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ABSTRACT

Special education is under fire from full inclusionists who advocate for children with severe mental retardation and who contend that special education settings are immoral dumping grounds for children deemed "unteachable." Other advocates of inclusion focus on the invalidity of disability categories, tests, and instructional services which, in the case of students with learning disabilities, ignores evidence that these students have learning needs substantially different from other students. Special education is special because of its unique resources, its impact on student performance, and the effective teaching practices that mediate between resources and performance. Special education emphasizes individualized instruction, smaller classes, and more highly trained teachers and is supported by large amounts of research and development. Scholarly reviews of the literature, time-series research, and teacher and parent surveys offer evidence of the success of special education in promoting the academic achievement of certain disability groups. Successful special educators use empirically validated procedures and an intensive, data-based focus on individual students, such as curriculum-based measurement. Many such practices validated by special educators do not transfer easily to mainstream classrooms, where teachers have many students and often a different set of assumptions about the form and function of education. (Contains approximately 100 references.) (JDD)

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What's "Special" about Special Education?

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Running head: "SPECIAL" EDUCATION

What's "Special" about Special Education?

A Field under Siege

On the day we began to write this article, Mark Wellman, former park ranger and professional rock climber, now motivational speaker and paraplegic, was shown in his wheelchair modeling a milled wool and nylon jacket ($1350) and wool trousers ($750) in The New York Times Fall Fashions section. One week earlier, Heather Whitestone, a talented and deaf 21-year-old, won the Miss America contest on national television. And this past summer, 30 million moviegoers saw Tom Hanks play a mildly retarded everyman in "Forrest Gump" (Paramount Pictures, personal communication, December 5, 1994). Such high-profile, positive images of people with disabilities are increasingly evident. They symbolize a hard-won victory for those in the disability community who for many years labored for greater normalization, or inclusion, of persons with disabilities in mainstream culture. These images, however, belie a troubling fact: Special education is under fire from within and without, and the disability community, long known for its cohesiveness (see Shapiro, 1993), appears to be coming apart at the seams.

Immoral

Special education's most strident critics are the "full inclusionists," a small but influential group of special educators and parents who advocate for children with severe mental retardation. Full inclusionists are adamant about the right of their children to make friends with nondisabled classmates--an objective unlikely to be met, they say, in separate placements. At the same time, they believe general education historically has used, currently uses, and forever will use special education settings as dumping grounds for children it deems "unteachable," and that children with severe mental retardation typically are

considered by general educators as least teachable. Hence, to ensure their children's place in the mainstream, and to preclude the stigmatization and warehousing purportedly inherent in separate programs, full inclusionists call for an end to all special education settings (e.g., Autin, Dentzer, & McNutt, 1992; Willis, 1994), which some have described as the moral equivalent of slavery (e.g., S. Stainback & Stainback, 1988) and apartheid (Lipsky & Gartner, 1987).

Intellectually Bankrupt

Some advocates of detracking general education (e.g., Allington & McGill-Franzen, 1989; Dentzer & Wheelock, 1990; Wang & Walberg, 1988), in concert with special educators like Algozzine (1985) and Reynolds (1991), have focused less on the purported injustice of separate placements and more on what they see as the invalidity of special education's disability categories, tests, and instructional services. A typical salvo from this group announces that many disability categories--most notably, learning disabilities (LD)--are social constructions without scientific validity (e.g., Algozzine, 1985; Pugach, 1988; Skrtic, 1991; Sleeter, 1986). They are merely the products of parents lobbying for services for their children (Sleeter, 1986), classroom teachers seeking to unburden themselves of difficult-to-teach students (Dillon, 1994b), and special education administrators eager for more special-needs "clients" to trigger more teachers and dollars for their programs (Shapiro et al., 1993; Wang & Walberg, 1988). Given the absence of sound theory to undergird constructs like LD, say the critics, it should come as no surprise that many tests used to identify students with special needs are invalid for such purposes (e.g., Coles, 1978; Reynolds, 1991; Ysseldyke, Algozzine, & Epps, 1983), leading to the labeling of many "false positives," or those wrongly identified as disabled.

The coup de grace of this critique of special education's legitimacy is the contention that the enterprise flat out doesn't work. The professional literature is chock full of pronouncements like: "[Special education] pulls students from general education classrooms and places them in small, segregated classes, in which they...are given watered-down curriculum and receive less rather than more instructional time" (Wang & Walberg, 1988, p. 131).

Whereas most detracking proponents do not argue like full inclusionists for an end to special education placements, at least some would like to see the system reduced considerably in size (e.g., National Association of State Boards of Education, 1991). These detracking proponents and some special educators recommend the transfer to general education of most, or all, children with LD, as well as the monies that until now have followed such children to special education programs. Some detracking supporters believe general educators have the know-how to do better by these children, and special education dollars will help them to put this knowledge to work (e.g., Slavin, Madden, Karweit, Dolan, Wasik, Shaw, Mainzer, & Haxby, 1991).

Fiscally Irresponsible

In New York City, downsizing special education is one of the few topics on which the Schools' Chancellor, Ramon Cortines, and the City's mayor, Rudolph Giuliani, can agree. How so? For the past 15 years, special education in the Big Apple has been administered under terms of a 1980 consent decree issued by a federal judge in a class action lawsuit filed on behalf of Jose P., a Puerto Rican student with disabilities. Because of its court protection, special education has continued to grow, even as other parts of the school system have been decimated by budget cuts (Dillon, 1994a). New York City currently spends $1.67

billion, or 22 cents of every school dollar, on special education. The special education system employs one-quarter of all school employees and provides services to 130,037 students, or 13% of the city's one million school children (Dillon, 1994b). It spends about $18,700 per student while general education spends only between $3,500 and $5,000 per pupil (Dillon, 1994a). The Board of Education's budget director, Leonard Hellenbrand, has said that nondisabled students suffer as a result of the court-ordered increases in special-education spending. "Kids that [sic] don't have court orders in their hands are dead meat," he said (Dillon, 1994a, p. 18). Squeezed by a multi-year recession and the public's concern about government spending, politicians and school administrators across the country are increasingly vexed by special education's high cost (Viadero, 1991).

