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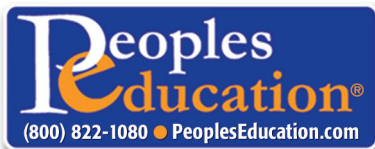
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RESEARCH BASE

FOR





INTRODUCTION

In January 2002, President George Bush signed into law the No Child Left Behind Act of 2001. Under this law, educational programs and materials paid for by federal funding must be based on sound, widely accepted educational research that supports the materials' design, thus increasing the likelihood that the materials will help students achieve the desired learning outcomes. This law, commonly known as NCLB, thus requires educators to be aware of the body of research that supports the design of any materials they are considering for use with their students.

Since its inception in 1990, Peoples Education has built and revised our student learning products based on continual review of the scientific research literature. The foundation of Peoples Education's Measuring Up® program is a set of principles derived from the soundest current theory and research on reading and language arts, mathematics, writing, science, social studies, assessment, and literacy. These principles are based specifically on the student learning standards of the state for which the materials are designed.

This document serves both to provide information about the Measuring Up Insight™ program and to explain the research on learning theory on which the system is based. Consequently, this document is organized in a way to be useful to educators who are considering the soundness and the practical uses of the materials in classrooms.

First, each principle underpinning the design of Measuring Up Insight™* is articulated. Second, a paragraph discussing the best-known and most respected educational research supporting the principle is given. Third, a discussion of the way Measuring Up Insight™* specifically embodies both the principle and its research-based foundation helps prospective educators see how the system can be used to help teachers collect information about their students' strengths and weaknesses and to help students explore their own understandings of the standards-based information they are likely to encounter on the state test.

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THE CHALLENGE

Today's educators, schools, and districts face a daunting challenge: how to raise student achievement in an increasingly rigorous, standards-based environment. This dilemma is particularly critical because the No Child Left Behind Act requires that:

- ❑ Each state adopt challenging academic content standards and challenging student academic achievement standards.
- ❑ Each state educational agency implements a set of high-quality, yearly student academic assessments that include, at a minimum, academic assessments in mathematics, reading or language arts, and science that will be used as the primary means of determining the yearly performance of children and discerning whether they meet the state's challenging academic standards.

THE Measuring Up® PROGRAM

Measuring Up® is a supplemental assessment and instructional program with instructional lessons completely customized to your state's curriculum standards.

The series includes Measuring Up Insight™, an Internet-based benchmarking/diagnostic system that helps to assess students' standards knowledge, while also preparing them for the state test.

Measuring Up Insight™ offers:

- Customized items and content for each specific state
- Pre- configured full-length practice assessments
- Ability to create and deliver ongoing formative assessments
- Easy step-by-step assessment creation tools
- Items in the idiom and format of each state's high stakes assessment and fully aligned to each state's unique standards
- Online and paper-and-pencil delivery
- Powerful, easy-to-use reporting identifying individual strengths and weaknesses for each student
- Ability to direct teachers to remediation resources based on our print and in our online products

RESEARCH-BASED PEDAGOGY OF THE Measuring Up® PROGRAM

The Measuring Up® program, including Measuring Up Insight™* is based on a state's mandated curriculum standards and performance objectives and is completely customized. The Measuring Up® series is designed to support and enhance best practices for effective teaching of your state's mandated curriculum standards. There are some research-based unifying pedagogical principles that are common across standards and that form the foundation of the Measuring Up® program's design. Those listed on the following pages apply to the Measuring Up Insight™* component of the complete Measuring Up® program.

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RESEARCH PRINCIPLE 1: Challenging Standards

Educational programs must be based on challenging academic content standards in academic subjects, the teaching of advanced skills, and challenging student academic achievement standards.

(PL 107–110, the No Child Left Behind Act of 2001)

RESEARCH BASIS FOR PRINCIPLE 1

The most extensive and best-known research about the effects of expectations is addressed by Rhona S. Weinstein (2002) in her book, *Reaching Higher: The Power of Expectations in Schooling*, a landmark in support of the results that high standards and expectations can produce. Weinstein's book takes as its thesis that "If . . . we are interested in the development of all children, we must link higher standards to effective teaching strategies for diverse learners. Our assessments of achievement must inform the next steps of instruction, rather than simply hold children accountable for what they may not have been taught."

