

# WE DILUTED EDUCATION AND CALLED IT SPECIAL

**BY JAMES A. TUCKER AND PRISCILLA M. TUCKER**

**C**hange should be systematic and data-based. But in education, it is often based on fad and fashion. Instead of changing our behavior, we simply revise our rhetoric. This article explores the history of special education in America, with special emphasis on what we have learned about effective instruction for all students, *including* those with disabilities.

More than 300 years ago—and within one year of his arrival in the New World—William Penn, proprietor of a grand new experiment called Pennsylvania, produced a document containing the following primary rule to govern education:

*All persons having children shall cause such to be instructed in reading and writing, so that they may be able to read the scriptures and to write by the time they attain to twelve years of age and that then they be taught some useful trade or skill.<sup>1</sup>*

That brief statutory pronouncement is one of the earliest education laws in America. The prescribed learning was

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intended not only to be Christian, but also comprehensive. Consider the basic elements of this law:

- Parents were the responsible agents of education.
- Basic skills represented the foundation of the curriculum.
- The outcome was intended to be preparation for adult life.

Those three tenets represent the essence of education. Eventually, we decided that these requirements should be accomplished at a place called “school,” and even made attendance compulsory. But we failed to adapt our instruction to individual differences. As a result, instead of providing effective instruction for individuals who were failing, we created categorical programs for them—compensatory (remedial) education, bilingual education, and special education. After decades of straying from the power and simplicity of Penn’s mandate, educators are once again implementing his three-part mandate. And nowhere in education is this more striking than in special education.

In 1981, the first in a series of Wing-spread conferences on special education

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convened in Wisconsin. It explored the reasons why special education had produced *unintended results*. Why, for example, when we sought the unserved population of students with disabilities through programs such as “child-find,” did we end up with a huge number of students in a previously unrecognized category called *learning disabilities*?

At that conference, several of the world’s leading special-education policy analysts summarized their review of research on social-service delivery systems. The following quotation is taken from that address:

*Fifteen years of research in this area has turned up a number of factors that influence how a large service system actually works and why it produces unintended results. A few of these results are suggested as follows:*

*1. Pre-eminently, service is performed where the money is, regardless of whether the rhetoric says the service should be performed somewhere else.*

*2. Professionals provide the services they know how to provide, regardless of what the recipient of the service may need.*

*3. When service personnel are faced with the choice of documenting compliance (as a condition of funding) or providing the services defined by the rhetoric of the system, they will document compliance first.*

*4. When faced with a choice of recipients who are “easy” or “hard” to serve, and formal rewards for dealing with each are equal, the service person will choose to deal with recipients who are easy to serve.*

*5. If portions—or all—of the service system are seen as a “free lunch,” they will attract extra use, whether the services are needed or not.<sup>2</sup>*

Overall, the first Wingspread conference spent most of its energies looking backward. Michael Scriven closed his presentation with the following words:

*I cannot say what I think the pessimist could say about research and practice in special education at this point, but I think the optimist could say that we have a wonderful opportunity to start all over!<sup>3</sup>*

And that is exactly what happened. Since 1981, we have done a great deal of starting over. We have collected a lot of

data and have evaluated the concept of special education—what it was, what it is, and what it should be.

### **The “Special” Mystique**

Through an unfortunate accident of history, the word *special* was used to designate instruction for students with disabilities. We started with the benign belief that such students are different and somehow need education that is different—or special. We convinced ourselves that if a person needs something special in education, he or she must have a disability. Furthermore, if students with disabilities need “special” education, then those without disabilities need only “regular” education. Yet *everyone* needs an education that is special—one that is designed to meet his or her specific needs.

### **The “Testing” Mystique**

Special education was built on the assumption that there is a diagnostic match between the instructional needs of disabled students and the standardized, norm-referenced tests used to define their eligibility. As is always the

case when we build on a false premise, we have to construct other shaky structures to support it. Standardized measurement and norm-referenced comparison were useful statistical tools as long as they were used for scholarly research on human behavior. But when those statistical concepts invaded the socio-political structures of society, it became clear that such tests can be, and often are, among the most discriminating mechanisms that humankind has invented.

In many cases, when a student is suspected of having a disability, someone says the magic words, "He needs to be tested." There is an unwritten and unfounded assumption that a student's learning problems cannot be truly detected, accurately defined, or properly remediated until he or she has received formal testing. Such testing is often very expensive, requiring the services of trained, certified, and often licensed professionals who administer a comprehensive battery of standardized, norm-referenced exams such as intelligence tests, which provide IQ scores, and academic achievement tests, which typically provide grade-equivalency scores.

There is nothing inherently wrong with testing—only with the ways that test scores are used. Testing has become so pervasive because governmental agencies require the scores to verify a student's eligibility for special services. Unfortunately, testing done for eligibility purposes rarely provides information that translates into needed intervention strategies.

