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Clearing the Road to Success for Students with Special Needs

If all students are truly to be served appropriately, special education programs and policies must be redesigned.

The Research reportea herein was supported by the Learning Research and Development Center, which is supported in part by the National Institute of Education, the National Follow Through Program, and the Office of Special Education Programs of the U.S. Department of Education. The opinions expressed herein do not necessarily reflect the positions or policies of these agencies, and no official endorsemen. should be inferred.

In 1983, a program that had achieved remarkable results with regular *and* special education students was nevertheless discontinued by the New York City Board of Education. The Board's action was understandable because it was in response to state policies which, though well-intended, were overly rigid in their effects. In the case of New York, change is already underway. However, the incident illustrates the need for other districts and states to review their policies and procedures to ensure that administrative arrangements are consistent with the goal of increasing schools' capabilities to provide appropriately for academically at-risk students.

The Adaptive Learning Environments Model

During the 1982–83 school year, through the initiative of the Chancellor of the New York City Schools and the superintendents of three community school districts and their administrative and instructional staff, the Adaptive Learning Environments Model (ALEM) was implemented in 26 mainstreaming classes in five New York City public schools. The model's goal was to provide instruction that meets the academic and social needs of most, if not all, students in regular class settings. ALEM classes ranged in size from

What is ALEM?

ALEM is the product of over a decade of development and field-testing by the Learning Research and Development Center of the University of Pittsburgh. It has been implemented in a variety of school settings as a core program for general education, as well as for compensatory education (Follow Through and Chapter I) programs and mainstreaming programs for exceptional students.

The model is designed to create school learning environments in which all students can learn basic academic skills and increase their confidence in their ability to learn and cope with the social and intellectual demands of schooling. The curriculum combines direct instruction, which has been proven effective in fostering students' mastrery of basic skills (BLoom, 1976; Glaser, 1977; Rosenshine, 1979), with aspects of informal or open education that generate attitudes and processes of inquiry, self-responsibility, and social cooperation (Johnson and others, 1981; Marshall, 1981).

The Adaptive Learning Environments Model has five major components:

1. A basic skills curriculum component consisting of highly structured and hierarchically organized prescriptive learning activities, as well as a wide variety of more open-ended exploratory learning activities aimed at increasing schools' capabilities to accommodate individual students' learning needs and interests.
2. An instructional/learning management system designed to maximize the use of available classroom and school resources (such as curricular materials and students' and teachers' time).
3. A family involvement component aimed at optimizing student learning through increased communication and the integration of school and home learning experiences.
4. A flexible grouping and instructional team system designed to increase the use of teacher and student talents, time, and educational resources.
5. A data-based staff development program providing written plans and procedures for increasing the capabilities of staff members to initiate and monitor implementation of the model in their school.

When the model is implemented, these components promote a unique classroom learning environment for students. Physically, the ALEM classroom is organized to facilitate movement and simultaneous activities. Students work in small and large groups and alone while teachers circulate among them, providing individual feedback and tutoring, and organizing and providing instruction to small groups of students or the entire class. Instruction is individually planned, and each student is expected to progress through the curriculum at his or her own pace. Learning tasks are broken down into small steps, affording frequent opportunities for evaluation. Thus, small successes are easily recognized and acknowledged, and momentary difficulties can be pinpointed and addressed before they become learning problems. When a learning problem does occur, it is viewed not as a failure on the part of the student, but as a signal to the teacher to use an alternative instructional method.

Students in ALEM classes are taught to plan and monitor their own learning, and are held responsible for planning, managing, and completing teacher-prescribed and self-selected learning tasks within time limits jointly decided on with the teacher. Students often collaborate in teaching and testing one another, but all activity is observed closely by teachers, who work alone or in teams to provide the instructional and management assistance students require. Special educators and support personnel are available to help provide diagnostic services, offer the intensive instruction some students require, and consult with general education teachers and parents.

Feasibility and Effects

Results from research examining the program in a variety of school settings show consistent positive trends regarding the feasibility of implementation and the effects of the program on both students' achievement in basic skills and their social behavior and attitudes. Evidence has been provided that supports establishing and maintaining the program in schools with differing demographic characteristics in a variety of geographic locations (Wang and others, 1984). The findings also suggest that, over time, improvement in degree of implementation is possible through a data-based approach to the provision of systematic staff development support (Wang and Gennari, 1983; Wang, Vaughan, and Dytman, 1984). In addition, the data suggest that program implementation leads to concomitant change in classroom processes and student achievement.

