This paper considers what can be done to shape an educational system that meets the needs of all students; it then recommends such a system to replace the existing situation in which certain students are labeled as "handicapped" and placed in separate programs. In evaluating the current situation, the paper examines existing educational practices for students with handicaps, focusing on provisions and implementation of Public Law 94-142: funding, referral and assessment, student placement in the least restrictive environment, and program outcomes. Intermediate strategies are presented for bridging the gap between special and general education to create a unified system. These strategies include, among others, strengthening the holding power of general education and making funds available to meet student needs, regardless of categorical labels or location of services provided. A vision of the future calls for such reforms as: viewing handicap as a social construct, recognizing various types of intelligences, framing the student's "problem" as a mismatch between learning needs and the instructional system, involving parents as partners, focusing on student achievement as the critical outcome, and improving educational productivity. Changes that can be accomplished within the present legislative situation are outlined. (JDD)
The Yoke of Special Education
HOW TO BREAK IT

Alan Garner
and
Dorothy Kerzner Lipsky
The National Center on Education and the Economy is a not-for-profit organization created to develop proposals for building the world class education and training system the United States must have if it is to have a world class economy. The Center engages in policy analysis and development and works collaboratively with others at local, state and national levels to advance its proposals in the policy arena. Working Paper Series: The Federal Role in Education

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This paper focuses on the education of students labelled as handicapped. The failures of their education require not only rethinking the education designed for them but lead to the task of reshaping schools so that they serve and meet the needs of all students.

In FY 1980, under the provisions of P.L. 94-142, 4.1 million children labelled as handicapped, aged 3 to 21, were served in the nation's schools; 1.35 million of them were categorized as Learning Disabled. Federal funds provided $874 million for their education. In FY 1987, 4.4 million students labelled as handicapped were served, 1.9 million of them (43.6 percent) categorized as Learning Disabled. Federal support reached $1.338 billion. After several years of relative stability, there was a 1.2 percent increase in students labelled as handicapped served in the 1986-87 school year compared to 1985-86. In total, approximately 11 percent of the overall public school enrollment is now labelled as handicapped. (Tenth Annual Report, 1988, Table 1, Figure 4, Table B1.) Despite an Education for All Handicapped Children Act commitment of 40 percent federal share, the current level of federal support is 8.5 percent.

Attention to the education of these students is warranted for several reasons:

- they constitute a significant number of the nation's children;
- the public funds involved are considerable;
- their education is a unique expression of a national commitment; and
- there are growing questions as to the efficacy of these programs, both as to implementation and fundamental design.

Despite these factors, for the most part the education of students labelled as handicapped has not been a part of the national debate concerning educational reform. This paper will address particular issues of the education of all students, the place of special education within the context of the larger educational reform effort and the implementation of P.L. 94-142, the Education for All Handicapped Children Act. In keeping with the perspective of this study, a series of modest strategies will be presented that can serve as the basis for moving toward a fundamental change in special education as well as a broad future vision.

The Current Situation

P.L. 94-142: Background and Provisions

Throughout the 1960's and into the 1970's, in testimony before committees of the Congress, in court suits and in state capitols, parents and other advocates on behalf of children with disabilities described a harsh reality. These children faced exclusion from public schools; when included, they found limited services, segregated and second-class settings, fees charged for what was provided free to other students, and discriminatory treatment of racial minorities and those whose native language was not English.

Laws in individual states chipped away at these conditions, and between 1966 and 1974 a series
of federal laws built system capacity. As in race relations, it was the federal courts that provided the key impetus. *Brown v Board of Education* (347 US 483) provided an example to those championing the rights of students with disabilities: as to the importance of education to the "life and minds" of children; setting the framework of the inherent inequality of separate education; and providing a model for change. Ironically, in presenting South Carolina's case before the U.S. Supreme Court, John Davis warned that acceptance of the plaintiffs' arguments in the race area would lead to the obligation to integrate children with handicaps.

In *Pennsylvania Association of Retarded Citizens (PARC) v. Commonwealth* (334 F. Supp. 1257), the federal district court in 1971 overturned a state law that had relieved the Commonwealth from educating those children it found "uneducable" or "untrainable." And in the District of Columbia, in *Mills v. Board of Education* (348 F. Supp. 866), the federal district court ruled the following year that limited funds could not be the basis for excluding students with handicaps from receiving services.

An increasingly crazy quilt of state laws and growing pressure from parents and other advocates, ably abetted by the new Bureau of Education for the Handicapped, led next to the 1974 Amendments to the Elementary and Secondary Education Act. These contained most of the provisions of what was to become a year later P.L. 94-142; but it lacked an explicit timetable and firm requirements placed upon the states.

P.L. 94-142's title, "The Education of the Handicapped Act," is a clear reflection of the PARC decision, namely that school systems could no longer pick and choose, according to some standard of educability, which children to educate. It was to be *all* handicapped children.

In examining the law, nine basic principles can be derived. They are designed to:

- establish the right of access to public education programs;
- require individualization of services to alter automatic assumptions about disability;
- establish the assumption that disabled children need not be removed from regular classes;
- broaden the scope of services provided by the schools;
- establish a process for determining the scope of services;
- establish general guidelines for certification of disability;
- establish principles for primary state and local responsibility;
- clarify lines of authority for educational services; and

The actual implementation of the law was staggered over the next six years. There was to be a
gradual increase in federal financial support, from 5 percent to 40 percent by 1982 with an increasing percentage of the federal funds passing through the states to local districts. All children from birth to 21 years of age in need of services were to be identified, and there was a state option for serving those under five years of age.

P.L. 94-142: A Decade of Implementation

In many ways, the implementation of P.L. 94-142 is one of the finest achievements of American public education. Students previously excluded from public education are now being served, additional resources have been committed and far ranging changes have taken place. A Louis Harris poll (The ICD Survey III: Special Education, 1989) reports significant satisfaction with special education among educators and parents. Two-thirds or more of the parents (and a higher percentage of educators) give their children's schools positive ratings on the attitude of educators toward the parents, physical access to school facilities, efforts to integrate students and cooperation between regular and special education teachers. About a third of the parents (and a smaller percentage of the educators) deemed these schools "fair" or "poor" in devoting enough time and staff to implementing the curriculum, and preparing the children for higher education or jobs beyond high school.

There have been achievements as well as deficits in the implementation of the law. Achievements include: access; a general recognition and acceptance of entitlement to education of students labelled as handicapped; due process for them and their parents; and some limited progress on "mainstreaming," especially in non-academic areas.

While overall entitlement has been assured and access achieved, limits remain. In a disturbing reading of the Rowley decision holding that schools must provide instruction that will "permit the child to be fit," a federal district court judge has upheld a New Hampshire school district's denying educational services to a 12 year-old boy who is blind, deaf and "profoundly retarded" on the grounds that he is "incapable of benefiting from them" (Adlin, 1988, pp 3, f.). The decision in the case, Timothy W. v. Rochester School District, is being appealed to the 1st Circuit Court of Appeals. The number of amici on the appeal indicate its importance.

Unreasonable delays in evaluation and placement continue in the nation's two largest cities. In the decade-old suit Jose P. v. Ambach, the New York City school system has had to promise expenditure of an additional $90 million in an attempt to clear the "waiting lists". A federal judge has threatened to cut off $117 million in federal aid due to the Chicago system's denial of "meaningful access to an education" to thousands of students (Hume, 1988b, pp. 3, f.; Snider, 1988a, p. 6).

Access to special schools, as well as the services provided by them, are issues in several areas. In Texas, restrictive admissions criteria to the School for the Blind are being challenged, while in Kentucky there is a challenge to the standards at both the School for the Blind and the School for the Deaf (Hume, 1988c, pp. 3-4). The provision of a shortened school day at state schools for the severely handicapped in Missouri is the subject of an Office of Civil Rights investigation (Hume, 1988c, pp. 3, f.). In several states, the restrictiveness of "intermediate units" is the subject of
legal question. More broadly, there are challenges to the entire design of education for students who are blind and those who are deaf.

Less progress has been made in determining who should receive special education services and in the quality of education provided, whether measured by knowledge and skills acquisition, graduation rates, return to general education, or post-high school achievement. Both cause and consequence of these limits are the operation of parallel programs and systems for students called normal and others labelled as handicapped.