Until the mid-1960s, the testing movement focused on general achievement and used IQ tests mainly for institutional placement and private therapy. But as schools enrolled more students with disabilities, a shift occurred from institutional psychological testing to public-school psychological testing, which was seen as a magical solution to classroom problems.

But there was no magic. Students assigned to special-education classes not only failed to receive an appropriate education tailored to their individual needs, they also became the victims of reduced expectations and achievement.

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When special education produced obvious racial and cultural discrimination, the courts entered the picture. Now, some 20 years later, we have almost come full circle. We are discovering that we can teach all students together—as we should have in the first place.

As early as the mid-1970s, the literature contained clear evidence of our mistaken dependence on norm-referenced tests as measurements of academic achievement. A number of

studies made it clear that student scores can be influenced by the school's choice of curricula and tests.<sup>4</sup> One of these studies<sup>5</sup> considered the relationship between topics in mathematics textbooks and those included in the most popular standardized achievement tests. Table 1 shows the results of that study.

Despite the limited relationship between the textbooks and the tests, virtually every state in the U.S. requires the use of standardized achievement tests to determine eligibility for special-education programs in the public schools. However, the statistical problems underlying the construction and use of such tests have been well known for decades.

### The New View

Gradually we are beginning to make changes. We have concluded that we can make school a better place for *all* students, including those with disabilities. And we have discovered that resources are used more efficiently when we build school systems that work for *all* students, including those with disabilities.<sup>6</sup>

Effective education for students with disabilities must deal with at least two areas: (1) the *location* where instruction is provided, and (2) the *instruction* itself. The former, often referred to as the

**Table 1**  
**Percentage of topics covered by three major mathematics texts that were tested by five of the major achievements tests\***

<b>Tests</b>	<b>MAT</b>	<b>SAT</b>	<b>Iowa</b>	<b>CTBS 1</b>	<b>CTBS 2</b>
Textbooks					
Houghton-Mifflin	60%	51%	63%	57%	58%
Scott-Foresman	71%	52%	66%	57%	68%
Addison-Wesley	60%	47%	53%	54%	61%

\*MAT=Metropolitan Achievement Test; SAT=Stanford Achievement Test; Iowa=Iowa Test of Basic Skills; CTBS=Columbia Test of Basic Skills, Versions I and II.

least-restrictive environment, or LRE, has received the lion's share of the attention; the latter has been left more or less to chance.

### Location—Inclusion

We have been seduced into believing an assumption that illustrates the adage that “there is no right way to do the wrong thing.” A person can be mistreated in the best of environments. The quality of service (specially designed instruction, in this case) is essential to defining the least-restrictive environment.

The term *inclusion* has received a great deal of attention, although neither it nor its predecessors—*integration* and *mainstreaming*—appear in federal law. However, the *concept* is firmly established in law.

*Each public agency shall insure:*

(1) *That to the maximum extent appropriate, handicapped children, including children in public or private institutions or other care facilities are educated with children who are not handicapped, and*

(2) *That special classes, separate schooling or other removal of handicapped children from the regular educational environment occurs only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily.*<sup>7</sup>

The mandate is clear, but so are the conditions under which it is to be carried out. The necessity for “supplementary aids and services” cannot be overlooked. Note that the default location for *special* education is the “regular educational environment.” Yet the assumed location for special education has wrongly come to mean a *separate* location.

Correcting this does *not* mean, however, that students currently receiving special education should simply be “dumped” into regular-education classes. Modern techniques in special education show how to provide specially designed instruction for virtually *all* students without removing any of them from the regular educational environment.

The State of Pennsylvania, for example, has taken this concept to its logical

conclusion. Recently, the state board of education adopted new regulations for the provision of regular education.

*Some students will achieve more quickly than others and some will achieve in different ways than others, although all are capable of high levels of achievement. Schools and school districts should adopt more than a minimal education program and instead should assist all students to achieve the highest academic standards.*<sup>8</sup>

Under this rule, education that is special is the right of *all* students in Pennsylvania, including disabled students.

### Instruction

Instruction is the single most powerful element in a program for disabled learners, yet it is often the least considered. More mundane issues like eligibility, available space, class-size restrictions, cost, and pressure to move a student often receive priority. Effective instruction must ensure that students acquire basic academic skills and apply them to real-life problems.

In 1984, Dr. Jay Samuels of the University of Minnesota reported general public agreement that the basic skills are still the five traditional categories of reading, writing, mathematics, speaking, and listening. Calling the first three of

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these “human inventions which are found only in literate societies,” Samuels makes this remarkable statement:

*... even modest IQ levels, within the 50-70 range of educable retardation, seem to be sufficient for mastering the basic skills which originate through human invention. Why then, one wonders, if the basic skills can be acquired with IQs in the 50-70 range, are there so many children who fail to master them despite having levels of intelligence substantially higher?*<sup>9</sup>

Samuels goes on to answer these questions by offering three steps that teachers must take in helping students to master the basic skills:

In many ways, good athletic coaching and good classroom teaching have much in common, and principles of coaching applied to the classroom can help students master the basic skills. In essence, to master the basic skills either in sports or the classroom, three elements are necessary:

1. Motivate the student.
2. Bring the student to the level of accuracy in the skill, and
3. Provide the practice necessary for the skill to become automatic.<sup>10</sup>

Let's briefly discuss—in practical terms—what we know about those three principles. For reasons that will become

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clear later, “motivation” comes last.