Analyses of standardized achievement test results show that students in ALEM classes participating in the National Follow Through Program not only scored above estimated population norms, but also tended to score above national norms (Wang and Walberg, 1983). Positive student achievement and attitudinal outcomes have been found in ALEM classrooms where mildly to moderately handicapped and gifted students are integrated on a full-time basis. Results include increased perceptions of self-competence and peer acceptance, as well as significantly increased decertification rates (Wang and Birch, 1984a, 1984b; Wang, Peverly, and Randolph, 1984). Achievement and attitudinal data show favorable performance by regular students in the mainstreamed classes as well.

HIGHLIGHTS OF RESEARCH ON ADAPTIVE EDUCATION

A quantitative synthesis of a large number of research studies conducted over a ten year period shows that adaptive instruction greatly improves student learning. This finding is remarkably quite consistent despite considerable differences among programs.

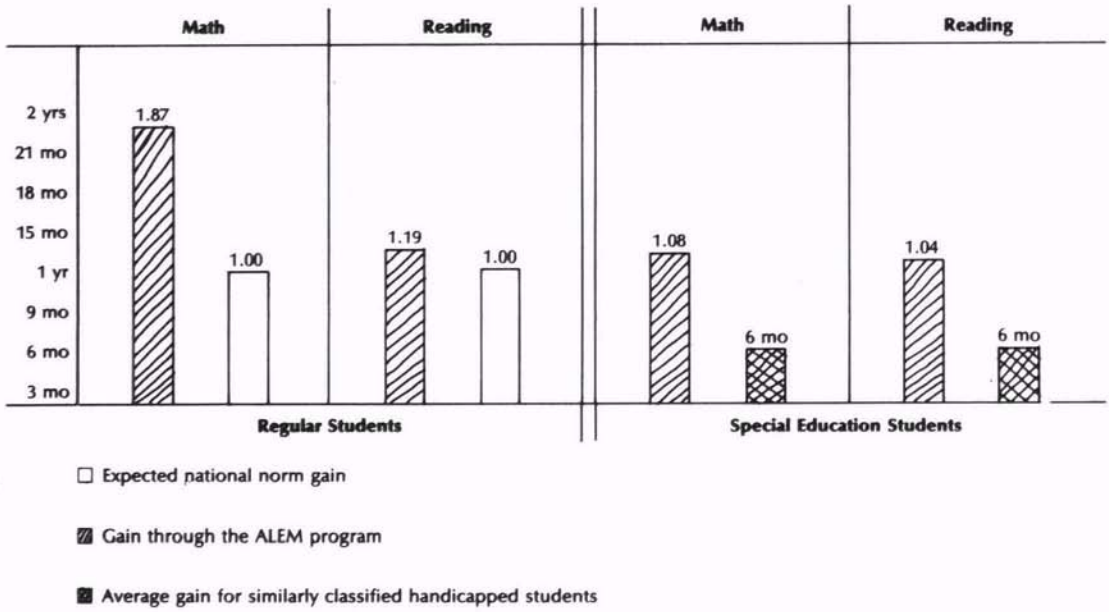
For example, a program was considered "adaptive" if it had at least *one* of the following characteristics:

- Instruction is based on the assessed abilities of each student.
- Students work at their own pace.
- Students receive periodic reports of their mastery.
- Students plan and evaluate their own learning.
- Alternative materials and activities are provided.
- Students have a choice of goals and activities.
- Students help one another to achieve individual and group goals.

None of these variables had an especially strong impact on the association with the positive results. Programs had generally positive results regardless of type of adaptiveness, social context, study characteristics or type of students.

Adaptive programs produced positive results in student achievement, but had even stronger effects on attitudes and behavior.