Visible and Vulnerable

The media have echoed many of these criticisms and concerns. The Wall Street Journal ("Special ed's special costs," 1993), for example, editorialized, "The most common special-ed category is the youngster simply found to have a 'learning disability.' In lay terms, this description...could fit nearly anyone" (p. A14). A writer in the National Review opined that "4 of the 5 million public-school special education students have no mental or physical handicaps" and should not be receiving special education services (Wood, 1994, p. 58). And in a cover story entitled "Separate and Unequal: How Special Education Programs Are Cheating Our Children and Costing Taxpayers Billions Each Year," U.S. News and World Report accused special education of being ineffective, more interested in dollars than students' welfare, and serving as handmaiden to a number of school systems engaged in purportedly racially biased practices (see Shapiro et al., 1993).

Special Disquietude

Demoralization. Full inclusionists, detracking advocates, politicians, school admininstrators, the media, and others have contributed to a zeitgeist that paints special education as more harmful than helpful (Hallahan & Kauffman, 1994). A few special education professors were so persuaded by this view that they deserted their own departments for others; or they worked to diminish the visibility and importance of their own units by helping to reduce them to "programs," subsuming them under entities like "curriculum and instruction"; or they succeeded in eliminating special education as both a department and a program. Data from the Higher Education Consortium on Special Education (HECSE) may reflect this phenomenon. Of 45 universities granting doctoral degrees in special education and forming the HECSE group, 39 responded to a recent survey. In 1987, 36 of the 39 claimed special education departments; in 1992, the number was only 25, a 31% drop in 5 years (H.J. Rieth, personal communication, February 1, 1994).

Arguably, the zeitgeist also has contributed to the attrition observed among special educators in elementary and secondary schools. It has been estimated that special educators nationwide leave the profession at a yearly rate of 7.3%, or about 17,500 (Bobbitt, Faupel, & Burns, 1991). In several states, however, the rate has been estimated at 10% to 15% (Lauritzen & Freidman cited in Singer, 1993); in some districts, as high as 30% to 50% (Smith-Davis, Burke, & Noel cited in Singer, 1993). Although many factors contribute to a special educator's decision to leave teaching, stress, burnout, and job dissatisfaction frequently are mentioned as important causes (Cross & Billingsley, 1994). Research shows that administrative support can blunt the effects of these harmful factors (Littrell, Billingsley, & Cross, 1994). But overburdened administrators (many in court defending special

education) have little time or opportunity to provide that kind of support.

Dissension. Of the just-mentioned criticisms of special education, none cuts to the quick like the charge that many disability categories, including LD, are bogus. Nationwide, 2.25 million students, nearly one-half of all students with disabilities, are certified as LD (U.S. Department of Education, 1993). If certain critics were to have their way and all students with an LD label were decertified, special education's clientele would be reduced by almost 50% without ever considering those in other allegedly suspect disability categories like mental retardation and behavior disorders. Although it is not our aim to respond to all charges leveled at our field, we feel compelled to address a couple, and this is one.

Yes, 2.25 million children labeled LD is a lot of children; yes, thousands--maybe hundreds of thousands--of these students are not LD; and yes, those wrongly labeled, in our view, should be in mainstream classrooms, not in special education programs. (See Gottlieb, Alter, Gottlieb, and Wishner, 1994, for documentation of an urban school system's over-identification of low-achieving students as LD.) But those who would have us believe there is no such thing as LD either (a) ignore considerable evidence showing that students so labeled perform consistently and statistically significantly less well than low-achieving nondisabled students on various academic measures (see Donahoe & Zigmond, 1990; Merrell, 1990; Shinn, Ysseldyke, Deno, & Tindal, 1986) or (b) downplay this reliable between-group difference, emphasizing instead the degree of overlap between the two groups (e.g., Ysseldyke, Algozzine, Shinn, & McGue, 1982). To ignore or downplay the fact that the mean of the LD group is significantly below that of the nondisabled low-achieving group is to fail to appreciate a pivotal point about inferential statistics: When groups differ significantly on a given measure--and especially when they do so consistently--we may

assume they represent different populations. To insist that LD is a phantom category also ignores findings from surveys of and interviews with general educators at elementary and secondary levels who tend to consider students with LD to be different from their nondisabled classmates (e.g., Houck & Rogers, 1994; Zigmond, Levin, & Laurie, 1985).

Many students with LD, then, have learning needs substantially different in amount or kind from those of nondisabled children. An important implication, we believe, is that the full-time placement of all students with LD in mainstream classrooms will result in the failure of some to obtain an appropriate education, or one from which they will benefit. No doubt general education can be made more accommodating of student diversity through important innovations like cooperative learning; but, we believe, there are limits on just how resourceful and responsive the mainstream can become. See, for example, O'Connor and Jenkins's (1994) and Tateyama-Sniezek's (1990) research suggesting that many children with LD may not benefit from cooperative learning; the work of McIntosh, Vaughn, Schumm, Haager, and Lee (1993), Zigmond and Baker (1994), and others, which documents how infrequently general educators modify their instruction for special-needs students; and Hiebert's (1994) summary of Reading Recovery research in the United States, which draws attention to how little we know about the reading method's applicability to students with LD and, presumably, to those with other academic disabilities.

We are not alone in viewing the mainstream as incapable of accommodating all, all the time; indeed, this is the perspective of a majority of the disability community. And it explains why parent and professional groups like the Learning Disabilities Association (1993), the National Joint Committee on Learning Disabilities (1993), and the Division of Learning Disabilities of the Council for Exceptional Children (1993), as well as many other

disability groups (see D. Fuchs & Fuchs, 1994), firmly, if not fiercely, support special education placements and consider full inclusion a threat to the provision of an appropriate education to each and every child with a disability. The emotion aroused and discord provoked by full inclusion is reflected in the words of Bernard Rimland (1993), a well-known advocate and parent of a son with disabilities: "I have no quarrel with [full] inclusionists if they are content to insist upon inclusion for their children. But when they try to force me and other unwilling parents to dance to their tune, I find it highly objectionable and quite intolerable. Parents need [placement] options" (p. 3).

