Trends Shaping the Future of Special Education

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by

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and
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Introduction

Predicting the future is always risky, especially for a field that is changing as rapidly as special education. We have no crystal ball. However, we believe that several major trends in some of today’s special education practices will result in those practices becoming commonplace in the next century.

There are four of these practices: integration and inclusion, collaboration and teaming, acceptance of diversity, and use of advanced technology. Current trends favor these practices, because they are grounded in evolutionary social forces that are likely to persist and to result in lasting changes in school and society.

These general changes in today’s society include: 1) changing demographics related to racial and ethnic groups with implications for educational differences in basic value systems, customs, beliefs, and native language and communication styles; 2) dramatic shifts in the organization of basic social structures, such as the family, the workplace, and the community, that call for modifications in educators’ roles and responsibilities, as well as in school policies and procedures; 3) new demands on schools to develop curricula that teach aca-
demic subjects while developing each student’s skills for successful adult living; 4) rapid developments in computer and telecommunications technologies that are revolutionizing the nature of public education and social discourse; and 5) heightened interest in the moral and ethical dimensions of education and social services that is redefining the rights and duties that membership in the human community confers.

Changes in the way people view individuals with disabilities and their roles in the community have led to a number of fundamental changes in the way schools deliver educational services. Schools now integrate more students with special needs into mainstream elementary and secondary classrooms than ever before. As the service delivery model has changed, so have the roles and responsibilities of teachers and administrators. The majority of states now require all teachers, not just those identified as special educators, to have knowledge and skills for teaching students with special needs in least restrictive environments.

Complementary changes are taking place in curriculum, which now focuses on high achievement and success for all children. This means that curricula and instructional strategies are being modified based on the student’s identified needs, rather than on diagnostic categories. In fact, the reauthorization of the Individuals with Disabilities Education Act (IDEA) suggests that eligibility for special school services be based, first, on service needs, rather than on categorical labels. Thus the movement toward noncategorical and inclusive education is allowing schools to offer special services to any student who may benefit from
them, without the need to attach a stigmatizing and often meaningless disability label.

The effectiveness of special education methodology in promoting learning and achievement among students with a variety of disabilities has been well-established by empirical research and clinical practice. There is a growing recognition by educators that special teaching methods also may benefit more typical learners and can help them develop the critical thinking skills and generalization abilities considered essential to a "good" education. As a result, many activities originally designed for special education (such as learning strategies instruction, cooperative learning groups, functional curriculum models) are now a standard part of the regular classroom.

General and special educators also are being trained and encouraged to collaborate as team members in preventing and solving student problems. And other components of model special education programs are beginning to be duplicated across a wide range of environments, including residential programs, correctional facilities, and school systems in developed and developing countries.

All of these changes have not come smoothly, however. The continuing imbalance between the supply of appropriately trained special educators and the demand for such personnel in the public schools has given impetus to changes in teacher education programs. Certification requirements for special education teachers and related service personnel are complex and differ from state to state, but the recent agreement between the National Council on Accreditation of Teacher Education (NCATE)
and the Council for Exceptional Children (CEC) promises to lead to greater consistency in training programs and teacher certification standards across the country.

In addition, colleges and universities, in collaboration with local, regional, and state education agencies, have designed a variety of innovative, alternative routes to certification that serve to recruit and prepare career changers and other nontraditional students for special education teaching positions.

Special education, long characterized by an over-representation of students from various minority groups, has led the profession in efforts to address issues of diversity and multiculturalism. Demographic studies show that the population is growing ever more diverse because of the constant influx of immigrants from such areas as Latin America and the Pacific Rim. This diversity is being increased by the growth of other minority groups, such as Hispanics and African Americans. Public school systems and teacher education programs are making efforts to recruit and retain teachers, administrators, and other personnel from these populations; however, much remains to be accomplished.

Federal mandates have stimulated schools to implement early intervention programs for infants, toddlers, and preschoolers with developmental delays and disabilities. But schools also are being directed in the Goals 2000 initiatives to offer programs for younger children without developmental delays. By doing both, schools can provide increased opportunities for participation by parents and better ensure school success for all children. This inclusive schools model, long advocated
by special educators, promises to create school communities wherein all children can learn, regardless of disabilities, sociocultural differences, or learning styles.