**Teach to mastery:** Mastery is so well understood that it hardly deserves mention except to make one point. The term can be defined (or defiled) by bureaucratic interpretation to mean something that it is not. For example, it is commonplace to hear “80 percent mastery” considered the criterion for success. Nothing short of 100 percent is mastery. A bridge reaching 80 percent across a chasm is a bridge to nowhere!

Mastery is one of the foundation principles of individualized instruction. Goals and objectives should be written in terms of facts, concepts, and skills to be *mastered*. Unless the basic content to be learned is clearly understood (mastered), it is meaningless to practice it until it becomes automatic.

**Practice until the skill becomes automatic.** Everyone knows the cliché “practice makes perfect.” Actually, practice makes *permanent*. Only *perfect* practice makes perfect. Homework, for example, should be used as practice—not to achieve mastery. If a student takes work home that he or she has not mastered, this will only reinforce his or

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her lack of understanding.

Practice is often referred to as *rehearsal* or *repetition*. As such, it is used inappropriately when students are required to perform mindless repetitions that do not engage the brain. For practice to be useful, repetition must be contextual; that is, it must be meaningful to

the learner in the context in which the practice occurs. One of the best current examples of contextual practice is a video game, where a person practices a given element over and over in the context of a game or challenge. A more mundane but equally powerful example of contextual practice can be seen in the simple act of reading. However, new words or ideas must be practiced within the material being read. If they are not repeated sufficiently, the student will not get to the automatic stage, and the resulting lack of memory may be misdiagnosed as a learning disability.

The value of practice has been carefully researched for many years. As early as the 1930s, it was known that sufficient repetitions were necessary to learn new things adequately.<sup>11</sup> For example, Gates found that a “high”-ability student (IQ 120) requires about 35 repetitions. A “slow”-ability (IQ 80) student needs about 55 repetitions.

**Motivate the student:** Here is where, in the past decade, we discovered pure instructional gold. Though described in the 1950s by Emmett Betts of Temple University, the concept lay dormant for nearly 30 years before receiving wide instructional application. When something is to be learned, it must be presented at a level where there is sufficient prior knowledge so that it is not too easy (boring) or too difficult (frustrating) to learn. Betts called this the *instructional level*.<sup>12</sup> Table 2 shows the level of prior knowledge reported by Gickling and Armstrong<sup>13</sup> for each of three levels at which students interact with print material (reading). More recent work by Gickling and his associates<sup>14</sup> has shown the incredible power of using the instructional level as a means of motivation.

Basically, motivation can be operationally defined as a natural learning state that exists between frustration and boredom in which the inclination to learn is internal, not induced by any external stimulus, such as rewards or punishment.

### **The Future of Special Education**

The future of education depends on the way we manage the changes taking place today. As Arthur L. Costa, former

President of the Association for Supervision and Curriculum Development, has said, "The best way to predict the future is to invent it now."<sup>14</sup>

In order to meet the needs of exceptional children, we will have to proceed on a number of fronts simultaneously. Wolf Wolfensberger, one of the pioneers in special education, challenges us succinctly:

*It is both salutary and gratifying to note that in the future, integrated special education will become better, and easier to accomplish, as all education becomes special education, i.e., as we move more and more from lockstep teaching to individualization of the learning-teaching process. As all education becomes special, grade leveling and grade grouping of children—as we know it—will disappear, and integration will no longer present the problems it does today.<sup>15</sup>*

The goal is eminently achievable: Every student who needs special assistance to succeed in school must have it readily available. We know *how* to achieve the goal. We have the technology and the resources. All that remains is to get to work. We *can* establish a virtually fail-safe network of support for the benefit of all students, and particularly for disabled students. We *can* set aside our power structures and our bureaucratic encumbrances. We *can* utilize procedures that help rather than hinder—and we must do so *now!* 🍌

*Dr. James A. Tucker is Professor of Educational Psychology at Andrews University and Director of the University Center for Assessment and Learning. Before joining the*

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*Andrews University faculty, Dr. Tucker was Director of the Bureau of Special Education, Pennsylvania Department of Education. Priscilla M. Tucker is a Graduate Student at Andrews University, enrolled in the Ph.D. program in Educational Leadership. She is a freelance writer and author of books on natural history for parents, teachers, and students.*

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**Table 2**

### **Levels of prior knowledge necessary for a learning experience to be independent or instructional**

Independent Level	97 - 100 percent known material
Instructional Level	93 - 96 percent known material
Frustrational Level	Less than 93 percent known material