What's Special about Special Education?

Supporters of special education placements like Rimland not withstanding, this is a critical time for the field. With IDEA's reauthorization before Congress; with many groups expressing profound dissatisfaction with special education services; with evidence that more than a few special educators are demoralized; with a disability community formerly described as mutually supportive and synergistic (e.g., Shapiro, 1993), now squabbling in so bitter and pervasive a manner, it seems timely to ask, What's special about special education? We will respond by identifying its unique resources (input), by discussing the impact of these resources on student performance (output), and by analyzing effective teaching practices that mediate between inputs and outputs. "Special education" will be defined as instruction for school-age children in resource rooms and self-contained classes; a discussion of day treatment and residential programs, as well as special education's contributions to early intervention and school-to-work, is beyond the scope of this article.

Input

Since the 1950s, education policy has been intended to prohibit discrimination both

because discrimination is immoral and because it is believed to produce unequal opportunity for future social and economic rewards (Kauffman, 1981). One often-used strategy to discourage discrimination has been to make comparable outcomes both the primary goal of schools and the ultimate test of equality of educational opportunity. According to this approach, most recently questioned by Murray and Herrnstein (1994), the purpose of education is to minimize between-group differences in learning. Hence, policymakers permit the distribution of greater education resources to poorer-performing groups to compensate for the fewer resources they received in the past, which possibly accounts for current inequalities in performance.

The Individuals with Disabilities Education Act (IDEA) reflects the strategy of unequal distribution of resources to help children with disabilities perform as nearly as possible like nondisabled children (Kauffman, 1981). Under IDEA, school districts must provide and pay for an appropriate education for every child with a disability, regardless of cost (Bateman & Herr, 1981). In 1985-86, state-reported expenditures for special education and related services were just under $16 billion--or $18.6 billion in constant 1989-90 dollars. Of this sum, $1.4 billion, $10.8 billion, and $6.4 billion came from federal, state, and local sources, respectively (Chaikind, Danielson, & Brauen, 1993, Table 5, p. 361). This works out to a national average per-pupil cost of approximately $7,800 in 1989-90 dollars, or about 2.3 times the cost of a regular education (Chaikind et al., 1993).

Individualized Instruction, Smaller Classes, and More Highly Trained Teachers

School districts spend special education money on children in infancy through young adulthood. For those in preschool through grade 12, IDEA requires school districts to ensure a free and appropriate education. Students are identified through a multidimensional

evaluation and are placed in a least restrictive environment in which they are as close as possible to nondisabled, age-appropriate peers and from which they will benefit instructionally. In addition, general and special educators develop an individualized educational plan (IEP) for each special-needs student, which includes long- and short-term goals and the specification of necessary related services, such as transportation, technological aids, work-study coordinators, and interpreter services.

To facilitate the realization of IEP goals, school districts grant special educators smaller classes than those in general education. In 1990-91, 297,490 full-time special educators were employed nationwide to work with 4,362,445 children, ages 6 to 21 (U.S. Department of Education, 1993); in other words, 14.66 children per special education teacher. In addition, in the same year, 295,822 full-time teacher aides, psychologists, social workers, counselors, and occupational, physical, and recreational therapists worked with special-needs students between 3 and 21 years of age (U.S. Department of Education, 1993).

Special educators not only have fewer students than do general educators, they also tend to have more advanced degrees. According to the National Center on Education Statistics' Schools and Staffing Surveys and Teacher Follow-up Surveys, 54.6% and 11.3% of special educators have master's degrees and educational specialist to doctoral degrees, respectively; for general educators, the percentages are 39.9% and 5.7% (E. Boe, personal communication, October 21, 1994). The federal government has underwritten part of special educators' advanced training.

Research and Development (R & D)

The total amount authorized by Congress for education R & D in 1989, representing "basic" and "applied" activity, was $145.6 million (U.S. Department of Education, 1989),

two-tenths of 1% of the federal government's total R & D expenditure of $62 billion in 1989 (Guthrie, 1990). Of the $145 million allocated to education research, special education's share was about 12%, with about $17 million going to the Division for Innovation and Development (DID) ("Fact File," 1990, p. 31).

The bulk of DID's financial investment goes to problem-focused, intervention-oriented, field-based research. While he was still DID director, Martin Kaufman explained, "We are...intimately involved with policymakers, professional associations representing teachers and administrators, [and] parent groups, because it is their needs, not theory divorced from those needs, that drive us" (McKenna, 1992). DID funding has produced a large armamentarium of teaching strategies and curricula for children and youth with disabilities, such as self-management procedures, mnemonic strategies, peer tutoring, Direct Instruction, and systematic formative evaluation. Quantitative syntheses of multiple--and sometimes hundreds of--studies have demonstrated the effectiveness of these and other techniques and curricula, many of which were developed expressly for small-group and individualized instruction (Britz, Dixon, & McLaughlin, 1989; L.S. Fuchs & Fuchs, 1986; Handen & Zane, 1987; Hughes, Korinek, & Gorman, 1991; Mastropieri & Scruggs, 1992; McDermid, 1990; Nye, Foster, & Seaman, 1987; Skiba, Casey, & Center, 1985-86; White, 1988). Furthermore, special education researchers have found innovative ways to bridge the research-to-practice schism, providing many teachers with effective educational practices (e.g., Kline, Deshler, & Schumaker, 1992).

Output

With more dollars per student to "buy" IEPs, with proportionately more teachers with advanced degrees and smaller special education classes, and with an R & D program that has

produced effective teaching strategies and curricula, the obvious question is whether such special inputs have translated into special outputs. That is, are we justified in speaking of special education's "value added"? Overall, we believe so.

Questionable Grounds for Skepticism

The aforementioned refrain, "Special education can't work," continues to resound in the professional literature and popular press for at least two notable reasons: Critics give too much credence to the so-called "efficacy studies," and too little attention to more recent scholarly reviews of this literature and other evidence.