Emerging technologies also are having a major effect on special education and, indeed, education in general. Today computer-assisted instructional programs facilitate learning; adaptive/assistive/robotic devices accommodate specific disabilities; augmentative and alternative communication systems encourage self-expression and peer interaction; and portable medical technology provides life support and health maintenance that enable severely impaired students to attend school. Voice synthesizers allow people without speech to talk; bionic limbs enable people with physical impairments to walk; mechanical and electronic adaptations allow people with various disabilities to control their environments; and medical advances have saved the lives of children previously doomed to an early death. As these technologies continue to improve, schools will see an increase in the number of students with complex physiological and health care problems; and educators will be called on to design and use ever more sophisticated equipment to meet their needs.

With the preceding as background, our intention in this fastback is to look specifically at several current trends in special education and to relate them to changes in everyday school policies and practices. We hope our reasoned vision of the future will assist educators as they prepare themselves and their schools to serve all of their students and to meet the challenges of the 21st century.
Individualized Instruction

In 1990 Vermont became the first state to legislate Regular Education Initiative (REI) programs by requiring each school district to design and implement a comprehensive system to foster success for all students through general education programs. REI means that each school must make an array of supports available to all students in regular classes. Only a few students with extensive service needs may be referred for special class placements.

California recently issued regulations requiring the immediate integration of all categorical program services (such as special education, bilingual education, migrant education, and Chapter 1 programs), meaning that all such services must be offered in regular classes. Pilot projects fostering collaborative regular and special education team models are being monitored to ensure that all students who need special help receive it.

Virginia and Maryland have just completed a final report of their three-year Community Integration Projects (Freund and Wald 1995). Project evaluations
indicate that general educators' concerns about teaching special students in their classes decreased after training. Students with and without disabilities demonstrated improved adaptive behaviors. And parents were very satisfied with the progress of their children.

In West Virginia the state legislature mandated that each school senate must develop an inclusion plan that includes a mission statement, goals and objectives, work-in-progress summaries, guidelines for staff, guidelines for collaborative planning and instruction, and training for all regular classroom teachers.

REI was proposed by special educators, not regular educators. Today, however, most teachers and administrators recognize the importance of REI, particularly as it relates to the legal and social mandate, "least restrictive environment," which is incorporated in the Individuals with Disabilities Education Act (IDEA), the Vocational Rehabilitation Act (commonly referred to in the context of one part, Section 504), and the Americans with Disabilities Act (ADA). (For more information on these pieces of legislation, see fastback 360 Implementing the Disabilities Acts: Implications for Educators, by Patricia F. First and Joan L. Curcio.)

Some educators have argued that schools will not be able to maintain the quality of existing REI pilot projects if federal and state incentive monies are withdrawn. However, it is becoming clear that special education projects are just one of the forces shaping individualized instruction. As Diane Ferguson points out in a recent Kappan article (1995), schools are becoming more inclusive because of three major directions. First, schools are
becoming structured less according to students' abilities and more according to students' diversities. Second, teachers are shifting from an emphasis on required content to an emphasis on the role of the individual learner in creating knowledge competence and becoming an independent learner. Third, the school's role is changing from providing general educational services to providing individualized support for learning.

Special education, in its broadest sense, may well become the solution to many of our school problems. Data collected during the Ravenswood Project (Lombardi 1994) indicated less truancy, fewer behavior problems, and maintenance of grades for the entire high school population as regular and special education were merged. Cooperative learning, peer tutoring, and individualizing programs in many schools are no longer a special education domain but are available to any student. And, as a complement to this initiative, many students without disabilities are learning to become helping, caring members of a school community.

Another factor behind REI is a concern about the cost of maintaining a dual general/special education program structure. It is not unusual for special education costs to exceed 30% of a school system's budget. In the Boston public schools, for example, average class size could be reduced from 26 to 13 students if categorical dollars earmarked for special education could be directed to the regular-class environment (Odden et al. 1995). The smaller average class size would go a long way toward helping teachers to be able to develop individualized programs for each student.
As America enters the next century, we envision many program and placement choices to meet individual needs. It appears that these choices will not be separated by arbitrary structures. For example, Section 504 of the Rehabilitation Act, which is the responsibility of general education, will likely become a large umbrella for all students who require some form of "extra" assistance to reach their learning potential.

**Early Intervention**

One growing trend is early intervention through prereferral programs for students considered to be at risk. For example, a prereferral program called Success for All in the Baltimore City Schools (Slavin, Karweit, and Madden 1989) found that after the first year of operation, only two students were referred to special education at the Abbottston Elementary School compared to 30 referrals in the previous year. The program also identified effective strategies that general teachers could use with increasingly diverse groups of students.