Figure 1. First-Year Results of the ALEM Program Discontinued in New York City



21 to 31 students, approximately 15 percent of which were officially classified as mildly handicapped (learning disabled, educable mentally retarded, or socially and emotionally disturbed). These students were considered to have moderate to mild learning problems and had been placed in full-time, self-contained special education classes before their assignment to the project. The self-contained classes had generally included ten to 12 students, one special education teacher, and a full- or part-time paraprofessional, depending on how many students in the class were classified as socially and emotionally disturbed.

After the first year of implementation, assessments of the model's effects suggested that it was possible to maintain the program across the five schools, which differed in organization, size, and the demographic characteristics of their students, and that the program led to positive changes in classroom processes and outcomes over time (Wang, Peverly, and Randolph, 1984). Significant gains in reading and math were made by both general education and mainstreamed special education students (see Figure 1). The mean grade-equivalent gains for general education students were 1.87 in math (the expected national norm gain is 1.00) and 1.19 in reading. The mean grade-equivalent gains for the mainstreamed special education students were 1.08 in math and 1.04 in reading. Additional findings included a significant increase in student-teacher interactions for instructional purposes; an essential lack of differences in the classroom behaviors of both general education and mainstreamed special education students; and positive assessments of the program by teachers, administrators, and parents.

The fact that the mainstreamed special education students averaged achievement gains of more than one year in both mathematics and reading is particularly noteworthy. The average gain for similarly classified handicapped students placed in self-contained special education programs has generally been about six months. In addition, at the end of the program's first year, about 30 percent of the mainstreamed special education students were recommended by teachers and principals for decertification (removal of the handicapped classification). The average decertification rate for similarly classified handicapped students enrolled in self-contained classes was less than 3 percent.

The data suggest the high possibility of breaking the cumulative deficit trend of academically at-risk students—an important issue in special education. As noted in a recent report of the New York City Mayor's Commission on Special Education, "the quality and content of instruction for these [special education] children, particularly those in self-contained classrooms ... demands improvement. Without such improvement, children placed in self-contained special education programs will have little hope of ever returning to regular education" (Mayor's Commission on Special Education, 1985, p. vii).

Program Discontinuation

Because of the program's effectiveness, the district superintendents, administrators of the participating schools, and instructional staff members and parents who had been involved with the ALEM strongly recommended its continuation. In addition, other districts in the school system were prepared to participate in the project during its second year. However, the school board decided to discontinue the planned, three-year pilot project at the end of its successful first year. Their decision was based on a state regulation that excludes the full-time mainstreaming of special education students from configurations of special education services eligible for state funding. (Eligible services include related services, transitional support services, resource rooms, special classes, contracts with other public and private in-state or out-of-state schools, and home instruction.) In accordance with this regulation, the state's Department of Special Education ruled that the provision of special education services to special needs students in regular classrooms was not considered special education and therefore could not be supported by special education funds. Rather than forfeit the reimbursements that ordinarily would be made to the participating schools for their special education students, the school board ordered that all special education students who had been mainstreamed in the ALEM classes be returned to the more restrictive self-contained special education classes or to other pull-out or partial mainstreaming alternatives, such as resource rooms.

The Efficacy of Mainstreaming

The ALEM model is but one example of a program that enables schools to promote success for both regular and special needs students in regular classes. Other innovative mainstreaming approaches have been noted in a number of recent reviews of mainstreaming effects (Carlberg and Kavale, 1980; Madden and Slavin, 1982). In addition, a recent quantitative synthesis of 50 empirical studies shows the efficacy of mainstreaming as an approach to serving students with special learning needs (Wang, Anderson, and Bram, 1985). Among the notable findings of this synthesis is the strong impact of mainstreaming on student performance outcomes, such as progress in the curriculum and on achievement tests. The mean performance of mainstreamed handicapped students, was at the 80th percentile of the achievement distribution of the comparison group of non-mainstreamed handicapped students with similar classifications (the mean for the comparison group was at the 50th percentile). In addition, mainstreaming programs with selected adaptive instructional features—such as continuous assessment, individualized progress plans, student self-management, peer assistance, instructional teaming, and consulting teachers—were consistently associated with positive outcomes for handicapped students. Thus, findings from recent research and innovative program development and implementation experiences increasingly support the feasibility and efficacy of integrating special needs students in regular classes.