If the law has been massively successful in assigning responsibility for students and setting up mechanisms to assure that schools carry out those responsibilities, it has been less successful in removing barriers between general and special education. P.L. 94-142 and other public policies of the time did not anticipate the need to take special steps to eliminate turf, professional, attitudinal and knowledge barriers within public education. It did not anticipate that the artifice of delivery systems in schools might drive the maintenance of separate services and keep students from the mainstream, or that the resources to fund these services would be constrained by economic forces. Neither could it foresee that special education might continue as dead-end programs in many districts, nor could it anticipate how deeply ingrained were assumptions about the differences between students with learning problems and those without and the impact of expectations (high or low) in the learning process (Walker, 1987, p. 109).

While P.L. 94-142 itself does not mandate the special education service system that has evolved, nonetheless what has developed is by and large in keeping with its direction and societal assumptions about disability. This federal legislation has, in turn, encouraged state legislation and regulations that maintain separation.

In part, as a result of a narrow reading of the strictures that federal aid supplement and not supplant local efforts, school practices in remedial education, bilingual education and special education have favored separate, usually "pullout" programs. Given the reductions in support for remedial education programs in this period, school systems had limited resources to support additional options within general education.

Funding

Not only did reduced support for remedial education encourage the growth of special education, its funding patterns promoted expansion and internal segregation. McGill-Franzen (1987) points out that the increase in the number of students identified as Learning Disabled neatly matches the decline in Chapter 1 participants over the past decade. While some see seeking the additional funding available for students placed in special education programs as "bounty hunting," the few studies of special education finance offer no conclusive evidence. But they do indicate the general cost of special education is about twice that for other students (Kakalik, Furry, Thomas, & Carney, 1981; Wright, Cooperstein, Renniker, & Padilla, 1982; Raphael, Singer, & Walker, 1985; Singer & Butler, 1987; Singer & Raphael, 1988).
These funding patterns encourage separate placements:

Funding formulas that create incentives for more restrictive and separate class placements or that support particular configurations of services based on special education teacher allocations maintain an inflexible program structure and fail to allow models that encourage students to remain in general classrooms with resource room or individualized help. One need only examine the variation in statistics between general classroom placements at the state level and the state funding formulas to know that states that provide financial incentives for separate placements, or which traditionally have had dual systems of services, place students disproportionately in more restrictive placements (Walker, 1987, pp. 110, f.).

Referral and Assessment

No area in special education has generated more concern than the procedures for the referral and assessment of students. Together, they raise issues about the professional judgment used in identifying students labelled as Learning Disabled, and discrimination, as seen in the differential treatment of children of color and those with limited proficiency in English:

Referral is more likely to occur in cases where the student is a member of a minority group or from a family whose socio-economic status varies from the district's norm. Further, decisions about special education classification are not only functions of child characteristics but rather involve powerful organizational influences. The number of programs, availability of space, incentives for identification, range and kind of competing programs and services, number of professionals, and federal, state, and community pressures all affect classification decisions (Keogh, 1988, p. 235).

Referral rates vary widely, demonstrated by two different sets of data from 28 large cities. As a percentage of total student enrollment, referral rates range from 6 to 11 percent. The figures for assessment vary even more; for the same 28 cities, the percentage of students who are referred, and then placed in, special education ranges from 7.8 percent to 91.8 percent (Special Education, 1986, Tables 8 and 9).

The most extensive study of the evaluation process reports that results are barely more accurate than a flip of the coin, with the evaluation process often providing a psychological justification for the referral (Ysseldyke, et al., 1983).

Among the major practical problems in assessing special education students are the disregard of results in decision-making (White & Calhoun, 1987), evaluators' incompetence and biases (Davis & Shepard, 1983; Ysseldyke, et al., 1980; Ysseldyke, et al., 1982; Ysseldyke & Algozzine, 1982, 1984) and the inadequacy and inappropriateness of the instruments used (Wang, Reynolds, & Walberg, 1986). Standard norm-referenced tests have been used for students with handicapping conditions. A careful study of the manuals of the most commonly used norm-referenced tests -- both general IQ and achievement -- reports that they "provided no evidence that their tests are valid for use with handicapped students" (Fuchs, et al., 1987, p. 267). The authors note: "Tests without validation data on handicapped people simply should not be used with this group to
determine diagnoses, classifications, placements and evaluations of academic progress" (p. 269). Nonetheless, such tests are commonly used for these purposes.

In practice, the major assessment problems involve students labelled as Learning Disabled. While the overall special education student population grew 20 percent between 1976-77 and 1986-87, those labelled as Learning Disabled increased 142 percent. They now comprise 44 percent of all special education students (Tenth Annual Report, 1988, Table 1, Figure 4). Among the 50 states, their percentage varies from 30 to 67 percent, and from 0 to 73 percent among 30 large cities (Binkard, 1986; Special Education, 1986).

The problem is not only the excessive numbers of students classified as learning disabled; even more troubling is the accuracy of the label:

- More than 80 percent of the student population could be classified as Learning Disabled by one or more definitions presently in use (Ysseldyke, 1987).

- Based upon the records of those already certified as Learning Disabled and those not, experienced evaluators could not tell the difference (Davis & Shepard, 1983).

- Students identified as Learning Disabled cannot be shown to differ from other low achievers on a wide variety of school-related characteristics (Algozzine & Ysseldyke, 1983; Bartoli & Botel, 1988; Ysseldyke, et al., 1982).

The impact of an inappropriate assessment was described by Chicago parents whose child was diagnosed as Learning Disabled (Granger & Granger, 1986). Based upon his not reading in school (although he read at home) the school's diagnostician determined that the boy should be placed in special education:

> The trap of Special Education was now open and waiting for the little boy. It is a beguiling trap. Children of Special Education are children of Small Expectations, not great ones. Little is expected and little is demanded. Gradually, these children -- no matter their IQ level -- learn to be cozy in the category of being 'special.' They learn to be less than they are (Granger and Granger, 1986, p. 26, f).

Based on school practice and the research literature there appears to be little to justify labelling nearly two million students as Learning Disabled. Coles (1987) both challenges the data on differences in brain activity and puts those differences in perspective:

> Learning difficulties, and any neurological dysfunctions associated with them, develop not from within the individual but from the individual's interaction within social relationships. Brain functioning is both a product of and a contributor to the individual's interactions, it is not a predetermined condition.

While Coles' critique addresses the limitations inherent in the learning disabilities formulation, Gardner's concept of multiple intelligences expands the horizon (Gardner, 1983). He points out that there are many types of intelligence, with variations among individuals. Current school
practices, however, focus on a single type of intelligence, thus disabling many students. The potential of building schooling on a fuller comprehension of intelligence is being demonstrated in Harvard University's "Project Zero" and at the Key School, Indianapolis, Indiana (Goldman & Gardner, 1989).

Based on a comprehensive review of the literature, Ysseldyke (1987) succinctly summarizes the disparity between the state of the art and the state of practice:

1. There is currently no defensible psychometric methodology for reliably differentiating students into categories. Yet, school personnel in all but two states are required by [state] law to use indices of pupil performance on psychometric measures to classify and place students.

2. There is no evidence to support the contention that specific categories of students learn differently. Yet, students are instructed in categorical groups on the notion that these groups of students learn differently.

3. With the exception of sensorily impaired students, categorically grouped students do not demonstrate a set of universal and specific characteristics--or for that matter even a single universal and specific characteristic. There is no logic to current practice.

4. The current system used by public schools to classify exceptional children does not meet the criteria of reliability, coverage, logical consistency, utility, and acceptance to users (Ysseldyke, 1987, p. 265).

As the number of students labelled as Learning Disabled increased, there has been a simultaneous decline (by some 300,000 between 1976-77 and 1986-87) in those labelled as retarded. This change is nothing new: shifting definitions, expressed in increasing IQ cut-off scores, saw the number of persons labelled as retarded expand from 6 million prior to 1959, 30 million based on a 1959 definition and 5 million per a 1973 revision (Stephens, 1988, Figure 3; for the American Association on Mental Deficiency definitions, see Grossman, 1973, 1977, 1983).

In a form of "classification plea bargaining," the Department of Education explained the reduction in the number of students labelled as retarded:

These decreases in the number of children classified as mentally retarded are the result of an increasing sensitivity to the negative features of the label itself and to the reaction on the part of local school systems to allegations of racial and ethnic bias as a result of the use of discriminatory or culturally biased testing procedures (Seventh Annual Report, 1985, p. 4).