Another example is the Teachers Assisting Teachers Model (Bay, Bryan, and O’Conner 1994), designed to assist general educators in a Mexican-American community on the south side of Chicago. A number of students were having problems with attention, motivation, language, and achievement. The TAT Model consists of three components: 1) information sharing sessions in which teachers acquire new knowledge and skills for working with students requiring special attention, 2) peer exchange sessions where teachers generate pos-
sible strategies to be used with these students, and 3) peer coaching teams where teachers coach and assist each other.

Following five months of TAT training, teachers achieved a significant decrease in referral rates for special education services. They commented that they were more motivated to explore new and alternate strategies and techniques in their teaching. And they broadened their support base beyond requests for teacher aides, volunteers, and special education consultants.

One concern noted in activating prereferral consultation and collaboration is the time necessary for teachers to meet, to discuss the students, to study new teaching techniques, and to evaluate their own instructional interventions. This is not surprising, and we will revisit this concern throughout this fastback. The need to structure time is perhaps the greatest challenge in meeting the special needs of an increasingly diverse student population.

In the future, educators will likely see an ever-greater emphasis placed on the prevention of learning and behavior problems through prereferral interventions and the immediate provision of support services for children and their families. Schools at all levels will find it necessary to modify their schedules so that more time is available for prereferral teams to meet. Such time modifications might include longer school days, year-round schooling, permanent substitute teachers, and variable scheduling. School-based assessment and intervention teams composed of parents, counselors, social workers, reading specialists, special educators, and classroom teachers will enable the vast majority of stu-
students with special needs to be educated in regular classes. Those students who require a placement other than the regular class will have authentic assessments derived from the prereferral and regular education intervention process.

**Responsible Inclusion**

The term *mainstreaming* became popular after the passage of Public Law 94-142 in 1975. In essence, it meant that students with special needs would be accepted in general education classrooms and settings *provided* that they could demonstrate appropriate behavior and skills. In too many cases, they could not do so. Thus placement in the regular classroom often led to failure.

Like mainstreaming, the term *inclusion* also grew out of the concept of the “least restrictive environment.” Rogers (1993) defines inclusion as “a commitment to educate each child, to the maximum extent appropriate, in the school or classroom he or she would otherwise have attended if he or she did not have a disability.” The term, *responsible inclusion*, coined by Lombardi (1994), emphasizes the importance of both regular and special educators being properly trained for new roles and responsibilities in educating students with special needs in least restrictive environments. Services are to be brought to the student, rather than the student to the service. (See fastback 373 *Responsible Inclusion of Students with Disabilities*, by Thomas P. Lombardi.)

Some REI advocates are proposing that even students with severe and multiple disabilities (such as significant
physical, sensory, and intellectual impairments) can be educated in regular classrooms. Proponents believe that schools best foster education for all students by accommodating genuine diversity through individualization, rather than segregating some students on the basis of presumed similarities among the disabled group that distinguish them from the nondisabled.

It may be that some students with extensive special needs will require service configurations other than the regular classroom. But implementation of the principle of “least restrictive environment” will ensure that even these students will be integrated primarily into regular schools and rarely in need of special day schools, residential centers, or homebound programs. Should a student’s Individual Education Program (IEP) require a special environment, the plan will include a transition component to address the goal of returning the student to a less restrictive environment following any special treatment.

Considerable debate is taking place over the direction of the inclusion movement. Some organizations, educators, and parents fear that students with special needs will not receive appropriate services or needed attention in a regular class or, conversely, that the quality of instruction for the regular students will be compromised because of the attention paid to special needs students.

These fears are well-grounded if responsible inclusion is not practiced. However, responsible inclusion has more to do with acceptance than placement. In the Ravenswood Project (Lombardi 1994), a full year was
spent getting parents, teachers, and students ready for a responsible inclusion program. But in the end, not only did all of the students with special needs prefer regular class placement over their previous special class or resource room assignment, but almost all of the 232 regular students also preferred to have the special needs students in their classrooms. Responsible inclusion has to do with all students perceiving benefits.

The likely result of the inclusion trend will be that students with special needs will be considered for regular class placement before any other placement decisions are made. We believe that the removal of a special needs student from a regular school or class will occur only when the student’s special needs cannot be met in that setting even with the use of supportive services, teaching adaptations, and curriculum modifications.

