all types of demographic characteristics and ability levels have been studied, and research has occurred both in the United States and in other countries around the world. Researchers have used a wide range of approaches, from small experiments to very large studies across many schools. They have included gifted students and those with a large range of disabilities, as well as examining changes over short periods of time and over a large number of years.

This research has consistently found strong evidence that students exposed to Direct Instruction have higher achievement than those using other programs. These results occur across all the contexts and variations researchers have examined:

- Students in general education versus those in special education
- Basal texts compared to “constructivist” approaches
- All age groups (preschoolers through adults)
- Different communities
- Various demographic backgrounds
- In the United States and in other countries around the globe

Research has also examined how teachers and schools can be most effective in their use of Direct Instruction programs. These studies have consistently documented how students learn more when their teachers use DI programs as they are designed. Schools and teachers that implement the programs exactly as they were written have much greater growth in student achievement and self-confidence than those that do not.

There are four main features of DI that make it so effective:

1. Students are placed in instruction at their skill level.

When students begin the program, each student is tested to find out which skills they have already mastered and which ones they need to work on. Using this information, students are grouped together with other students needing to work on the same skills. These groups are organized by the level of the program that is appropriate for students, rather than the grade level the students are in. Thus, they aren't wasting time reviewing material they already know. They also aren't trying to understand material for which they aren't prepared.

2. The programs are designed to ensure that students master the content.

Mastery learning – ensuring that students fully understand the material being taught – is a key element of DI programs. All DI programs are organized so that skills are introduced gradually. This gives children a chance to learn new skills and apply them before being required to learn another new set of skills. Only about ten percent of each lesson is new material. The remaining 90 percent of each lesson's content is review and application of skills students have already learned, but need to practice in order to fully master. Skills and concepts are first taught alone and are then integrated with other skills into more sophisticated, higher-level applications. All details of instruction are carefully managed. This attention to detail minimizes the chance that students might misinterpret the information being taught.

Because DI helps students learn quickly, students find instruction and learning reinforcing. Each day they learn something new. This new learning helps them learn additional material. Thus, their repertoire of skills rapidly expands. They are successful students, and they become increasingly confident in their own abilities.

3. Instruction is modified to accommodate each student's rate of learning.

A particularly wonderful part of DI is that students are taught at the rate at which they learn. If they need more practice with a specific skill, the programs show teachers how to provide additional

instruction to ensure students master the skill and have continued success. Conversely, if students are easily acquiring the new skills and need to advance to the next level, they can be moved to a new placement. This way they can continue adding to the skills they already possess, accelerating their learning.

4. Programs are field tested and revised before publication.

DI programs are very unique in the way they are written and revised before publication. All DI programs are field tested with real students and revised before they are ever published. This testing and revision process does not occur with other programs. Only DI programs have undergone such rigorous testing and been proven to work before they are published.

THE CHAPTERS TO COME

This book shows educators how they can use Direct Instruction programs to make their classrooms and schools highly successful. In these writings, Engelmann shows educators how their students can have high rates of achievement and thus see themselves as good students and successful learners. He describes steps that schools can take to empower their staff to be the most effective educators they can be. He also describes the joys that come from being an effective teacher and seeing one's students learn and succeed.

The book is directed to two audiences:

- Teachers and administrators currently using Direct Instruction programs who want to learn more about how they should use the programs to maximize their students' success.
- Teachers and administrators not using Direct Instruction programs who want to learn about the potential for creating a more effective learning environment—one in which all their students can succeed and have positive attitudes toward learning.

The book is divided into four sections. The first section discusses mastery learning, which is central to all Direct Instruction programs. The chapters are designed to answer the question of how to teach

so that all children learn what is being taught. They explain what mastery learning is and what teaching to mastery involves. They also describe how schools should be organized to support teaching to mastery, how mastery learning can lead to positive student attitudes, and how it can help students learn how to learn, promoting even greater success in the future.

The chapters in the second section provide more specifics on how to create classroom and school environments that foster positive attitudes towards school and learning. They describe how teachers and administrators can adopt expectations and routines to increase student motivation and eliminate undesired models of behavior. They show how all members of a school can become part of an environment that honors and celebrates high achievement.

In the third section, Engelmann describes the elements that must be in place to make significant improvements in students' academic performance. He stresses the importance of an instructional plan for ensuring students' success and helping those who are behind grade level catch up. He provides concrete guidance for changing low performing schools into high performing ones, describing the actions that must be taken to transform student performance.

The final chapter of the book is an essay Engelmann wrote for DI teachers in 1982 called "On Observing Learning." It brings together many of the themes in earlier chapters, such as promoting mastery learning and celebrating success. However, it goes beyond these themes to describe how DI teachers can be fully engaged in their teaching, observing the responses of each child, and how to bring what Engelmann calls "good acting" to their interactions with their students.

Learning to be a good teacher takes time and training. As with all professions, teachers become better instructors as they have more practice and professional development. It also takes time for schools and administrators to learn how to implement DI well. Research shows that schools become stronger and more effective as Direct Instruction becomes institutionalized and stabilized within their day-to-day activities. While this process can take several years, the

guidelines in the following chapters will help make this process easier and, ultimately, more successful.

The changes will have life-long implications for students. They will also affect the lives of teachers and administrators. As students learn more effectively and are more confident in their abilities, school climates change. Students like going to school. Teaching becomes more joyful. Administration becomes more rewarding. And, parents become increasingly grateful for the impact the school is having on their students' lives. Taken together, the following chapters show teachers and administrators how they can transform their school to ensure an environment where all students can be successful and confident.