While there may be "increasing sensitivity," the over-representation of students of color continues. During the 1986-87 school year, the U.S. Department of Education, Office of Civil Rights, reported minority students comprised 30 percent of all public school students. But they accounted for 42 percent of all students classified as educable mentally retarded (EMR), 40 percent of those classified as trainable mentally retarded (TMR) and 35 percent of those classified as seriously emotionally disturbed (SED). The disproportion is greatest among Black students; they comprised 16 percent of the student body but 35 percent of the EMR students, 27 percent of the TMR students and 27 percent of the SED students (Hume, 1988b, p. 5). There is a
relationship between poverty and impairment; but given the correlation in the U.S. between race and poverty, and between race and impairments, this explanation of the over-representation fails given the absence of such disproportion among students labelled as physically handicapped.

Disproportions also exist between boys and girls. Although boys represent 51 percent of all public school students, they comprise 58 percent of the students labelled as retarded, 78 percent of those labelled as SED, 63 percent of the speech impaired, and 71 percent of those with specific learning disabilities (Hume, 1988c, p. 6).

Placement, Least Restrictive Environment and "Mainstreaming"

While referral and assessment procedures vary widely, P.L. 94-142 is clear concerning Least Restrictive Environment (LRE) criteria. "[R]emoval from the regular education environment" is to occur "only when the nature and severity of the handicap is such that education in regular classes with the use of supplementary aids cannot be achieved satisfactorily" (Sec. 612 (5) (B)).

The reality is far from the standard set by the law. During the 1985-86 school year, barely a quarter of the students served in special education programs received services in general education classes for 80 percent or more of the school day. Another 51 percent were pulled out of regular classes from 21 to 60 percent of the day, and the remaining 24 percent remained in separate classes or programs for more than 60 percent of the school day (Hume, 1988a, p. 8).

In 1976-77, when data on the implementation of P.L. 94-142 first were collected, 67 percent of the students were served full time in regular classes, or with resource room services; 25 percent in special classes; and 9 percent in separate schools or other environments (Walker, 1987, p. 104). A decade later, with an additional 500,000 students in special education programs, the placement figures for the 1985-86 school year are uncannily alike: 67 percent in general classes (full- or part-time), 24 percent in special classes, and 9 percent in separate schools or other environments (Tenth Annual Report, 1988, Table 10).

These overall figures mask a great deal of variation -- between states, among categories of handicapping conditions, and over time.

- While five states place 60 or greater percent of their students with handicaps full time in regular classes, another eight place fewer than 10 percent full time in regular classes.
- At the opposite extreme, while seven states place 45 percent or more of their students with handicaps in separate classes or separate settings, five other states place fewer than 15 percent in such settings (Ninth Annual Report, 1987, Table EC1).

A recent paper issued by the Office of Special Education Programs reports:

- the District of Columbia is 25 times more likely than Oregon to place a student labelled as handicapped in a separate school or residential facility;
some states are five or six times more likely than others to educate a
disabled student in a separate classroom, school, or other facility; and

compared to the five most integrated states, others, on the average are
nearly six times as likely to place a student in a separate school or
residential facility (Danielson & Bellamy, 1989).

The Department's most recent report to the Congress on the implementation of P.L. 94-142 notes:
"Virtually every state [of the 25 monitored] had significant problems in meeting its LRE
responsibilities." And, further, "Evidence suggests that states have not established procedures to
ensure that the removal of handicapped children from the regular education environment is
justified." Indeed, the report concludes: "Reviews of some individual student records in these
[25] states also revealed a substantial lack of evidence that LRE is even considered before a
place ment is made. On the contrary, some placements seem to be made on the basis of the
handicapping condition or for administrative convenience" (Tenth Annual Report, 1988, p. 178).

The separation of special education and regular education students is not the only problem. It is,
however, a factor in reducing the likelihood of students being decertified and returned to general
education. While never used in the law, the term "mainstreaming" refers to opportunities for
students labelled as handicapped and placed in special education settings to spend part of their
time in general education classes. A unique analysis of "mainstreaming" in the Pittsburgh
schools gives dramatic evidence of its limitations.

The district classifies approximately 6 percent of its students as mildly to moderately disabled,
with services provided in 38 of the district's 56 elementary schools. Based on their academic
schedules, "the percent of [special] students assigned to regular classes ranged from 3 to 7
percent. This means that over 90 percent of the mildly handicapped elementary students ... were
never assigned to regular education academic classes" (emphasis in the original; Sansone &
Zigmond, 1986, p. 455). Participation is limited in three ways: scheduling students for fewer
than the full number of periods in the week, having students attend several different general
education classes for the same subject, and assigning students to inappropriate (by age or level)
general education classes. Less than 10 percent of mildly handicapped students were
mainstreamed and of this small number, less than half were mainstreamed on a full basis
(Sansone & Zigmond, 1986, p. 456). Given such program limitations, it is no surprise that only
1.4 percent of the students return to general education (Special Education, 1986, Table 13).

National data are not collected on decertification, and the large city data (referred to above) has
the flaws of being based upon self-reports, a lack of common definitions, and at least for some
cities overstates the actual situation. The extent of "mainstreaming" is a topic of increasing
attention, both in response to the implementation of the Department of Education's "Regular
Education Initiative" (discussed below) and in individual court cases. For example, the decision
of a hearing officer in Minnesota that severely handicapped children be placed in an integrated
setting, based upon evidence that such placements have been successful in other states, is the
subject of challenge by the state in a U.S. district court (Hume, 1988a, pp. 3-4).
Program Outcomes

Systematic and comprehensive data on special education program outcomes are scarce. There are no comprehensive national data available on special education students' academic gains, graduation rates, preparation for post-secondary schooling or work, or involvement in community living. The director of the Office of Special Education, G. Thomas Bellamy (1988), said in a paper on the second decade of FL. 94-142, that improving quality must become the major focus, and that quality is evidenced in outcomes for students. "[I]t is time to focus the primary attention of special education on quality, on what students with disabilities get from school" (Empirical emphasis in the original, p. 2).

The basic premise of special education is that its students will benefit from a unique body of knowledge and smaller classes staffed by specially trained teachers using special materials. But there exists no compelling body of evidence that segregated special education programs offer significant benefits for students. There is, however, a substantial -- and growing -- body of evidence to the opposite effect. Reviews and meta-analyses consistently report little or no benefit for students of all levels of severity placed in special education settings (Carlberg & Kavale, 1980; Cegelka & Tyler, 1970; Epps & Tindall, 1987; Glass, 1983; Kavale & Glass, 1982; Leinhard & Pallay, 1982; Madden & Slavin, 1982, 1983; Semmel, Gottlieb & Robinson, 1979; Strain & Kerr, 1981; Ysseldyke, 1987). And a response to those who challenge present special education practices offers little to defend them (Kauffman, Lloyd, & McKinney, 1988).

A review of programs for academically handicapped students found no consistent benefits of full-time special education programs. Rather, it determined that full- or part-time regular class placements contribute more to students' achievement, self-esteem, behavior, and emotional adjustment (Madden & Slavin, 1982). One study found that 40 to 50 percent of students labelled as Learning Disabled did not realize the expected benefits from special education (Bloomer, et al., 1982).

In 50 recent studies comparing the academic performance of mainstreamed and segregated students with mild handicapping conditions, the mean academic performance of the integrated group was in the 80th percentile, while the segregated students scored in the 50th percentile (Weiner, 1985, p. 42). Reporting on 1986-87 data, the Department of Education estimates that the dropout rate among students in special education is at least 10 percent greater than for students not labelled as handicapped. Among students labelled as handicapped over age 16, 26 percent of those who left school dropped out, compared to between 16 and 18 percent among the general education student population. The real drop-out rate may be higher; an additional 11.5 percent of these students labelled as handicapped left school for "unspecified reasons." Interestingly, the highest drop-out rate was among the students in the least impaired category, Learning Disabled: the rate was an astonishing 47 percent of all those over age 16 (Tenth Annual Report, 1988, Table 18).

A recent study rejects the prevalent "pull-out" strategy as ineffective, and concludes: "This split-scheduling approach ... is neither administratively nor instructionally supportable when
measured against legal requirements, effective schools research or fiscal considerations" (Hagerty & Abramson, 1987, p. 316).