Noncategorical Program Models

Although categorical programs have been the norm in the past, they are gradually being replaced by noncategorical service delivery models. At the national level, early intervention programs are essentially noncategorical, though federal regulations provide for services to three subgroups of children: those with established conditions, those who are developmentally delayed, and those who are at risk for developmental delays.

At the state level, for example, the Pennsylvania State Department of Education has changed to a noncategorical certificate for special education teachers based on three factors: overlap in categorical programs, generalization of methods and materials across all categories,
and similar activities performed by special education teachers regardless of categorical assignment.

Proponents of noncategorical models argue that placement of students in special classes and resource rooms by disability categories is not a valid indicator of educational needs (Reynolds, Zetlin, and Wang 1993). In addition, categorical placement is expensive and inefficient, because it often results in poor coordination between the various categorical programs. Categorical labels also can cause irreparable harm to students. Labels stereotype behavior, limit potential achievement, and foster negative attitudes toward people with disabilities. Provision of special services should be based on student needs identified through curriculum-based assessment, rather than on categorical labels assigned solely on the basis of diagnostic testing.

Noncategorical models may be conceptually sound; but, as in the case of inclusion, they are not without critics. Parents and professionals assert that many students' special needs would not be recognized without categorical labels. Opponents of the noncategorical approach also express concern that the range of special services and programs may decrease when most students with special needs are educated in regular classes. They argue that collaboration and consultation between general and special education teachers will not be sufficient to accommodate the wide range of individual differences represented by students with learning and behavior problems.

Paradoxically, growing recognition of additional student needs seems to dictate the need for an increase,
rather than a decrease, in special education categories. Children and adolescents who are medically fragile, dependent on technology for life support, disabled as a result of traumatic brain injury, born to mothers who are addicted to crack or cocaine, or are HIV-positive are presenting new challenges for school systems. New labels quickly find new cases, it seems. For example, in just five years the number of students identified as Attention Deficit Hyperactivity Disorder (ADHD) has doubled from 1 million to 2 million.

In a noncategorical model, however, such students are served according to their service needs rather than according to diagnostic labels. A very unique, noncategorical service delivery model has been proposed and researched by Maynard Reynolds and colleagues (1993). Called the 20/20 plan, it is designed to modify the categorical service model. Under this plan, students in the lower 20% and the upper 20% of the learning-progress continuum would have something like an individual education program developed cooperatively by teachers and parents. Students who are in the mid-range between these two extremes but who have special needs — such as students with hearing or vision impairments — also could be nominated for special services. But no student would be labeled or categorized in traditional ways.

In the future, categories probably will continue to be used for research or for administrative communications, but they no longer will drive educational programming in the schools. Most students with special needs who can benefit from the traditional academic
and vocational curricula will not be categorized except in the broadest terms, perhaps according to the type of services they require. They will receive specialized programs, such as remedial instruction, peer tutoring, strategy training, various therapies, behavior management, and counseling based on their individual needs and within the context of their regular classroom placements.
Personnel Preparation

Changing how special education is offered in the nation's schools necessarily demands changing how educators are prepared to teach students with special needs. In response to federal and state inclusion initiatives, we are witnessing the development of new approaches to teacher education for general educators, special educators, and related service personnel. Some changes are modifications in content to incorporate new skills to teach effectively in inclusive settings. Other changes reflect the need to design more flexible delivery systems to accommodate the growing number of nontraditional students who seek to become special education teachers. Still other changes are part of the continuing effort to enhance the status of teaching as a profession.

Collaborative Preparation Models

Mainstreaming special education services and restructuring schools to build more inclusive communities have prompted educators to consider the need for innovative models of teacher education. Traditionally, the preparation of special educators has been separated from that of regular elementary and secondary teachers
and from that of related service personnel from other disciplines. However, a growing number of colleges and universities are experimenting with programs that allow — indeed, encourage — collaborative training efforts across professional disciplines and academic departments.

If inclusive schooling is to be successful, many teacher educators believe that classroom teachers and special education personnel need to be trained together in order to develop the interpersonal social and communication skills for effective collaboration. For example, integrated programs to prepare general and special educators together have been instituted in courses on learning/behavior problems at the University of South Florida, in severe disabilities at Syracuse University, and across all categories at the University of Minnesota.