The efficacy studies, conducted during the past 60 years and involving mostly students with mental retardation, generally show special-needs students in mainstream classrooms performing as well as, or better than, their counterparts in special education programs. This result has led many to question the effectiveness and necessity of special education. What many critics have not understood, or conveniently overlooked, is that nearly all of these investigations are seriously flawed--and flawed in precisely the same way: The researcher rarely assigned students at random to special education and mainstream classes. Rather, in almost every case, school personnel had assigned students to programs to suit their own pedagogic purposes long before the researcher showed up, with the consequence that the mainstreamed students were stronger academically from the study's start (see Hallahan & Kauffman, 1994, and MacMillan, Semmel, & Gerber, 1994, for a discussion of critics' misuse of the efficacy studies).

Evidence of Success

Scholarly reviews. Scholarly reviews of the literature cast special education in a somewhat different light. Carlberg and Kavale (1980), for example, undertook a meta-

analysis of 50 independent studies of special classes (including resource rooms) versus regular classes. They concluded that "special classes were...significantly inferior to regular class placement for students with below average IQs, and significantly superior to regular class for behaviorally disordered, emotionally disturbed, and learning disabled children" (p. 295). Sindelar and Deno's (1979) narrative review of 17 studies explored the effectiveness of resource rooms. They used more stringent selection criteria than did Carlberg and Kavale, reviewing only investigations with relevant comparison groups. Nevertheless, their findings are consonant with those of Carlberg and Kavale: Resource rooms were more effective than regular classrooms in improving the academic achievement of students with LD or emotional and behavioral disturbances. By contrast, there were no reliable differences between resource and mainstream classes with respect to the academic improvement of children with mild mental retardation. Moreover, as Sindelar and Deno noted, "one clear trend has begun to emerge: The most carefully designed studies have...obtained the most affirmative results [for special education programs]" (p. 24).

Additional reviews of the efficacy studies by Madden and Slavin (1983) and Leinhardt and Pallay (1982) do not agree in all respects with the Carlberg and Kavale and Sindelar and Deno reviews. But all four syntheses agree on this central point: For certain students, special education programs appear to promote greater academic achievement than do regular classrooms.

Time-series research. Marston (1987-1988) compared the effectiveness of general education to special education for students with LD in the Minneapolis Public Schools. To circumvent methodological problems inherent in the hoary efficacy studies, Marston employed time-series analysis. Such analysis eliminates the need for random assignment of

study participants by requiring them to serve as their own controls as they are measured repeatedly across multiple trreatment conditions. Three Minneapolis elementary schools identified 272 fourth- through sixth-grade, nondisabled students who performed at the 15th percentile or below on a reading achievement test. Of this number, 11 students were subsequently refered to and found eligible for special education services, and spent a minimum of 10 weeks in both general and special education programs. Figure 1 shows each student's average gain per week in general and special education in terms of number of words read correctly. They nearly doubled their weekly rate of gain in special education: 1.15 words (SD < .57) in special education versus .60 words (SD < .35) in general education.

Insert Figure 1 about here

Fuchs, Fuchs, and Fernstrom (1993) also conducted time-series analyses on the academic achievement of elementary- and middle-school students with LD in special and general education programs. Whereas Marston followed students as they moved from general education into special education, Fuchs et al. did the reverse. To evaluate the effectiveness of a mainstreaming strategy, they tracked 21 students from 8 schools in Middle Tennessee before and after they transferred to general education classes. Math achievement data were collected weekly for about 10 weeks while the students were in special education and about 7 weeks after they reintegrated into mainstream classes. Findings showed that the students made modest but steady progress in special education, whereas they demonstrated no gain in general education.

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Teacher and parent surveys. Corroborating these research results are the opinions of many school personnel. Houck and Rogers (1994) asked a randomly selected, statewide sample of Virginia's special and general education supervisors, building principals, mainstream teachers at elementary and secondary levels, and teachers of students with LD to respond to the assertion that, "'Pull-out' [special education] programs do students with learning disabilities more harm than good." A total of 61.5% of respondents "disagreed" or "tended to disagree" with the statement; 29.7% "agreed" or "tended to agree"; and the remainder of the sample expressed no opinion. Surveys of general educators in southern California and northern Illinios (Semmel, Abernathy, Butera, & Lesar, 1991) and in northwest Iowa (Coates, 1989) have reflected similar support for special education programs. Moreover, a recent Harris poll (cited in Kauffman, 1991) indicated (a) that 94% of general educators believe services for students with disabilities are better now than 12 years ago, and (b) that 77% of parents of children with disabilities are satisfied with special education services.

Special education programs can and do work in certain places, make no mistake. However, it is equally clear that they do not work everywhere. For years, special education nationwide has been excessively concerned about compliance with federal law and insufficiently concerned about educational outcomes (Hehir, 1994). Few would disagree with the view that special education can and should be improved in many school districts. But to assert, as many today do, that it is broken everywhere is downright false--as false as it is to say that regular education is broken everywhere (Carson, Huelskamp, & Woodall, 1993; Huelskamp, 1993; Tanner, 1993).

Mediating Factors

What, if anything, is special about the successful special educator's approach to instruction? At least two features, we believe: use of empirically validated procedures and an intensive, data-based focus on individual students. To illustrate these characteristics, we describe special educators' use of Curriculum-Based Measurement (CBM).

CBM: An Example of "Special" Education

CBM is a set of assessment methods developed by Deno (1985) and validated by many others over the past two decades with DID funding. CBM specifies procedures for regularly measuring student performance within the local school curriculum to monitor progress toward end-of-year, global literacy and numeracy goals. Research has provided teachers with valid methods for creating, administering, and scoring assessments across different curricula (see Shinn, 1989).

Nationwide, special educators use this CBM methodology to develop effective, individualized instructional programs inductively over time. With CBM, a special educator assesses student performance twice each week. The resulting database provides the teacher with two types of information useful for instructional decision making: proficiency indicators, which describe students' past, current, and future growth trajectories, and profiles of students' strengths and weaknesses in the curriculum. Whenever a student's growth trajectory suggests that the established end-of-year goal may underestimate his or her potential, the teacher raises the goal for that student. When the growth trajectory indicates that the student may fail to achieve the end-of-year goal, the teacher modifies the instructional program.