A review of the literature on effective instruction strongly indicates that the general practice of special education runs counter to the basic effectiveness tenets in teaching behaviors, organizing instruction and instructional support (Bickel & Bickel, 1986). Another study points out:

[T]here appear to be at least three discrepancies between the suggestions for best practice and the observation of actual teaching practice for mildly handicapped students: (a) there is almost no instruction presented to these students that might be classified as involving high level cognitive skills, (b) there is a small amount of time spent in activities that could be considered direct instruction with active learner response and teacher feedback, and (c) students receive a low frequency of contingent teacher attention (Morsink, et al., 1986, p. 38).

While many of these shortcomings are true as well in general education classes, the absence of the desired practices holds even more consequences for students labelled as handicapped.

In sum, there is little in the current design of special education that makes a difference for these students -- either, while they are in school or after they exit.

**Intermediate Strategies**

Special education has developed an elaborate system to assess and classify students to place them in appropriate programs, broadly organized in a bimodal design of special and general education systems. Within this basic dual system approach, there have been various efforts to bridge the gap between the two. As we consider a set of intermediate steps to bridge the gap, three criteria must be used: programs must improve the quality of education; they must be consistent with the broad vision described in the following section; and they must be able to be implemented within the context of current federal law.

**Strengthening the Holding Power of General Education**

One set of activities can be described as strengthening the holding power of the general education system including the development of pre-referral alternatives, and assisting general education teachers strengthen and expand their skills. The most prominent is the "consulting teacher" model (Huefner, 1988). Discussed prior to the passage of P.L. 94-142, it has gained increased attention in the past several years; most notably in a special issue of *Teacher Education and Special Education* (Blankenship & Jordan, 1985) and in the report of the National Task Force on School Consultation (Idol, 1986). This model is being used statewide in Idaho, Massachusetts, and Vermont, as well as in districts in many other states.

The "ultimate goal of the consulting teacher model is to enable the regular education teacher to successfully instruct children with special needs" (Huefner, 1988, p. 404). Advocates of this approach claim many potential benefits, including "decreasing special education enrollment, allowing more handicapped learners to compete in the mainstream, perhaps reducing special education costs...", lessening stigma, producing greater understanding across disciplines,
providing on-the-job training in special education skills for regular educators, reducing
mislabelling of students and offering "spillover" benefits to regular students (Huefner, 1988, p.
405, f.). Helping regular education teachers enhance their ability to educate students in a
mainstream setting is a necessary part of the larger reforms discussed in the following section as
well as an activity that can benefit the diverse needs of students in general education.

Pre-referral activities go beyond the consulting teacher role. The Pre-Referral Guidelines (1988),
developed by the Minnesota Department of Education, expresses several broad principles,
including:

- policies to support building level procedures that foster collegiality and
  cooperative planning, interaction and involvement with parents at the
  initial contact and on an ongoing basis and cooperation with other
  child service agencies;

- teachers knowing their students as individuals;

- teachers having a broad repertoire of skills, strategies and materials to
  meet the individual needs of a wide range of students within the
  classroom. These include changing the classroom environment,
  adapting assignments, modifying materials and teaching methods,
  conferring with student and parents, rearranging student schedules and
  using the resources of other school personnel. More formal models
  recommended include peer tutoring, cooperative learning, teacher
  support systems, teacher assistance teams, community volunteers,
  student support groups and parent involvement activities.

Building on the "rights without labels" concept, the National Association of School Psychologists
has developed a description of new designs being implemented for both referral and instruction
(NASP Directory, 1987). A wide range of school systems are implementing them, including
Arlington Heights, Illinois; Ft. Mitchell, Kentucky; Lansing, Michigan; St. Cloud and
Rosemount, Minnesota; Devils Lake, North Dakota; and Cincinnati, Ohio.

Educating Students Labelled as Handicapped in General Education Classrooms

Adapting the regular education classroom to enable it to be an effective location of services for
students labelled as handicapped is an extension of strengthening the holding power of general
education. While not all such efforts fall under its rubric, the "Regular Education Initiative"
launched by the U.S. Department of Education's Assistant Secretary, Madeleine Will, has been
called the "hottest debate in special education" (Viadero, 1988, p.1). For some it is a "promising
approach" (Wang, 1988), while for others it is a "slippery slope" (Gerber, 1988), "patent medicine"
(Braaten, et al., 1988) or a "false promise" (Kauffman, Lloyd, & McKinney, 1988).

Assistant Secretary Will identified a number of current harmful practices: dual systems,
stigmatization of students and battles between parents and school personnel about placement
decisions (Educating Students with Learning Problems, 1986). Few question the accuracy of this
analysis; the conflict centers on how to change the system. The Office of Special Education and
Rehabilitative Services said the challenge is to "search for ways to serve as many children as
possible in the regular classroom by encouraging special education...to form partnership with regular education” (p. 20). The components include increased instructional time, support systems for teachers, empowerment of principals to control all programs and resources at the building level and new instructional techniques that involve "shared responsibility" between general and special education (pp. 7, ff.). The Department of Education has funded a wide range of projects addressing topics such as the relationship between academic achievement and instructional factors, teacher characteristics and activities, curriculum modifications, restructuring administrative arrangements and new evaluation options.

Another approach proposed by regular education initiative proponents involves a "waiver" of existing federal and state regulations to allow for needed changes (Viadero, 1988, p. 20). A more proactive approach is to emulate the Food and Drug Administration's role whereby the U.S. Department of Education would have a clearly defined obligation and commitment to use its authority (and budget) to promote demonstrably effective approaches to educating mildly handicapped students and to support research dedicated to that same purpose" (Reynolds & Laikin, 1987, p. 348). However accomplished, adapting regular classrooms to serve a broader range of students is a strategy deserving expansion.

Students “At Risk”

At the same time concerns about services for mildly or moderately handicapped students are growing, they are also being expressed about additional "pull-out" programs, such as Chapter 1 and other remedial efforts. In this formulation, the unmet needs of a broader group of students are addressed. A variety of school programs have been created to provide special, compensatory and/or remedial education services for students not well served in the general education system. A careful review of such separate programs finds "that the instructional rationale does not support a continuum of separate systems, and that a unified program would be more instructionally valid. In short, current educational policy conflicts with principles of effective instruction” (Emphasis in the original, Jenkins, Pious, & Peterson, 1988, p. 154).

Some researchers advocate the redesign of both remedial and special education to serve what are viewed as students with common needs (Allington & McGill-Franzen, 1989; Idol, West, & Lloyd, 1988). Other educators have identified specific instructional strategies, such as cooperative learning, for integrating special and remedial services with the regular program.

Moving from classroom practice to system design, the Council of Chief State School Officers has proposed to "guarantee" those students least likely to graduate from school access to quality education programs (Elements, 1987). Unlike previous efforts of the governors (Honetschlager & Cohen, 1988) and the business community (Children in Need, 1987), the "Chiefs" proposal explicitly includes students now labelled as handicapped.

The common denominator of all of these efforts is a recognition that schools are failing to meet the needs of large numbers of students, but yet there are common interventions that can address these needs.
Funding

For the last decade the availability and the nature of funding, not education policy and design, have shaped special education programs. Thus, resources needed to educate students in less restrictive settings are available only at the price of placing students in more restrictive settings. This is true for general and special education, as well as within special education. San Francisco's superintendent of schools has noted that categorical programs reduce the role of the school to that of "employment agencies for education specialists. We keep kids captive many times [in categorical programs] because that's the only way a school has to generate money" (Snider, 1988a, p. 20).

The appropriate policy objective is straightforward: funds must be available to meet student needs, but not as a function of either categorical labels or the location of services provided. It should not be necessary for a school system to waste funds and staff time evaluating and certifying students as handicapped to obtain the state funds necessary to educate the students in a full-time mainstream setting. While no legislation -- P.L. 94-142 or any other law -- precludes states or school systems from strengthening their general education programs to enable them more successfully to serve a wider range of students, services continue to be yoked to labels and placement.

This yoking of services to placement is not required by P.L. 94-142; in fact the law was intended to encourage the opposite of current practices. Changes in funding patterns and designs can be effected at the state level by P.L. 94-142 state plans, state education department regulations, through general funding formulas set by the state department, the legislature or budget agency and by local school district policies. Changes are required at two levels. First, all of a district's students must be educated within district schools, and, second, all students within those schools must be educated in integrated settings. An example of the first change is Vermont's "homecoming" policy that returns students from both special education schools and intermediate units. Ten years ago Pennsylvania's current Secretary of Education, Thomas K. Gilhool, pointed out that if it can be shown that one student with a particular set of needs can be educated in a regular school setting, then there is no reason that all students with such needs cannot be educated in such a setting (Gilhool, 1976). More recently, Taylor (1988) argued that any service that could be provided in a segregated setting could be provided in an integrated setting.