At West Virginia University, the new five-year teacher education program incorporates strands from technology, multiculturalism, and special education in all core courses required of potential teachers. Not only do such joint training programs foster a better understanding and respect for each educator’s role, but they also facilitate maximum use of faculty expertise in an economically efficient manner.

Cross-disciplinary preparation programs to implement common training opportunities for special education and related services personnel have been advocated to develop skills for transdisciplinary service delivery that is critical in the area of severe/multiple disabilities and early intervention. At the University of Wisconsin-Madison a common core of courses in special education, rehabilitation
counseling, and vocational education allows the cross-disciplinary preparation of personnel to facilitate transition services for youth with disabilities. Interdisciplinary training in early intervention for infants and toddlers is provided at Temple University through joint seminars for students in special education, psychology, speech therapy, and occupational therapy. These programs help students who are studying a specific discipline, such as special education, to understand and appreciate the work of other specialists, such as physical therapists and nutritionists, and to learn strategies for designing integrated instructional activities.

These and similar programs have the potential to evolve into a system in which undergraduate programs will prepare general educators to work directly with students with a broad range of special needs, while graduate-level programs will prepare special education specialists to provide more complex consultative services, such as behavior management, diagnostic assessment, community-based instruction, and transitional program planning.

Innovative Delivery Systems

Critical shortages of special education personnel are the rule in many urban and rural districts (Hebbeler 1994). In response to this supply-demand imbalance, we have witnessed a decade of experimentation in personnel preparation supported by state and federal funds. Most of these innovations have focused on designing alternative delivery systems to meet the needs of students
who are unable to attend traditional campus-based training programs.

Many colleges and universities across the country have modified their teacher education programs in special education to allow delivery through field-based models. At West Virginia University, for example, coursework taught at off-campus centers and practicum experiences supervised in the student's own classroom allow teachers working on emergency permits or out-of-field authorizations to complete special education certification requirements on the job. Some institutions use a combination of off-campus coursework and intensive on-campus summer institutes to train teachers who already are employed.

A more controversial development has been the growth of alternative certification programs that allow prospective teachers to bypass all or part of the traditional teacher education requirements. Although these programs originally were designed to prepare liberal arts graduates to teach in secondary schools, a number of states also have used them to train special educators on the job (Buck, Polloway, and Mortoff-Robb 1995). Collaborative arrangements between institutions of higher education and local education agencies in such states as California and Texas allow alternative certification options so that individuals with a bachelor's degree can become fully certified as a teacher while employed as an intern in the public school. Both Wisconsin and Florida have experimented with systems that allow special education teachers to complete certification competencies through self-study modules. Hawaii and New
Hampshire have created similar statewide systems. Nevertheless, the effectiveness of alternative certification programs in preparing qualified special educators and reducing critical teacher shortages remains to be demonstrated (Sindelar and Marks 1993).

We believe that innovative delivery systems not only are here to stay but likely will become even more prevalent. They may become the predominant model of teacher preparation in special education in the future. The more successful components, such as university-school system collaboration, integration of coursework and field experiences, and mentoring throughout the initial teaching years, have profound implications for teacher education in special education and will affect the shape of such programs in years to come. In addition, we are convinced that alternatives to traditional four-year, on-campus delivery systems are needed to meet the needs of the growing body of nontraditional students, such as career changers and minority group members, who often cannot afford the luxury of attending traditional programs.

**National Standards**

National teacher certification standards have become a focus of concern. At present, each state issues its own set of requirements for a teaching license, the nature and rigor of which vary widely. States also are responsible for college and university teacher education programs, which results in wide discrepancies across programs nationally (Lilly 1992).
The National Council for the Accreditation of Teacher Education (NCATE) has served as the primary national accrediting process for teacher education programs for some years, but some institutions do not submit their programs for review. However, in an effort to support national standards for teacher preparation, a number of states have made state approval of teacher education programs contingent on NCATE accreditation.

In addition, nearly a decade ago, the National Board for Professional Teaching Standards was created to develop an assessment process and performance standards as criteria for the professional certification of all teachers across the country (Carnegie Corporation 1989). Although participation by state education agencies and colleges and universities is purely voluntary at this point, we predict that these processes will become important factors in standardizing both the preparation and certification of education personnel.