To identify promising strategies for enhancing instruction, the special educator relies

on a CBM profile of a student's curricular strengths and weaknesses, the student's rate of overall growth (indexed by CBM), and an historical analysis of the instructional components of the student's program. Through this data-based, analytic, trial-and-error process, the special educator tests alternative hypotheses about which instructional methods will produce the most satisfactory growth rates. Over time, an instructional program is fine-tuned for each student.

Special educators who use CBM to develop demonstrably effective instructional programs engage in the following practices. First, they use CBM to monitor the appropriateness of the goals they set and to keep those goals ambitious. Special educators who set and maintain ambitious goals facilitate superior achievement by their pupils (L.S. Fuchs, Fuchs, & Deno, 1985; L.S. Fuchs, Fuchs, & Hamlett, 1989). Second, collecting CBM data routinely does little by itself to improve student growth. Rather, successful special educators use the data continually to revise and tailor their students' programs (L.S. Fuchs, Deno, & Mirkin, 1984; L.S. Fuchs, Fuchs, & Hamlett, 1989). Third, when the CBM data reveal inadequate growth, effective special educators frequently obtain human or computer-generated expertise to help them generate important revisions to their existing instructional programs (L.S. Fuchs, Fuchs, Hamlett, & Stecker, 1991; Wesson, 1991). When special educators use CBM in these ways, they facilitate impressive academic gains among students with very serious learning difficulties--with effect sizes of .70 standard deviation units (e.g., L.S. Fuchs & Fuchs, 1986; L.S. Fuchs et al., 1991).

Empirically Validated and Individualized

With DID funding, a CBM technology for tracking student growth toward broad literacy and numeracy goals and for connecting the assessment information with instructional

decisions has been researched for 2 decades and reported in more than 100 empirical studies. Special educators can use CBM with confidence to enhance learning outcomes with children who demonstrate persistent and severe learning problems.

The R & D activity associated with CBM is not unusual in special education. Many special education practices used nationwide have been developed and validated with similar care. Given the profound learning problems of students in special education programs--and their demonstrated failure to profit from general education instruction--these empirically validated practices are necessary to promote meaningful academic growth.

Virtually all validated special education practices share one important characteristic: They focus the special educator's instructional decisions on the individual student. Individualized instruction is perhaps the signature feature of effective special education practice. It exemplifies a basic value and represents a core assumption of special educators' professional preparation; it requires teachers to reserve judgment about the efficacy of instructional methods until those methods prove effective for the individual student; it necessitates a form of teacher planning that incorporates ongoing, major adjustments and revisions in response to an individual student's learning patterns; and it requires knowledge of multiple ways to adapt curricula, modify instructional methods, and motivate students.

Can General Education Become Special Education?

Can teaching methods that focus instructional decisions on individual students, and that have been empirically validated by special educators in special education settings, be exported to mainstream classrooms to improve the outcomes of students with severe learning problems? This is a timely question given the increasing popularity of full inclusion. We have explored the issue by studying CBM's use in mainstream classrooms. Our attempts to

encourage general educators to adopt special education's individual decision-making orientation have proved discouraging. We have found that the instructional adaptations general educators make in response to students' persistent failure to learn are typically oriented to the group, not to the individual, and are relatively minor in substance, with little chance for helping students with chronically poor learning histories (L.S. Fuchs, Fuchs, Hamlett, Phillips, & Karns, in press).

Indeed, to make CBM more compatible with most general education settings, we have had to change CBM's traditional focus on the individual to a classwide orientation. With classwide decision making, general educators use CBM to create task-oriented motivational climates (Anderman & Maehr, 1994) and to identify appropriate content for peer-mediated instruction sessions within their classrooms (L.S. Fuchs, Fuchs, Hamlett, Phillips, & Bentz, 1994). And in such settings, learning outcomes for low-, average-, and high-achieving students are considerably better than in classrooms without classwide CBM decision making (respective effect sizes = 1.14, .45, and .63). However, results in classrooms with CBM decision making are considerably less impressive for children with LD (effect size = .26). This stands in stark contrast to the aforementioned improvements observed among students with LD when an individual CBM decision-making orientation is used by special educators in special education settings (effect size = .70).

Many practices validated by special educators for use in special education settings, like CBM, do not transfer easily to most mainstream classrooms, where teachers have many students and often a different set of assumptions about the form and function of education. Focusing intensively on the individual student--as most special education practices require--means that teachers must conduct different instructional activities for different students at

different times. This simply is impractical for classrooms of 25-35 students. Moreover, special education's most basic article of faith--that instruction must be individualized to be effective--is rarely contemplated, let alone observed, in most general education classrooms. For sound reasons, mainstream teachers have important competing priorities: the good of the group and the extent to which activities engage students and maintain classroom flow, orderliness, and cooperation. These operational priorities (and a committed teacher) make general education a productive learning environment for 90% or more of all students. For the remaining children, however, a different orientation is required. Special education, with its emphasis on empirically validated practices and its use of data-based decision making to tailor instruction to the individual student's needs, has the capacity to effect better outcomes for this small minority of learners.

Coda

We are not apologists for special education. Many times we have tried to shake our field by its shoulders about its assessment practices, state reimbursement formulas, reintegration efforts, and over-identification of students (e.g., Dempsey & Fuchs, 1993; D. Fuchs & Fuchs, 1989; D. Fuchs, Fuchs, Benowitz, & Barringer, 1987; D. Fuchs, Fuchs, & Fernstrom, 1993). But such concerns, and other legiitmate problems expressed by full inclusionists, detracking advocates, school administrators, and others, should not be construed as evidence that special education cannot work. It can and does work--it is special--in many places. And it is unique in ways that general education is not and probably can never be. That special education isn't special everywhere is the fault of many, including those of us at colleges and universities responsible for preservice education. Parents, advocates, the courts, federal officials, and others should hold special educators' feet to the

fire, rather than seek special education's elimination or dramatic dim ution by such means as moving all students with LD into regular classrooms full time. In many places special education (like general education) requires change. Let's get on with it, but let's also not forget what's special about special education. If we do, many students will pay the price.

References

Algozzine, B. (1985). Low achiever differentiation: Where's the beef? Exceptional Children, 52, 72-75.

