Episode 5: Why It Works

Direct Instruction has decades of research behind it, but what makes it work? We dig into Zig Engelmann's theory of instruction, what cognitive science reveals about how children learn and what hundreds of studies show about the program's effectiveness.

S2 EPISODE 5

Episode Length	Listen to the episode	Read the transcript
24:19	Apple Podcasts • Spotify • soldastory.org	Printable Transcript
Additional Materials	• Article: When it comes to evidence-based programs, nothing matches Direct Instruction • Article: 10 Rules for Designing Effective Learning	

Before Listening	• What evidence would convince you that a program or teaching approach works?
While Listening	As you listen, jot down anything that makes you think that Direct Instruction is or isn't effective.
After Listening	*From all perspectives:* In this episode, we heard about Zig's theory of instruction, findings from cognitive science and the results of hundreds of studies examining Direct Instruction's effectiveness. • What do you want to remember about the research presented in this episode? • What evidence did you find most convincing? Why? • What questions do you still have?
Wrap Up	• What do you think schools should prioritize when deciding whether to use a program?
Extend	*Activity 1* Read When it comes to evidence-based programs, nothing matches Direct Instruction, which summarizes decades of research on Direct Instruction and includes links to studies. Consider taking notes as you read. • What words or phrases in the article did you take note of? • What did you find most compelling? Much of the research on Direct Instruction is decades old. The article ends with this quote from Cathy Watkins: "Penicillin was invented a long time ago, too. But it still works."

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- What do you think about the policy of the What Works Clearinghouse to generally exclude studies that are more than 20 years old?
- Do you think the age of a study should affect how much weight we give its findings? Why or why not?

Activity 2

In the episode, we learned this:

> "Direct Instruction could have a powerful effect on one of the biggest and most stubborn problems in American education: the achievement gap. That's the persistent difference in average academic achievement between kids from poor families and their higher-income peers.
>
> What [Stockard's] analysis showed is that — when Direct Instruction is done really well — the gains can be as large as that gap.
>
> In other words, Direct Instruction has the potential to erase the achievement gap."

From a student perspective:

- Have you noticed that school is different for kids whose families have more money and kids whose families have less money? What have you seen?

From a parenting perspective:

- Have you seen evidence of the achievement gap at your child's school? What have you noticed?
- Do you think your child's school experience would be different if the achievement gap disappeared? In what ways?

From a community perspective:

- How might the workplaces in your community be different if there were no achievement gap?

From a teaching perspective:

Carl Hendrick said, "You can't really connect the dots if you haven't got any dots."

- Can you think of a time when a lesson expected students to "connect dots" they didn't have? What happened?
- How would your job be different if there were no achievement gap?

Activity 3

Read Carl Hendrick's article 10 Rules for Designing Effective Learning. Hendrick describes 10 principles he took from reading "Theory of Instruction" by Zig Engelmann and Doug Carnine.

- Which principle would you want to share with a colleague or friend? Why?
- How do these principles connect to what you've heard in the podcast about Zig's approach to designing and testing lessons?

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The article concludes with Hendrick's reflections on what these principles mean for teaching.

> "Once we know how learning really works, we become morally obligated to design instruction properly. Once we understand human nature, we're responsible for creating systems that honour rather than violate it."

- What do you make of Hendrick's argument that educators have a moral obligation to design instruction around how people learn?
- How much should teachers' preferences guide lesson design? Why?

Consider this passage from the Hendrick article.

> "Faultless communication removes guesswork from the learner's side and places full responsibility on the instructional design. If students fail to learn, it is not because they are inattentive, lazy, or incapable. As Engelmann and Carnine put it: 'If kids mislearn, the fault is in the design, not the learner.'"

- Hendrick calls this a hopeful message. Do you find it hopeful? Why or why not?