As a subspecialty within education, special education also is struggling with the need to develop professional standards for the certification of teachers. Each state issues its own set of requirements for a teaching license. Consequently, there are many ways to conceive of special education certification: categorical, multi-categorical, noncategorical, or even as a simple endorsement to standard teacher licensure. There is so little consistency at present that a fully qualified teacher in one state may be granted only an emergency license in a neighboring state. This situation has led leaders in special education to call for the development of national certification standards in special education to ensure teacher competence and job mobility (Reynolds 1990).
In response to this need, the Council for Exceptional Children (CEC), the oldest and largest of the professional organizations serving special education, began working to develop national standards. NCATE invited CEC to collaborate to define the knowledge base for special educators and to establish criteria for reviewing preparation programs at colleges and universities (CEC 1987). After lengthy deliberation to ensure sufficient input from the field, CEC (1995) issued a set of professional standards for the preparation and certification of special education teachers that outlines a common core of knowledge and skills essential for all special educators, as well as specific competencies for each categorical specialization.

Because the effort to establish national certification standards is part of the growing effort to professionalize education in general, we believe that these CEC standards will enhance the rigor and consistency of training and licensure for special education personnel.
Emerging Technologies

Emerging technologies are changing the way we view people with disabilities, as well as the way we provide them services. Rapid developments in the area of assistive technology have had a profound effect on schooling for students with special needs. Individuals who formerly were unable to communicate even their most basic needs are now able to carry on conversations by using communication devices from simple picture boards or wallets to complex computerized equipment.

Advances in technology clearly are producing major changes in special education. The use of microcomputers, robotics, assistive-adaptive devices, and medical technology are altering both curriculum objectives and instructional methods for students with special needs, as well as the roles and responsibilities of educational personnel. As technologies for training and treatment become even more sophisticated, available, inexpensive, and user-friendly, educators will be making more effective use of the wide range of devices designed to enhance individual development, learning, and independence.
Assistive Technologies

Children whose severe physical disabilities once led to their being considered unteachable now are being helped to respond to instruction and to participate in group activities by means of response systems that rely on basic motions, such as eye gaze or pointing, or by microswitches that operate with the press of a cheek or puff of breath. Students with motor impairments that limit writing and typing soon will have access to voice-activated computer programs that will allow them to dictate written assignments and advance their academic performance.

Children with vision disorders make use of vision aids, such as the Kurzweil, that use computer scanners and voice synthesizers to read aloud a page from any book. Students who display specific learning disabilities can use word-processing software with grammar and spelling checkers to demonstrate their comprehension of key ideas without interference from information-processing problems. And individuals with multiple disabilities are beginning to use robotic and remote-control devices to operate a wide range of equipment in their environments for personal care, environmental control, employment opportunities, and total enhancement of their independence and self-esteem.

Assistive technology, a growing specialization within the field of special education, encourages educators to use both high-tech and low-tech adaptations such as these to level the playing field for individuals with disabilities with respect to academic achievement, personal
accomplishments, social acceptance, and employment opportunities.

By using microcomputers, students can acquire basic knowledge and skills through multiple sensory inputs, express themselves through print or synthetic speech, and control features of their physical environment, such as utilities and appliances. For example, four years ago Rey Crespo of Milwaukee, Wisconsin, was seriously injured in a car accident that left him unable to speak or use his left arm. Using a communication aid (Crestwood 1996), he now can talk and even speaks on a telephone. Being bilingual, he also can use the aid to converse with his parents in Spanish. This small device cost less than $200.

As computers and other electronic devices become easier to use, more portable, and inexpensive to purchase and maintain, we believe that they will facilitate children’s engagement in a wide range of educational and social activities and make participation in inclusive environments a reality instead of a dream.

**Distance Education**

The rapid growth of the “information superhighway” and recognition of its implications for education has led to increased use of telecommunications technologies in special education. Distance education applications now are seen as essential strategies in expanding educational opportunities for individuals with disabilities, for members of minority groups, and for people living in rural communities (Howard et al. 1992). Today, educa-
tors are using audioconferencing, computer networking, and television transmissions to expand the range of services and programs offered to students with special needs, as well as to special education teachers.

Several rural states are experimenting with the use of distance education formats to offer education programs to students in elementary and secondary schools (Ludlow 1995). In one situation, the Hawaii Department of Education has been using interactive television for advanced placement instruction to academically gifted students throughout the islands of the state, some of which are at considerable distance from the main population centers. In another case, six school districts in rural northeastern Utah have collaborated to offer advanced placement courses by means of television and computers. Computer networking also has been used to deliver instruction to culturally different high-risk students in remote areas of Alaska, to teach written language skills to students with hearing impairments and to students with learning disabilities, and to promote an electronic penpal program to improve social skills in students with behavior disorders.

