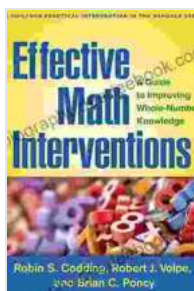


The Guilford Practical Intervention: A Guide to Improving Whole Number Knowledge

Whole number knowledge is a fundamental building block for mathematical success. It is the foundation for understanding place value, operations, fractions, and other more complex mathematical concepts. Unfortunately, many children struggle with whole number knowledge, which can lead to difficulties in math and other academic areas.

The Guilford Practical Intervention (GPI) is a scientifically-validated program designed to improve whole number knowledge in children. The GPI is a comprehensive, evidence-based program that has been shown to be effective in improving whole number knowledge in children with and without learning disabilities.

This article provides a comprehensive guide to the GPI, including its theoretical foundations, instructional components, and implementation guidelines.



Effective Math Interventions: A Guide to Improving Whole-Number Knowledge (The Guilford Practical Intervention in the Schools Series) by Robert J. Volpe

★★★★☆ 4.8 out of 5

Language : English

File size : 5587 KB

Screen Reader : Supported

Print length : 258 pages

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The GPI is based on the work of Dr. Edward Guilford, a leading researcher in the field of cognition. Guilford's research on the structure of intellect identified a factor that he called "numerical facility." Numerical facility is the ability to think flexibly and efficiently with numbers.

The GPI is designed to improve numerical facility by teaching children a variety of strategies for representing and manipulating numbers. These strategies include:

- Using concrete manipulatives, such as blocks, beads, and counters
- Drawing number lines and other visual representations of numbers
- Breaking numbers into smaller parts and recombining them in different ways
- Using mental math strategies, such as skip counting and compensation

The GPI is a comprehensive program that includes a variety of instructional components. These components include:

- **Concrete activities:** Concrete activities are the cornerstone of the GPI. Children learn best when they can manipulate concrete objects to represent numbers. The GPI includes a variety of concrete activities that are designed to help children develop a deep understanding of numbers.
- **Visual representations:** Visual representations are another important component of the GPI. Children can often learn more effectively when they can see numbers represented in a visual way. The GPI includes a

variety of visual representations, such as number lines, number charts, and ten frames.

- **Mental math strategies:** Mental math strategies are essential for efficient number manipulation. The GPI includes a variety of mental math strategies that are designed to help children develop fluency with numbers.
- **Problem-solving:** Problem-solving is an important part of math learning. The GPI includes a variety of problem-solving activities that are designed to help children apply their number knowledge to real-world situations.

The GPI is a flexible program that can be implemented in a variety of settings. The following guidelines can help teachers and parents implement the GPI effectively:

- **Start with concrete activities:** Concrete activities are the foundation of the GPI. Start by teaching children to represent numbers using concrete manipulatives. Once children have a strong understanding of concrete numbers, you can gradually introduce more abstract representations.
- **Use a variety of representations:** Use a variety of representations to help children understand numbers. Number lines, number charts, and ten frames are all effective ways to represent numbers visually.
- **Encourage mental math:** Encourage children to use mental math strategies to solve problems. Mental math strategies can help children develop fluency with numbers.

- **Provide opportunities for problem-solving:** Provide opportunities for children to apply their number knowledge to real-world situations. Problem-solving activities can help children develop a deeper understanding of numbers.
- **Be patient and consistent:** The GPI is a gradual process. Be patient with children as they learn new concepts. Consistency is also important. The GPI should be implemented regularly to ensure that children make progress.

The GPI is a scientifically-validated program that has been shown to be effective in improving whole number knowledge in children. The GPI is a comprehensive, evidence-based program that can be implemented in a variety of settings. By following the implementation guidelines outlined in this article, teachers and parents can help children develop a strong foundation in whole number knowledge.

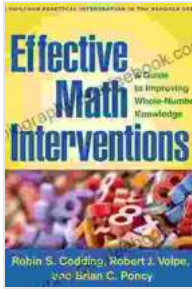
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