Gilhool's "developmental twin" argument applies equally to the setting within the school. Indeed, funding restrictions should not impede such efforts. Several changes would be helpful, including expanding the "regular education initiative" call to give the building leader control of all resources available to the school, regardless of the funding source -- in effect, to allow co-mingling of funds. "Waivers" of current limitations and "hold harmless" procedures should be implemented to encourage districts to use all available resources to promote quality integrated education for all students without risking loss of state (or federal) reimbursement. Traditionally, the Elementary and Secondary Education Act (ESEA) and the Education for All Handicapped Children Act (P.L.94-142, EHA) have supported programs that operate separately, but the Hawkins-Stafford Elementary and Secondary School Improvement Amendments of 1988 offer
significant new opportunities for all students failed by current education practices. These include the concentration grants that provide additional resources to school districts with especially high concentrations or proportions of students in poverty; innovation projects that provide districts with more flexibility to adapt programs to local needs; schoolwide projects that allow districts to implement comprehensive building projects; school improvement sections that provide technical assistance to meet schoolwide needs; and emphasis upon coordination of regular education programs and services with compensatory education activities.

While these changes offer opportunities to students with mild to moderate handicaps, a little noticed provision in the catastrophic health care law passed in 1988 promises substantial resources to assist students with health-related needs. The new law overturns the Health Care Financing Administration's policy against reimbursement of health-related services prescribed in Individualized Educational Programs (IEPs). Medicaid will now pay for speech pathology and audiology, psychological services, physical and occupational therapy, medical counseling and diagnostic or evaluative services (Hume, 1988f, pp. 1).

State-Level Activities

P.L. 94-142 gives a special role to the state education agencies, placing the responsibility for its implementation with the individual state departments of education according to a department-developed state plan. Funding to local districts also passes through the department. The range of a state education department's activities can be seen by looking at those in Ohio. In 1983 the Ohio Department of Education developed a set of five goals (Initiative, 1983) in response to an impact study:

- Increase “vocational and career education services for handicapped children by refining the coordination between special and vocational education.
- Improve the effectiveness of regular education personnel serving handicapped children by providing systematic educational opportunities at the pre- and in-service levels.
- Enhance parents' and special education personnel's understanding and delivery of educational programs and related services for severely handicapped students.
- Strengthen the parent-educator partnership in IEP development through inservice training.
- Improve instruction for handicapped children.

While state-level initiatives continue, a new state-level activity in Ohio offers special promise. Called the “Special Education Futures Forum”, the project brings together some 30 education leaders, school administrators, education organization leaders, union leaders and parents to develop a plan for the future of special education in the state. The “Futures” project recognizes that the changes needed to educate students now labelled as handicapped cannot be achieved within special education alone.
A Vision of the Future

There is mounting concern about the future of education. The basic issue is how to create and sustain effective programs for all students, including those now labelled as handicapped. While educators strive to improve particular practices -- school organization, assessment, teacher roles and curriculum -- increasingly the issue has come to be seen in a larger frame; it is time, in Kuhn's (1962) formulation, of paradigm shift. A recent report by the Office of Technology Assessment (Technology and the American Economic Transformation, 1988) offers a stark assessment of the alternatives facing American public education:

The system could change in a way that makes learning more productive and fun while allowing teachers more time to spend with individuals as coaches or tutors. It could put more power in the hands of the learner, tailor instruction to each person's level of understanding and learning speed and technique, and make it easier for an individual to learn when instruction is most needed.

Or, the system could create rigid centralization of course design, mechanical and impersonal instruction, national regulations, and a contraction of choice for both students and instructors (p. 48).

While the needed reforms affect the education of all children, particular attention must be called to the needs of students in separate and segregated programs (e.g. special education, remedial programs and bilingual education). Within each of these groups, there are high drop-out rates, low graduation rates, limited learning for those who do complete school, and poor preparation for subsequent education and/or employment.

Educational restructuring must begin with new concepts concerning: the way children are viewed; how they are valued; and what is expected of them. While the current literature on school effectiveness adopts Edmonds' (1979) findings about the importance of high expectations for all students, too often public policies and human services practices (particularly education) incorporate "disabling images" (Gartner & Joe, 1987). Educational initiatives must incorporate the belief that all children -- including those with impairments -- can learn, that their learning is important and that their achievement is the school's responsibility.

New Conceptualizations

To achieve these ends, reform is needed in seven broad areas that follow:

The Individual, His or Her Impairment and the Resulting Handicap

The current practice, reflecting the medical model and its use of categorical descriptions, equates the child with the impairment, failing to see that the handicap comes not from the impairment alone but from the societal response to it. Handicap is a social construct, created by the built and attitudinal environment. Special education practice still addresses only the impairment; it teaches those who are mobility impaired, for example, to maneuver a wheelchair but never how to advocate for accessible public transportation.
Any new approaches will require a better understanding of the relationship between impairment and handicap. The student must be prepared to overcome or cope with the impairment and become an advocate for needed services.

*The Nature of Intelligence*

Testing and evaluation is a major activity in special education. The current practice construes intelligence as uni-dimensional, e.g., cognitive knowledge as measured by an I.Q. test; fixed once and for all, and fully known. Educators need to recognize that there are various types of intelligences (Gardner, 1983) subject to change over dimensions and time. Until the barriers of inaccessibility are removed it will never be known the extent to which the limits measured by current intelligence tests are a function of those instruments and/or environments or "true" or "real" limits.

Change will require greater openness as to the range, extent and ability of intelligence. New program design must reflect such understanding and the consequence of multiple intelligences (See Goldman and Gardner, 1989).

*The Location of the Problem*

The current practice of special education operates on a deficit model; that is, it identifies something as wrong or missing in the student. When a student has a learning or behavior deficit, the current model leans toward finding cause in terms of an impairment.

The new concept will frame the student's "problem" in a different context, seeing it as the result of a mismatch between learning needs and the instructional or management systems. Therefore, the child will be viewed not as a disabled person but as a learner whose potential is being thwarted by an educational mismatch.

*The Individual as Learner*

The current practice of education views students as recipients, and instruction as given or delivered to students. The new conceptualization will recognize the need for the active participation of students in learning. While the adult may teach, the student must be engaged in the learning process -- to be a worker in his or her own education (Gartner & Riessman, 1974). The student must be engaged, interested and respected.

The new conceptualization will see the student as able to participate both in his or her own learning but also to join with others in mutual learning, in programs such as cooperative learning (Slavin, 1986, 1987) and learning through teaching programs. Such instructional strategies are not only expressions of a different role for students, they also are a means toward integrating students with a wide range of abilities and needs.
The Place of Learning and the Level of Services

Currently special education is organized as follows:

<table>
<thead>
<tr>
<th>Degree of Impairment</th>
<th>Intensity of Service</th>
<th>Location of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild or Moderate</td>
<td>Low</td>
<td>In or near the mainstream</td>
</tr>
<tr>
<td>Profound or Severe</td>
<td>High</td>
<td>Separate or distant from the mainstream</td>
</tr>
</tbody>
</table>

This is, in effect, the cascade (Deno, 1970) or continuum of services (Reynolds, 1962). As Taylor (1988) urges, a different formulation starts with the commitment to all students being educated in an integrated setting with varied levels of services. Thus, a new educational model is:

<table>
<thead>
<tr>
<th>Degree of Impairment</th>
<th>Intensity of Service</th>
<th>Location of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild or Moderate</td>
<td>Low</td>
<td>Fully integrated</td>
</tr>
<tr>
<td>Profound or Severe</td>
<td>High</td>
<td>Fully integrated</td>
</tr>
</tbody>
</table>

Placement in an integrated setting will be seen as the most appropriate location for the social and academic growth and development necessary for all children. Special education services, in a refashioned mainstream, will vary based on what is required to meet the individual student's needs.

Parental Roles

Parents are yet to be involved to the full extent envisioned by the law. In practice, Individualized Education Plans (IEPs) reflect limited parental input, often with only a "sign off" (Ninth Annual Report, 1987). Actual contact between school and parents is limited (Meyers & Blacher, 1987) and the emphasis is on procedural obligations rather than on substantive involvement (Lipsky, 1989). In part, this is due to the general school culture that presents a cool, if not hostile, face to parental involvement. And in special education, parents are seen as part of the problem (Lipsky, 1985). One remedy to low parental participation is often counselling -- to help the parents overcome guilt, shame or chronic sadness, and training of them to become, in effect, semi-professionals.