Audioconferencing has long been used by school systems to provide daily instruction and contact with teachers and peers to students with physical disabilities and other health impairments that keep them from attending school on a regular basis. The upgrading of telephone systems in major urban centers now also permits the use of videoconferencing through a computer modem.

Distance education technologies have been used extensively for both preservice personnel preparation and
inservice staff development in special education, again primarily in rural areas (Sebastian 1995). Preservice programs most often are designed to prepare practicing but untrained teachers working with low-incidence rural populations. Program examples include training in severe disabilities (at the University of Utah and the University of Kentucky), early intervention (at Utah State University and West Virginia University), and hearing impairments (at the University of Kansas). A few programs offer generic special education coursework, such as those at the University of California at Chico, the University of Maine, and Bowling Green State University in Ohio.

The majority of these programs rely on some form of television transmission, such as satellite broadcasts, closed-circuit microwave relays, cable television, interactive digital video across telephone lines, or slowscan serial still video images via computer networks. Inservice applications of telecommunications technologies in special education have ranged from national satellite broadcasts of sessions on attention deficit disorders sponsored by the University of Georgia, to workshops on learning strategies offered by the Kentucky Educational Network, to an electronic mail system for informal collaboration by teachers established by the Florida Information Resource Network.

At present, widespread use of distance education formats for school service delivery is complicated by the cost of technology. Many rural areas that need the technology have little access to it. And many educators simply lack general knowledge about distance communication
technologies and do not have the skills needed to use such technologies effectively. But, as telecommunications links become more widely available, easier to use, and less expensive, we are confident that educators will find many distance education applications for students with disabilities.

We see distance education as an essential component of special education in the future, with ever-expanding applications in both service delivery for students and personnel preparation for teachers in the next century. Telecommunications technologies will permit even the most remote school system to offer the highest quality educational programs, will allow school administrators to make effective and efficient assignment of scarce specialists and other resources, and will enable teachers to acquire and develop skills in implementing state-of-the-art practices. Such developments, of course, imply that special educators must be trained in educational applications of technology and provided with sufficient resources to make appropriate use of them.
Policy Development

The history of American education reflects ongoing tension between the quest for educational excellence and the demand for educational equity, a tension that is nowhere more evident than in the recent spate of proposals for education reform. Proponents of general education reform tend to focus on increasing student achievement scores, raising standards for teacher education and licensing, and enhancing the competitive aspects of schooling to ensure that education promotes excellence (Carnegie Forum 1986; Holmes Group 1986; National Commission on Excellence in Education 1983).

On the other hand, proponents of special education reform argue a need for celebrating a broad range of student diversity in inclusive regular classrooms, preparing all educators to work collectively in support of individualized achievement criteria, and enhancing the cooperative aspects of schooling to ensure that education promotes equal opportunity for all (Gartner and Lipsky 1987; Reynolds 1990; Stainback and Stainback 1990).

We believe that current reform efforts in special education will largely continue to parallel — albeit with
somewhat different criteria — the reform efforts in general education. At root, both movements have the goal of restructing the public education system to become more efficient and effective in helping all students learn.

**Education Reform**

In an age when technological advances may eliminate the need for routine work by humans, schools can no longer afford to follow an outdated factory model of education. Site-based management, teacher empowerment, collaborative teaming, and support networks represent efforts to create more flexible organizational structures that can meet the changing needs of an evolving society.

In his newest book, *Disability and Democracy* (1995), Thomas Skrtic suggests that the current system of special education is incompatible with notions of a democratic society and the fundamental beliefs of postmodernity because it promotes neither equity nor excellence. It fails in this measure, Skrtic says, by restricting children with disabilities to limited educational opportunities, a watered-down curriculum, and mostly segregated environments. He argues for restructured, adhocratic schools that celebrate individual and group differences, encourage collaboration by both teachers and students, and develop skills for lifelong learning.

In the December 1995 issue of the *Phi Delta Kappan*, Diane Ferguson explains that the real goal of inclusion is a unified system of public education, meshing general and special education. She envisions schools that
will accommodate student diversity, facilitate active learning, and offer comprehensive supports to help each child learn.