Allington, R.L., & McGill-Franzen, A. (1989). Different programs, indifferent instruction. In D.K. Lipsky & A. Gartner (Eds.), Beyond separate education: Quality education for all (pp. 75-97). Baltimore: Paul Brookes.

Anderman, E.M., & Maehr, M.L. (1994). Motivation and schooling in the middle grades. Review of Educational Research, 64, 287-309.

Autin, D., Dentzer, E., & McNutt, B. (1992, November). Segregated and second rate: "Special" education in New York. New York: Advocates for Children of New York.

Bateman, B.D., & Herr, C.M. (1981). Law and special education. In J.M. Kauffman & D.P. Hallahan (Eds.), Handbook of special education (pp. 330-360). Englewood Cliffs, NJ: Prentice-Hall.

Bobbitt, S.A., Faupel, E., & Burns, S. (1991). Characteristics of stayers, movers, and leavers: Results from the teacher followup survey, 1988-89. Washington, DC: National Center for Education Statistics.

Britz, M.W., Dixon, J., & McLaughlin, T.F. (1989). The effects of peer tutoring on mathematics performance: A recent review. B.C. Journal of Special Education, 13, 17-33.

Carlberg, C., & Kavale, K. (1980). The efficacy of special versus regular class placements for exceptional children: A meta-analysis. The Journal of Special Education, 14, 295-305.

Carson, C.C., Huelskamp, R.M., & Woodall, T.D. (1993). Perspectives on education in

America: An annotated briefing. Journal of Educational Research, 86, 259-310.

Chaikind, S., Danielson, L.C., & Brauen, M.L. (1993). What do we know about the costs of special education? A selected review. The Journal of Special Education, 26, 344-370.

Coates, R.D. (1989). The Regular Education Initiative and opinions of regular classroom teachers. Journal of Learning Disabilities, 22, 532-536.

Coles, G. (1978). The learning disabilities test battery: Empirical and social issues. Harvard Educational Review, 48, 313-340.

Council for Exceptional Children, Division of Learning Disabilities. (1993, April). Statement on inclusive schools and communities. Reston, VA: Author.

Cross, L.H., & Billingsley, B.S. (1994). Testing a model of special educators' intent to stay in teaching. Exceptional Children, 60, 411-421.

Dempsey, S., & Fuchs, D. (1993). "Flat" versus "weighted" reimbursement formulas: A longitudinal analysis of statewide special education funding practices. Exceptional Children, 59, 433-443.

Deno, S.L. (1985). Curriculum-based measurement: The emerging alternative. Exceptional Children, 52, 219-232.

Dentzer, E., & Wheelock, A. (1990). Locked in/locked out: Tracking and placement practices in Boston Public Schools. Boston, MA: Massachusetts Advocacy Center.

Dillon, S. (1994a, August 14). New York City schools monitor contends that special education cost is inflated. The New York Times, p. 18.

Dillon, S. (1994b, April 7). Special education soaks up New York's school resources. The New York Times, p. A16.

=

Donahoe, K., & Zigmond, N. (1990). Academic grades of ninth-grade urban learning-disabled students and low-achieving peers. Exceptionality, 1, 17-27.

Fact file: Higher education funds requested in fiscal 1991 budget. (1990, February 7). The Chronicle of Higher Education, p. A31.

Fuchs, D., & Fuchs, L.S. (1989). Effects of examiner familiarity on black, Caucasian, and Hispanic children: A meta-analysis. Exceptional Children, 55, 303-308.

Fuchs, D., & Fuchs, L.S. (1994). Inclusive schools movement and the radicalization of special education reform. Exceptional Children, 60, 294-309.

Fuchs, D., Fuchs, L.S., Benowitz, S.A., & Barringer, K. (1987). Norm-referenced tests: Are they valid for use with handicapped students? Exceptional Children, 54, 263-271.

Fuchs, D., Fuchs, L.S., & Fernstrom, P. (1993). A conservative approach to special education reform: Mainstreaming through transenvironmental programming and curriculum-based measurement. American Educational Research Journal, 30, 149-177.

Fuchs, L.S., Deno, S.L., & Mirkin, P.K. (1984). The effects of frequent curriculum-based measurement and evaluation on pedagogy, student achievement, and student awareness of learning. American Educational Research Journal, 21, 449-460.

Fuchs, L.S., & Fuchs, D. (1986). Effects of systematic formative evalution: A meta-analysis. Exceptional Children, 53, 199-208.

Fuchs, L.S., Fuchs, D., & Deno, S.L. (1985). The importance of goal ambitiousness and goal mastery to student achievement. Exceptional Children, 52, 63-71.

Fuchs, L.S., Fuchs, D., & Hamlett, C.L. (1989). Effects of alternative goal structures within curriculum-based instruction. Exceptional Children, 55, 429-438.

Fuchs, L.S., Fuchs, D., Hamlett, C.L., Phillips, N.B., & Bentz, J. (1994). Classwide

curriculum-based instruction: Helping general educators meet the challenge of student diversity. Exceptional Children, 60, 518-537.

Fuchs, L.S., Fuchs, D., Hamlett, C.L., Phillips, N.B., & Karns, K. (in press). General educators' specialized adaptations for students with learning disabilities. Exceptional Children,

Fuchs, L.S., Fuchs, D., Hamlett, C.L., & Stecker, P.M. (1991). Effects of curriculum-based instruction and consultation on teacher planning and student achievement in mathematics operations. American Educational Research Journal, 28, 617-641.

Gottlieb, J., Alter, M., Gottlieb, B.W., & Wishner, J. (1994). Special education in urban America: It's not justifiable for many. The Journal of Special Education, 27, 453-465.

Guthrie, J.W. (1990). Education R & D's lament (and what to do about it). Educational Researcher, 19, 26-34.

Hallahan, D.P., & Kauffman, J.M. (1994). Toward a culture of disability in the aftermath of Deno and Dunn. The Journal of Special Education, 27, 496-508.

Handen, B.L., & Zane, T. (1987). Delayed prompting: A review of procedural variations and results. Research in Developmental Disabilities, 8, 307-330.