The new vision of parental involvement is one of partnership. Parents will not be viewed as persons themselves who are disabled, and therefore requiring their own professional help, but rather as possessing valuable knowledge and legitimate interests.
Relationship to Broad School Reform Efforts

The current practice of special education is largely separate from general education and is a function of the extrusion of students labeled as handicapped by general education (Lipsky & Gartner, 1987). This practice continues in the day-to-day life of the school (Allington & Johnston, 1986; Allington & McGill-Franzen, 1989; Jenkins, Pious, & Peterson, 1988). Special education has been ignored in the school reform movement. Special educators decry the abandonments, but still keep their distance because they believe general educators are not open to closer relationships.

New efforts will recognize that the issues facing special education cannot be addressed, no less solved, in isolation from broader school reform. Failure to insist that the school reform movement encompass the needs of all students will leave special education further apart, permanently consigned to a separate and second-class status.

Implications for School Improvement

As one leader of the school effectiveness movement states: "It seems clear from the available research and related documentation that the mission of special education programs may not be that of teaching for learning, as is generally the case for 'regular' education" (Lezotte, 1988, p. 2). It is not only practices, but the paradigm that undergirds the current organization and conduct of special education, that is defective:

[It] operates to identify among persons with disabilities areas of deficits and 'deviancies,' as determined by the consensus of those persons who assume responsibility (and control) over their behavior, and buttressed by an array of diagnostic instruments and surveys that depict either expected 'normal' development or assumed community standards for behavior and conduct. The assumption is, of course, that once having identified the problems associated with the disability, the environment can be arranged, controlled, or otherwise manipulated to bring about the desired change in the student. This orientation, variously referred to as 'prescriptive-teaching,' 'remedial,' 'let's fix it,' and so on always carried with it the (at least) implicit assumption that persons with disabilities are somehow less than normal or, at its worst, 'deviant' (Guess & Thompson, 1989).

Skrnic (1986) argues that these assumptions are challenged by different understandings of disability, ones that are less rooted in biology and psychology. Rather, they "derive more from sociological, political, and cultural theories of deviance, and... provide many different perspectives on virtually every aspect of special education and 'disability' ..." (Skrnic, 1986, p.6).

Heshusius (1988) contends that the "reductionist thought" characterizing current education practices is "mirrored in behavioral objectives that reduce complex human processes to only the most obvious and observable behaviors" (p. 62). Including the insights of artists and humanists, he proposes, allows us to "restore the importance of recognizing and justifying appropriate values as a way of knowing" (p. 62). This approach will result in a fuller understanding of the range of humanity and human relationships.
Skrtic (1987) also argues that "current school organization creates -- and can do nothing but create -- students with mild disabilities as artifacts of the system, and, furthermore, [current] efforts to reform the system -- without replacing it with an entirely different configuration -- do little to eliminate mild disabilities or their effects, produce even more students with mild disabilities, and create a new and largely hidden class of student casualties" (Skrtic, 1987, p. 3).

While much of the criticism of the current organization of special education comes from actual practice, increasingly there are more fundamental challenges to its basic conceptualization (Berres & Knoblock, 1987; Biklen, 1985, 1987; Biklen, et al., 1987; Bogdan & Kugelmass, 1984; Gartner & Lipsky, 1987; Lipsky & Gartner, 1987, 1989; Stainback & Stainback, 1984; Skrtic, 1986, 1987). Some formulations focus on the nature of students, while others question basic special education concepts.

Stainback and Stainback (1984) emphasize the shared characteristics of students. They contend there are not two distinct groups of students -- regular or normal students, and others who deviate from the norm -- but that all students vary across a range of physical, intellectual, psychological and social characteristics. They believe that it is not only special education students who benefit from (or indeed need) individualized services; rather all students need such services and can benefit from them.

Redesign efforts are taking several different forms. Some are being put forward by state education departments (Delaware, Iowa, Pennsylvania, Vermont, Washington); others by individual school systems; and still others by foundations. In Minneapolis, for example, the General Mills Foundation is supporting a plan to establish an academy that will eliminate "pull-out" programs by serving a cross-section of the city's pupils, K-6 (Gold, 1988). The Annie E. Casey Foundation's "New Futures" program is supporting efforts of fundamental redesign of education in five U.S. cities for those students traditionally served in "pull-out" programs (Joe & Nelson, 1989).

There is an alternative to separate systems -- a merged or unitary system. The unitary system requires a fundamental change in how differences among people are perceived, how schools are organized and how the purpose of that education is viewed. It rejects the bimodal division of handicapped and non-handicapped students, and recognizes individual differences and complexities. Moreover, it rejects a medical or deviant-y model, as well as the concept that the problem lies in the individual and the resolution can be found in one or another treatment modality. The unitary system requires adaptations in society and in education, not just the individual.

A merged system is characterized by effective practices in classrooms and schools for all students. It would replace an education system that now focuses on the limitations of "handicapped" students, a teacher's incapacity to teach because of a lack of special credentials, or instruction determined by categorical labels. Nor would it blame students or family characteristics. Rather, the aim would be effective instruction for all students based on the belief that "substantial student improvements occur when teachers accept the responsibility for the performance of all their students and when they structure their classrooms so that student success
is a primary product of the interaction that takes place there (Algozzine & Maheady, 1985, p. 498) or as Bellamy states: "This belief places special education in the center of school improvement efforts, since it emphasizes the ability of each local school and district to implement current best practices which can allow all students to be served in their home schools" (Bellamy, 1988, p. 3).

Programs of full integration (or nearly so) are being carried out in a few states, such as Delaware, Iowa, Pennsylvania, Vermont and Washington, and in some school districts, such as Johnson City, New York; Montevideo, Minnesota; Glendale, Arizona; and in individual schools in Syracuse, New York and Riverview School District in Pennsylvania.

While there are limits to the evaluation data (for example, random assignments of pupils to control groups would likely violate P.L. 94-142), in each of these programs research indicates that student learning is enhanced. After initial start-up costs, the programs generally operate at costs equal to, or less than, the existing segregated models.

Three characteristics are required to achieve an integrated school: commitment, planning and staff involvement, preparation and training (Knoll & Meyer). The first is the most significant. "What distinguishes the programs [that work] is a strong belief in the value of educating children with severe disabilities alongside typical peers and preparing them to participate fully in community life. Integration works when people are committed to it" (Taylor, 1982, p. 48).

While commitment is essential, in these and other schools it originated from diverse sources -- parents, administrators and teachers. Several recent "bottom-up" innovations launched by school personnel have included students labelled as handicapped. Among these are the Key School in Indianapolis (Fiske, 1988, A16), where teachers are using Gardner's ideas (see Goldman & Gardner, 1989) and at Montlake Elementary School in Seattle, where the principal has structured the school so that there are no "pull-out" programs and as a result has been able to redefine and redeploy staff (Olson, 1988, p22). American Federation of Teachers' President, Albert Shanker has "advocated for more schools which emphasize group learning -- teams of students and teachers working together, developing individualized learning plans and dealing with content in ways students can participate more directly" (Shecky, 1988, p. 22). Regardless of its initial source, the commitment to educate all students in a unitary system must be shared by all the stakeholders.

A common feature of integrated programs is that they do not ignore the individual needs of students, be they labelled as handicapped or not. These programs make use of aides and support staff in the classroom; teamwork between general and special education teachers; consultation and technical assistance to teachers; adaptation of curricula; the use of specific learning strategies such as cooperative learning designs and peer instruction, and outcome-based approaches. By providing for the students' individual needs, a unitary system is not a "dumping" ground; rather, it is a refashioned mainstream.
Central to this new design for students are new rules for teachers. Changes vary from district to district and include:

- delabelling of teachers, that is, eliminating narrow categorical responsibilities in favor of broader responsibilities;
- collaboration and consultation between and among teachers;
- greater teacher control over their own time and variation in the use of students' time;
- greater variety in teacher-student interactions, including whole class instruction, small group work, individual tutoring, managing peer learning groups, monitoring of student self-scheduled activities; and
- broader teacher involvement with other adults, including staff, out-of-school learning resources and parents.