Education for All

Throughout the history of public education in the U.S., efforts for school reform have stressed the need to provide instruction that leads to educa-

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tional success for all students in regular school environments. Recently, the path to such success has become increasingly tied to improving schools' capabilities to provide effective educational services for academically at-risk students. Key factors in this development have been the public, judicial, and legislative movements that have called attention not only to equal access but also to equal chances for success. The enactment in 1975 of the Education for All Handicapped Children Act (P.L. 94–142) is a prime example. Two of its most important imperatives are that (1) all handicapped children have the right to a free and appropriate (effective) public education, and (2) handicapped children must be socially and educationally integrated, to the maximum extent appropriate, among their nonhandicapped peers in regular classroom environments.

These imperatives have had pervasive and profound implications for educational reform by providing the impetus for examining the merits of—and the empirical, moral, and legal grounds for—serving special needs students in segregated educational settings. As a result, researchers and practitioners alike are increasingly calling for the delivery of compensatory and special educational services in regular classes (National School Publication Relations Association, 1981; Reynolds and Birch, 1982; Reynolds and Wang, 1983; Rothrock, 1982; Will, 1984).

Underlying these developments has been the observation, made in a variety of school settings, that reliance on separate school improvement programs often leads to piecemeal remediation in segregated environments. While pull-out programs may be helpful for certain students (such as the severely handicapped), such programs are more likely to have negative results, including discontinuities and interruption of the instructional/learning process for teachers and students, loss of district leadership control over specialized programs, and the fostering of narrow categorical attitudes and programming (Reynolds and Wang, 1983; Will, 1984).

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Reforming Special Education

Clearly, special education programs need to be reformed—but this reform must be conducted across schools in general, rather than strictly within special education. A Panel of the National Academy of Sciences has suggested that most of the diagnoses performed in special education are essentially unrelated to the treatment (Heller, Holtzman, and Messick, 1982). Furthermore, the monitoring of compliance with special education legal requirements often tends to be more procedural than substantive. Special education is often used to do what regular education leaves undone or remedy what it does poorly. Solving these problems requires a rethinking and restructuring of present special and general educational systems within a framework of broadly based school change.

As noted in an analysis of the current state of practice and continuing problems associated with implementing programs designed to serve at-risk students, the reforms required are quite fundamental (Reynolds and Wang, 1983). However, we doubt that anyone really knows how to design them with precision and credibility. This suggests the need for the development and careful evaluation of various educational models. There must be an open, experimental period during which funding for general, special, and compensatory education can be combined to encourage innovative development aimed at improving educational services in the mainstream and to support a full continuum of services, including supplementary aids and pre-referral services in regular classes. Local school leaders should be encouraged to experiment with and evaluate the effectiveness of educational approaches in achieving more productive learning for all students.

Some steps have already been taken in this direction. For example, the New York City Commission on Special Education has recommended both "that the State fund a pilot program which would provide special education and supplemental services in regular classes for handicapped students who can be served there" (New York City Mayor's Commission on Special Education, 1985, p. 96), and that the state fund a broader continuum of services. In addition, the city has proposed to amend the current state funding formula to permit reimbursement for special education services according to their actual costs rather than pre-determined placement categories (Mayor's Commission on Special Education, 1985). Another example of the positive steps being taken is evident in Minnesota, where the State Board of Education granted a waiver permitting a school district to implement the

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ALEM as an experimental mainstreaming program for full-time integration of special education students in regular classes without all of the constraints usually associated with the categorizing of students and teachers.

These examples are encouraging signs of a continuing movement to strengthen the capabilities of regular schools to deal with diverse student characteristics. Although many people are uncomfortable with approaches that break out of existing categories, others are even more uncomfortable when special educators do not acknowledge the forces that are now distorting special education. Merely rewriting regulations that define learning disabilities or opening up dollar flow from special to regular education would be unsatisfactory, and it would be both immoral and unprofessional for special educators simply to withdraw to the boundaries of the 19th century when only seriously handicapped students were served.

If reforms occur in even a few places over the next several years, we will be on the right path. Then attention can be given to the widespread implementation of the most promising ideas and practices developed at the experimental sites—and to the necessary policy changes. In our second decade of work based on P.L. 94–142, we must join together to bring about the crucial changes that will result in schooling success for all students—including those with special needs.□

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