RESEARCH PRINCIPLE 1 APPLIED

The implication of Weinstein's statement is that assessment must help teachers understand what students know and need to know. The Measuring Up® materials can be used with students to help teachers know in advance where gaps in student understanding lie. Teachers can then begin to think about filling in those gaps for all learners.

State standards demand high achievement for all learners, and the Measuring Up® program can be seen first as an aid to student learning toward those goals and second as a step toward positive assessment results. Measuring Up Insight™* can be used with all students of all abilities; they allow all teachers of all students to see where their students need help in approaching the standards and even allows teachers to work differently with different students to make necessary progress. In other words, using the program allows teachers to enact the principle that high standards can result in higher achievement for all students by using the assessment materials to inform the next steps of instruction.

RESEARCH PRINCIPLE 2: Test preparation

Teachers are responsible for teaching the skills, knowledge, and behaviors essential to answering test questions, as well as preparing their pupils for the formal assessments.

RESEARCH BASIS FOR PRINCIPLE 2

Gulek (2003) writes that adequate and appropriate test preparation plays an important role in helping students demonstrate their knowledge and skills in high-stakes testing situations. Becker (1990) conducted an extensive meta-analysis of the research and concluded that on average, helping students understand how to approach test questions can help increase SAT scores. Sloane & Kelly (2003) write that "Students can

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be effective instruments in their own learning if the teacher is clear on the learning goals and the students are informed of their current performance and given clear steps for remediation.... The task for teachers is to know and understand their state's standards, and then translate this knowledge to continuously help students learn and self-assess to meet those standards.”

RESEARCH PRINCIPLE 2 APPLIED

Working specifically through questions (“What, exactly, is the question asking?” “What kind of answer will you be looking for?” “Why did you choose the answer you chose?”) can be a fruitful practice in reasoning. The cognitive skills required for understanding and answering test questions are higher-order thinking skills; making these skills overt for students can improve their understanding of the many tasks in their lives that will involve reading and answering questions, well beyond the demands of the state test.

To this end, Measuring Up® provides assessment activities embedded in each lesson of the student worktexts to provide practice on applying curriculum standards in the format of the state test. Each question in Measuring Up Insight™ is linked to the standards, state objectives, and Measuring Up® worktext lesson in the P3—Personal Prescriptive Path™

Report, so the educator can provide targeted direct instruction for those areas that are weak. This means that teachers use Measuring Up Insight™ to help students become familiar with the standards and experience test questions that resemble those on the state test.

RESEARCH PRINCIPLE 3: Formative assessment

“A major purpose of evaluation is to help teachers better understand what students know and make meaningful decisions about teaching and learning activities.”

RESEARCH BASIS FOR PRINCIPLE 3

Assessment comes in two forms: formative and summative. Standardized tests are a summative assessment, or testing that occurs at the end of a given amount of instruction. Formative assessment occurs throughout a unit of instruction; because it occurs more frequently, and because its purpose is to inform further instruction, students receive more immediate feedback on their learning. “Formative assessments...are essential. They permit the teacher to grasp the students’ preconceptions, understand where the students are in the ‘developmental corridor’ from informal to formal thinking, and design instruction accordingly” (Bransford, et al., 2000).

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RESEARCH PRINCIPLE 3 APPLIED

Together, teacher observation and Measuring Up Insight™ enable teachers to define and implement a P3™—**Personal Prescriptive Path™** of instruction for all students, no matter how diverse.

In addition, students' approaches to and solutions of questions provide teachers with extra information about what their students know and how they think. Both Measuring Up® -created tests and Teacher-created Benchmark Tests in the Measuring Up Insight™ system are designed to provide diagnostic information; working through questions in the Measuring Up Insight™ program can provide a great deal of information for teachers about their students. Seen in this way, Measuring Up Insight™ is a powerful instructional tool for informing classroom instruction in ways more profound than simple test preparation.

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