Summarizing the look of a system that educates all of its students together, Stainback, Stainback and Forrest (1989) compare dual with unitary systems:

**TABLE 1**

*Comparison of Dual and Unified Systems*

<table>
<thead>
<tr>
<th>Concern</th>
<th>Dual System</th>
<th>Unified System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student characteristics</td>
<td>Dichotomizes student into special and regular</td>
<td>Recognizes continuum among all students of intellectual, physical, and psychological characteristics</td>
</tr>
<tr>
<td>Individualization</td>
<td>Stresses individualization for students labelled as special</td>
<td>Stresses individualization for all students</td>
</tr>
<tr>
<td>Instructional strategies</td>
<td>Seeks to use special strategies for special students</td>
<td>Selects from range of available strategies according to each students' learning needs</td>
</tr>
<tr>
<td>Type of educational services</td>
<td>Eligibility generally based on category affiliation</td>
<td>Eligibility based on each students' individual learning needs</td>
</tr>
<tr>
<td>Diagnostics</td>
<td>Large expenditures on identification of categorical affiliation</td>
<td>Emphasis on identifying the specific instructional needs of all students</td>
</tr>
</tbody>
</table>
Concern | Dual System | Unitary System
--- | --- | ---
Professional relationships | Establishes artificial barriers among educators that promote competition and alienation | Promotes cooperation through sharing resources, expertise, and advocacy responsibilities
Curriculum | Options available to each student are limited by categorical affiliation | All options available to every student as needed
Focus | Student must fit regular education program or be referred to special | Regular education program is adjusted to meet all students’ needs
The “real” world | Some students educated in an artificial special world | All students educated in mainstream of regular education
Attitude | Some students given an education as a special and charity-like favor | All students given an education as a regular and normal practice

Drawing upon an extensive study of factors affecting student achievement, Brophy (1986) states: “Research has turned up very little evidence suggesting the need for qualitatively different forms of instruction for students who differ in aptitude, achievement level, socio-economic status or learning style.”

***

What is known about the education of students labelled as handicapped? First, separate special education does not work. It does not do so by any measure of assessment -- learning, development of self-esteem and social skills or preparation as student, worker or citizen. Its failure is costly in several currencies -- in dollars, in public confidence and, most importantly, in students’ lives.

But it is recognized that integrated programs work, and that preparation for full lives can only occur in integrated settings. Succinctly, Hilliard says: “There is no special pedagogy for ‘at-risk’ students. The pedagogy that works for them is good for all students. Further, it is due to the fact that appropriate regular pedagogy was not provided to ‘at-risk’ students that they fail to achieve” (Hilliard, p. 4).
Four Themes for School Reform

Undergirding the broad school reform efforts are ongoing debates as to student and system outcomes. As formulated by the National Center on Education and the Economy, these themes involve: a focus on student achievement as the critical outcome; support for site-based decisions to allow for integration of all available resources; new incentives and sanctions tied to improved measurement; and improved productivity.

Student Outcomes

If students with disabilities are "capable of achievement and worthy of respect" (Lipsky & Gartner, 1987), then a new perspective on student outcomes is required. The new outcomes will be measured by student learning, graduation rates, return to general education, preparation for post-secondary education, employment and community living, rather than by the amount of services received. Outcomes-based education provides a perspective on the goal -- student achievement -- and on the "inevitable need for educators to accommodate the differences in learning rates inherent in any group of students" (Spady, 1988, p. 6).

The basic unit for providing of education is the school. If there are choices as to schools students may attend -- an interesting and potentially positive development -- all students (and their parents) must have the information necessary to make a sound choice. The opportunity to attend must not be limited because of their impairment any more than it would be acceptable for it to be limited by race or gender.

Site-Based Decisionmaking

The individual school's leadership must be able to command all available resources. With the goal of outcome-based achievement, the issue should not be the source of the resources, but rather the result of their use. Accountability will require that the school's leadership take responsibility for the learning of all students and to do so they must have control over all available resources.

Incentives, Sanctions and Improved Measurement

Schools that achieve agreed upon outcomes should be rewarded, the leadership of those who do not do so helped and, if their failure continues, replaced. New York State's Commissioner of Education has put forward proposals that students attending schools deemed "educationally unsound" could transfer to other schools in their district at state expense. Above average schools would be rewarded by freeing them from compliance with many state regulations (Jennings, 1988, p. 16). All schools could benefit from being freed from many current state educational department regulations.

While the locus of reform is at the individual school, the district is the (current) unit for determining overall outcomes. Thus "educators must define clear goals and develop procedures by which schools can demonstrate at regular intervals, the effectiveness of their programs... If excellence is to be achieved and public confidence sustained, the local school must be answerable
to the public for the performance of its students" (Teacher Involvement, 1988, p. 2).

Measurement must address the extent to which generally accepted practices are utilized. This includes factors identified in the school effectiveness literature, as well as the implementation of effective instructional strategies. An aspect of this is increased attention to the instructional environment. The Instructional Environment Scale (Ysseldyke & Christensen, 1987) is designed to provide information on the appropriateness of the instructional environment for individual students. This tool could be adapted to assess the school’s overall success in providing environments that enable all students to succeed.

Improved Productivity

The outcomes for individual students must be assessed based upon district-generated achievement outcomes (a criterion-referenced rather than norm-referenced approach). Not only must there be measures of student achievement, educators must conduct their work in a cost-effective manner. Appropriately conducted cost effectiveness studies (Levin, 1988) can be a tool to gain and sustain the public confidence that is the bedrock upon which a public education system ultimately rests.

Although part of a design for high school reform, the recommendations from Theodore Sizer’s Coalition of Essential Schools have important productivity consequences for education in general:

- Do not waste class time on “teaching”. Class time can be better spent with students working collaboratively, sharing knowledge or experience.

- Focus on helping students learn how to learn, not on course “coverage” of material which is soon forgotten.

- Stop thinking about education in terms of “content” and start thinking about it in terms of “intellectual habits” (Wiggins, 1988).

Implicit in each of these recommendations is the role of the student, who is the key to improved productivity in education (Gartner & Riessman, 1974). Not only is the outcome of an education student learning, it is only the student who can do that learning. Teaching is not synonymous with learning; rather, teaching is but one activity that may encourage learning. The student is central to increased educational productivity and the desired outcome -- learning. The resources of the school -- teachers, administrators, educational material, organization and climate -- must be organized to increase the student’s effectiveness as a learner and as a worker in his/her learning. Workers are more productive when they feel respected, understand the relationship of a particular activity to a larger goal, have some control or discretion over the pace and order of the task and work cooperatively while having a sense of individual achievement. These themes are applicable in schools. The high expectations for all students’ academic achievement, for example, is an expression of respect for them. Cooperative learning programs can provide opportunities for collaboration and individual achievement. Peer learning programs allow students to learn both as tutee and tutor. Student involvement in school life and planning encourages a positive climate.
making the school a place of order, safety and cleanliness.

The use of computers has a special place in educating students with disabilities. As the founder of Apple Computer's special education office stated: "The issues, no matter what the disability, are access and expectations" (Brightman, 1988). With speech synthesizers for those who are non-verbal and access to huge data banks for those with learning problems, the computer provides a ramp of access. The achievements that result from effective use of the computer challenge low expectations. The recently enacted Technology-Related Assistance for Individuals with Disabilities Act, if fully funded and well-administered, will offer significant opportunities. Key to its success will be the training of school personnel to incorporate the new technology into students' education.

Conclusion

The present period is one of heightened scrutiny and concern about special education. While not often included in the educational reform debate, the education of students labelled as handicapped is likely to be a major agenda item in the coming years. Several elements should provide the structure for the needed reform.

First, the interests of students labelled as handicapped must be incorporated into the broad debate. The labelling and consequent separation of these students must be ended. More broadly, the premise that the purpose of school reform is to pick and promote "winners" rather than to nurture and educate all students must be challenged.

Second, the quality of education provided to students now in special education programs must be scrutinized with greater care, and the focus of the scrutiny must be on outcomes for students. This must be done despite the fear that the findings will be dismal and may threaten hard-won current programs. Indeed, this is all the more reason to undertake such scrutiny. The scarce resources of public funds and trust and, most importantly, student needs, demand no less.

Third, linking funding and program services to categorization of students serves no educational function. Therefore, the debate needs to be shifted from placement to concern for quality academic and social learning, preparation for work, participation in community life and citizenship. Part of this involves identifying and promoting effective practices. Given the new knowledge being developed, there is little justification for perpetuating ineffective practices, especially those that offer limited opportunities based upon pernicious notions of limited capacity of students labelled as handicapped.