Hehir, T. (1994). Special education: Successes and challenges; A memo from the Director of the U.S. Office of Special Education Programs. Teaching Exceptional Children, 26(3), 5.

Houck, C.K., & Rogers, C.J. (1994). The special/general education integration initiative for students with specific learning disabilities: A "snapshot" of program change. Journal of Learning Disabilities, 27, 435-453.

Huelskamp, R.M. (1993). Perspectives on education in America. Phi Delta Kappan, 74, 718-

721.

Hughes, C.A., Korinek, L., & Gorman, J. (1991). Self-management for students with mental retardation in public school settings: A research review. Education and Training in Mental Retardation, 26, 271-291.

Kauffman, J.M. (1981). Historical trends and contemporary issues in special education in the United States. In J.M. Kauffman & D.P. Hallahan (Eds.), Handbook of special education (pp. 3-23). Englewood Cliffs, NJ: Prentice-Hall.

Kauffman, J.M. (1991). Restructuring in sociopolitical context: Reservations about the effects of current reform proposals on students with disabilities. In J.W. Lloyd, A.C. Repp., & N.N. Singh (Eds.), The Regular Education Initiative: Alternative perspectives on concepts, issues, and models (pp. 57-66). Sycamore, IL: Sycamore.

Kline, F.M., Deshler, D.D., & Schumaker, J.B. (1992). Implementing learning strategy instruction in class settings: A research perspective. In M. Pressley, K. Harris, & J. Guthrie (Eds.), Promoting academic competence and literacy in school (pp. 361-406). San Diego: Academic Press.

Learning Disabilities Association. (1993, January). Position paper on full inclusion of all students with learning disabilities in the regular education classroom. Pittsburgh, PA: Author.

Leinhardt, G., & Pallay, P. (1982). Restrictive educational settings: Exile or haven? Review of Educational Research, 52, 557-578.

Lipsky, D.K., & Gartner, A. (1987). Capable of achievement and worthy of respect: Education for handicapped students as if they were full-fledged human beings. Exceptional Children, 54, 69-74.

Littrell, P.C., Billingsley, B.S., & Cross, L.H. (1994). The effects of principal support on special and general educators' stress, job satisfaction, school commitment, health, and intent to stay in teaching. Remedial and Special Education, 15, 297-310.

MacMillan, D.L., Semmel, M.I., & Gerber, M.M. (1994). The social context of Dunn: Then and now. The Journal of Special Education, 27, 466-480.

Madden, N.A., & Slavin, R.E. (1983). Mainstreaming students with mild handicaps: Academic and social outcomes. Review of Educational Research, 53, 519-569.

Marston, D. (1987-88). The effectiveness of special education: A time series analysis of reading performance in regular and special education settings. The Journal of Special Education, 21, 13-26.

Mastropieri, M.A., & Scruggs, T.E. (1992). Science for students with disabilities. Review of Educational Research, 62, 377-411.

McDermid, R.D. (1990). A quantitative analysis of the literature on computer-assisted instruction with learning-disabled and educable mentally retarded. Dissertation Abstracts International, 57, 1196A.

McIntosh, R., Vaughn, S., Schumm, J.S., Haager, D., & Lee, O. (1993). Observations of students with learning disabilities in general education classrooms. Exceptional Children, 60, 249-261.

McKenna, B. (1992). Special education research priorities focus on action. Educational Researcher, 21(5), 27-29.

Merrell, K.W. (1990). Differentiating low achieving students and students with learning disabilities: An examination of performances on the Woodcock-Johnson Psycho-Educational Battery. The Journal of Special Education, 24, 296-305.

Murray, C., & Herrnstein, R. (1994). The bell curve. New York: The Free Press.

National Association of State Boards of Education. (1991, October). Special education: New questions in an era of reform. Alexandria, VA: Author.

National Joint Committee on Learning Disabilities. (1993, January). A reaction to "full inclusion": A reaffirmation of the right of students with learning disabilities to a continuum of services. Baltimore, MD: Author.

Nye, C., Foster, S.H., & Seaman, D. (1987). Effectiveness of language interv ntions with language/learning disabled. Journal of Speech and Hearing Disorders, 52, 348-357.

O'Connor, R.E., & Jenkins, J.R. (1994). Cooperative learning as an inclusion strategy: The experiences of children with disabilities. Unpublished manuscript.

Pugach, M. (1988). Special education categories as constraints on the reform of teacher education. Journal of Teacher Education, 39(3), 52-59.

Reynolds, M.C. (1991). Classification and labeling. In J.W. Lloyd, A.C. Repp, & N.N. Singh (Eds.), The Regular Education Initiative: Alternative perspectives on concepts, issues, and models (pp. 29-41) Sycamore, IL: Sycamore.

Rimland, B. (1993). Inclusive education: Right for some. Autism Research Review International, 7(1), 3.

Semmel, M.I., Abernathy, T.V., Butera, G., & Lesar, S. (1991). Teacher perceptions of the Regular Education Initiative. Exceptional Children, 58, 9-23.

Shapiro, J.P. (1993). No pity: People with disabilities forging a new civil rights movement. New York: Times Books (Random House).

Shapiro, J.P., Loeb, P., Bowermaster, D., Wright, A., Headden, S., & Toch, T. (1993, December 13). Separate and unequal: How special education programs are cheating

our children and costing taxpayers billions each year. U.S. News and World Report, 46-49, 54-56, 60.

Shinn, M.R. (1989). Curriculum-based measurement: Assessing special children. New York: Guilford.

Shinn, M.R., Ysseldyke, J.E., Deno, S.L., & Tindal, G.A. (1986). A comparison of differences between students labeled learning disabled and low achieving on measures of classroom performance. Journal of Learning Disabilities, 19, 545-552.

Sindelar, P.T., & Deno, S.L. (1979). The effectiveness of resource programming. The Journal of Special Education, 12, 17-28.

Singer, J.D. (1993). Once is not enough: Former special educators who return to teaching. Exceptional Children, 60, 58-72.

Skiba, R.J., Casey, A., & Center, B.A. (1985-86). Nonaversive procedures in the treatment of classroom behavior problems. The Journal of Special Education, 19, 459-481.