Fourth, given the development of successful unitary models, serious consideration must be given to a new definition of a "free appropriate public education." It is now time to reshape P.L. 94-142 into a "new" vehicle for the future, one that focuses less on procedures and more on outcomes. It must challenge -- and reject -- the dual system approach and mandate a unitary system for all students.
Other fundamental changes are necessary, ones that derive from a paradigm shift. This will required a major review at the federal level (legislatively in the P.L. 94-142 regulations, and at the bases for acceptance of state plans); the state level (in legislation, regulations and funding formulas) and in local practices. In the meantime, however, considerable progress can be achieved within the present law. Within the principles of P.L. 94-142, outlined above, the following changes can be accomplished in the inte-im period.

The Right to Access
To a substantial extent this has been achieved. However, continued vigilance is needed to prevent any slippage and to overcome present failures, e.g. the danger represented by the challenge in Timothy W. v. Rochester School District and the continuing compliance problems in a number of cities.

Vigorous enforcement and monitoring by the federal and state governments is needed, along with strong legislative oversight and militant advocacy on the part of parents and others, particularly including the disability community.

Individualized Services to Alter Automatic Assumptions about Disability
Two pernicious assumptions continue -- that disability is a personal deficit, and that "the disabled" (or categories of persons with disabilities) have common educational needs. Both assumptions are false. Disability is a function of the interrelationship between individual impairment and environment, and the learning needs of students are individual, not categorical. The school cannot "fix" the impairment but it can change the environment; it can correct the mismatch between individual student needs and available services. Tools now exist to assess the appropriateness of the instruction, and certain practices are known to be effective; schools must use both.

Schools must focus on outcomes for students as a result of their interventions. To do this they must be held accountable for using "best practices", through monitoring and litigation. (Thomas K. Gilhool, Secretary of Education, Commonwealth of Pennsylvania, argues that PL 94-142 imposes an affirmative legal obligation on schools to use "best practices". See Gilhool, 1989). Assisting schools to do so through dissemination, technical assistance and staff development are key tasks for both the federal government and state education department. Also, there is need to develop the as yet unfulfilled potential of the IEP as a tool for prescribing effective practices and assessing their effect.

Establish the Assumption that Disabled Children Need Not Be Removed from Regular Classes
Neither this assumption nor its translation into practice has been achieved. Three-quarters of the 4.4 million students served under P.L. 94-142 receive less than 20 percent of their education in regular classes. Only in a regular classroom setting can students labelled as handicapped receive the law's mandated "appropriate education", that is, an education judged by outcomes, student learning and development, preparation for full participation in the society.

Federal regulations must make clear that an "appropriate education" is determined by student outcomes, and an "appropriate" placement is a regular setting for all students. The obligation of
the schools to meet the individual student needs requires systemic changes, to provide instructional settings where all students can be served and succeed; in short, establishing a refashioned mainstream. The barriers (programmatic, regulatory, and financial) between general and special education and among various remedial programs established by laws and regulations and district practices must be eliminated. The neighborhood school must be viewed as the appropriate place for all children, and school leadership must have control of all resources in the building and be held accountable for the success of all students. Districts must establish unitary systems through research and dissemination of "best practices," technical assistance and staff development.

**Broaden the Scope of Services**

As schools have met their obligation of access, the scope of services provided has broadened. The earlier struggles concerning related services seem to have abated.

Continued vigilance is needed to provide the full range of needed services with an emphasis on providing them in regular school settings, instead of in separate facilities or intermediate units. Related services should be incorporated into regular classroom practices. Educators must recognize that learning can occur outside classrooms and make greater use of the community and the workplace as learning sites.

**Establish the Process for Determining the Scope of Services and Guidelines for Identification of Disability**

The evaluation, assessment and certification process is flawed. Conceptually it assumes a bimodal division between the handicapped and the non-handicapped, and focuses only on individual deficits. In practice, the process is flawed by the use of inappropriate assessment instruments and procedures and poorly trained personnel resulting in inaccurate identification and classification of students. It fails to effectively involve parents. There is inappropriate use of funding formulas, program and space availability and community pressures all of which result in excessive costs, generally more than a $1,000 per student.

As long as the process of "labelling" continues, changes are required to establish strict federal requirements that only proven valid and reliable assessment instruments be used and that states be required to document this use. Specific attention must be paid to the continuing differential assessment and placement of children of color, as well as on evaluating the educational needs of students. Significant improvement is needed in staff preparation and effective substantive involvement of parents must be strengthened.

The school's obligation to meet the needs of all students must shift from providing a "cascade" of separate programs to refashioning the mainstream school and classroom. This will require changes in federal and state regulations and in local practices. Districts can be assisted through dissemination of "best practices", technical assistance and staff development.

**State and Local Responsibility and Lines of Responsibility**

Substantial success has been achieved in establishing the responsibility of the state education department and clarifying local district roles. However, the role of intermediate units is a
growing problem as is the failure of the federal government to meet its funding and monitoring obligation.

The continuation of intermediate units flies in the face of serving all students in home districts, no less home schools. There is no legitimate justification for them to continue as units of basic service. The Vermont "homecoming" program demonstrates that even in a rural state this segregation can be eliminated.

The federal funding shortfall -- now at about 8 percent instead of the law's specified 40 percent -- should be addressed. The federal government must meet its obligation or remove the pretense. Enhanced resources and muscle are needed for monitoring along with continuing legislative oversight.

Move Beyond Staffing and Training of Personnel

The major piece of unfinished business is the continuing division between general and special education, in school organization, practices, staffing, funding and training.

While many of these suggestions address aspects of this separation, its elimination will come incrementally. However, an end to the division must become a major goal in itself to insure the establishment of schools that serve all students and produce the desired outcomes in learning, development and preparation for full participation in society. To do so, four principles must be honored: the improvement of one group of students' education must not be at the expense of any other groups; teachers and other school personnel must not be asked to do work for which they are not properly prepared; limits must not be placed on parental involvement and due process rights must be honored; and these changes must be carried out without additional aggregate costs until results can be demonstrated.

A marriage of the obligations per P.L. 94-142 and individual state constitutional or statutory requirements suggest that a case can be made now for such an outcome-based obligation. If that is not true, then such an obligation, perhaps in the Effective Schools Act of 1990, must be established.

Speaking of the turmoil created in a school characterized by "the wrongs of racial discrimination and segregation and the treatment of the handicapped" and its efforts to reform, Albert Shanker (1988) points out that "a school is... a moral community...[which cannot] be 'good' for only a small, privileged handful at the expense of discriminating against or excluding many others" (p. E7).

A community, indeed a "moral community," is the result of human choice. Persons with disabilities can be full participants in a community as friends, neighbors, workers, citizens and family members.

What can be done to shape an educational system that includes all students, one that is both
consonant with and builds an inclusive society? Clearly, it is not done by taking students from the regular education setting, labelling them as "deficient" and placing them in a separate, second-class program. Rather than special programs -- where goals have been dropped altogether, we can develop school organizations and adapt "instruction to individual differences to maximize common goal attainment ..." (Snow, 1984, p. 13).

At least four inter-related factors can affect achievement of this goal: broad social and economic factors, the disability rights struggle, parents' involvement and the school reform movement.

- The American economy needs a well-educated workforce, and the demographics of the future make clear that this cannot be achieved if we continue to discard large portions of our people.

- Persons with disabilities are increasingly asserting their rights to full places in the society.

- Growing numbers of advocates and parents with children labelled as handicapped are recognizing that the P.L. 94-142 achievement of access to a separate system is not an adequate preparation for a full life.

- The most recent school reform efforts are now concerned with the full range of students and have demonstrated the capacity effectively to educate all students together.

The ultimate rationale for quality education in an integrated setting is based not just on economics, law or pedagogy, but on values. What values do we honor? What kind of people are we? What kind of society do we wish to build for ourselves and for all of our children? The current failure to provide quality education to all students and the perpetuation of segregated settings is not only morally unsound and educationally unnecessary, but says much about the answers to these questions. We can do things differently, in Ron Edmonds (1979) words, depending "on how we feel about the fact that we haven't done it so far" (p. 29).
Bibliography


Harper & Row.


and worthy of respect: Education for the handicapped as if they were full-fledged human beings. *Exceptional Children*, 54 (1), 69-74.


Viadero, D. (1988a). Researchers' critique escalates the debate over "Regular Education" for all
students. *Education Week*, 1, 20.


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