Skrtic, T.M. (1991). Behind special education: A critical analysis of professional culture and school organization. Denver: Love.

Slavin, R.E., Madden, N.A., Karweit, N.L., Dolan, L., Wasik, B.A., Shaw, A., Mainzer, K.L., & Haxby, B. (1991). Neverstreaming: Prevention and early intervention as an alternative to special education. Journal of Learning Disabilities, 24, 373-378.

Sleeter, C.E. (1986). Learning disabilities: The social construction of a special education category. Exceptional Children, 53, 46-54.

Special ed's special costs. (1993, October 20). The Wall Street Journal, p. A14.

Stainback, S. & Stainback, W. (1988). Letter to the editor. Journal of Learning Disabilities, 21, 452-453.

Stainback, S., & Stainback, W. (1992). Curriculum considerations in inclusive classrooms: Facilitating learning for all students. Baltimore: Paul Brookes.

Tanner, D. (1993). A nation "truly" at risk. Phi Delta Kappan, 75, 288-297.

Tateyama-Sniezek, K.M. (1990). Cooperative learning: Does it improve the academic achievement of students with handicaps? Exceptional Children, 56, 426-437.

U.S. Department of Education. (1989, December 18). Research and development activities, Department of Education (Exhibit A-11-44A). Washington, DC: Author.

U.S. Department of Education, Special Education Programs. (1993). Fifteenth annual report to Congress on the implementation of the Individuals with Disabilities Education Act. Washington, DC: Author.

Viadero, D. (1991, June 12). States turn to spec.-ed. programs for budget cuts. Education Week, p. 16.

Wang, M.C., & Walberg, H.J. (1988). Four fallacies of segregationism. Exceptional Children, 55, 128-137.

Wesson, C.L. (1991). Curriculum-based instruction and two models of follow-up consultation. Exceptional Children, 57, 246-257.

White, W.A.T. (1988). A meta-analysis of the effects of direct instruction in special education. Education and Treatment of Children, 11, 364-374.

Willis, S. (1994, October). Making schools more inclusive: Teaching children with disabilities in regular classrooms. ASCD Curriculum Update. Washington, DC: Association for Supervision and Curriculum Development.

Wood, R.L. (1994, September 12). A different sort of handicap. National Review, p. 58, 60.

Ysseldyke, J.E., Algozzine, B. & Epps, S. (1983). A logical and empirical analysis of

current practice in classifying students as handicapped. Exceptional Children, 50, 160-166.

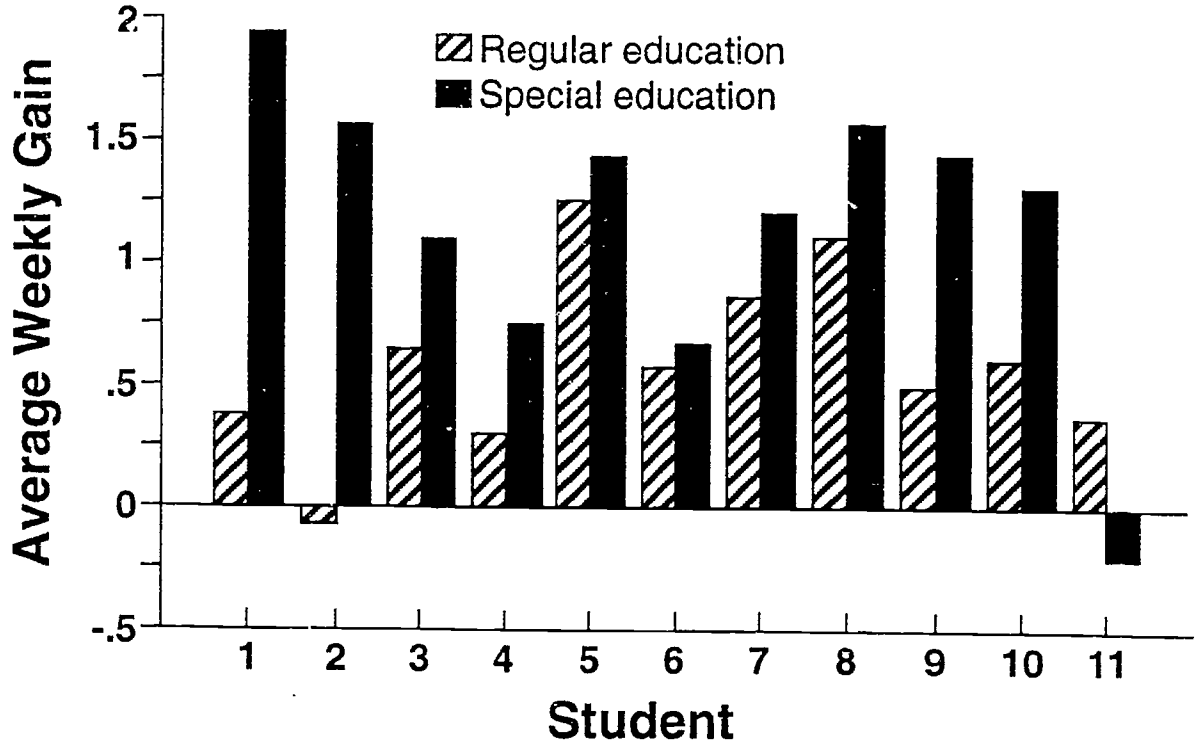
Ysseldyke, J.E., Algozzine, B., Shinn, M.R., & McGue, M. (1982). Similarities and differences between low achievers and students classified learning disabled. The Journal of Special Education, 16, 73-85.

Zigmond, N., & Baker, J.M. (1994). Is the mainstream a more appropriate educational setting for Randy? A case study of one student with learning disabilities. Learning Disabilities Research & Practice, 9, 108-117.

Zigmond, N., Levin, E., & Laurie, T.E. (1985). Managing the mainstream: An analysis of teacher attitudes and student performance in mainstream high school programs. Journal of Learning Disabilities, 18, 535-541.

Figure Caption

Figure 1. Average weekly gain in words read correctly in special education and general education.


Average Weekly Gain
2
1.5
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Regular education
Special education
1
2
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Student