We believe that responsible inclusion will enable tomorrow's educators to meet the needs of all children regardless of disability, culture, class, or any other characteristic of difference and to promote both equity in educational opportunities and excellence in individual accomplishments. In fact, the inclusion movement — and the changes it implies — is not merely about special education. Rather, it proposes to create a school where diversity, cooperation, and creativity are nurtured and valued, offering us a vision of the type of society that will be desirable in the 21st century.

Family Support

The America 2000/Goals 2000 initiatives established the objective of ensuring school success for all children; but a growing number of children in today's classrooms come from families living in disadvantaged social situations, such as homelessness, chronic poverty, lower socioeconomic status, minority cultural groups, and immigrant or alien status, that put them at increased risk for underachievement and failure in school (Children's Defense Fund 1994; Hodgkinson 1993; Reich 1992).

These families, who often have no personal experience of the knowledge or skills needed for success in a rapidly changing society, must trust the schools to teach such skills to their children. However, many schools fail to make the necessary accommodations for unique
learning styles, dooming these students to a repetition of the cycle of poverty, inappropriate education, and limited skills for achieving adult independence and employment. Indeed, far too many of these students are inappropriately referred to and placed in special education programs.

Specific disabilities, developmental delays, and other biological or environmental risk conditions are known to limit many children's later academic performance and social competence. Since 1986 federal law has mandated that schools provide special education services beginning at age three. Federal incentives also have resulted in all of the states establishing early intervention services for infants and toddlers (U.S. Department of Education 1994). Yet many years of research data from Head Start, the Handicapped Children's Early Education Projects, and other studies clearly show that preschool programs and other early intervention services alone often are too little and, ironically, too late to significantly change the future for many of these children. What is needed is a total family intervention plan that begins with prevention or amelioration of social and environmental risk factors, education for parenting skills long before people become parents, systematic intervention that maximizes parent-child interactions in learning contexts, and development of social support networks. Many states already have designated the state education agency as the lead agency in overseeing such services (Simeonsson 1994).

At the same time, it must be realized that families themselves are changing in response to social and eco-
onomic trends, such as professional careers for women, acceptability of single parenthood, and the increased mobility required of workers in order to respond to new job opportunities. Consequently, the demand for different forms of quality child care has grown, and private day care providers, business and industry, and the schools themselves are rushing to develop compatible services (Baglin and Bender 1994). Many schools offer special after-school programs for "latch key" children, and a few schools even offer weekend activities. In the September 1995 issue of the Phi Delta Kappan, David Elkind discusses how schools are being transformed to incorporate broader responsibilities for child and family welfare in response to social changes in the postmodern world. We see the schools, which are the center of community life in many areas, as the most appropriate social agency for family support programs.

Transition Programs

Making a successful transition from school to adult life is a critical issue facing all high school students, but especially for those who have special needs. Since 1983 the federal government has established transition as a national priority, requiring schools to develop an individualized transition plan and to provide comprehensive transition services for students with special needs (Rusch and Phelps 1987). Despite these intensive efforts to facilitate the transition process, many young adults with disabilities remain unemployed or underemployed (Sitlington, Frank, and Carson 1992). Realistically, the gains made by people with disabilities through
special education in the schools may not be realized if they are unable to adjust successfully to the demands of adulthood.

Renewed interest in the transition process has moved schools toward a variety of innovative practices in such areas as career education, functional academic curricula, community-based instruction, work experience, and on-the-job training for students with special needs (Brolin 1995). Transition programs for students with mild to moderate disabilities aim toward competitive employment (Gajar, Goodman, and McAfee 1993). These programs also could accommodate other students at risk.

Transition programs for students with severe or multiple disabilities usually focus on preparation for supported employment (Sowers and Powers 1991). These programs generally require collaboration with adult habilitation agencies to ensure that supports are carried over after the student leaves school.

In the future the need for educational programming to facilitate the transition from school to adult life will become more important than ever before in order to ensure that students with special needs are able to support themselves and contribute to their communities. But individualized planning and comprehensive services also may be important to assist all students in making a successful transition from school to adult life as the job marketplace becomes increasing competitive and complex. We see the possibility of transition programs in special education serving as models for new schoolwide transition programs for all students.
Diverse Environments

At least a nod must be given to the distinctions among the diverse environments that are characterized as either rural or urban. As we mentioned earlier, these environments tend to present the greatest challenges in special education. We have specifically left out suburban environments because many such communities have "the best of both worlds" and do not face the type of problems inherent in either rural or urban communities.

Rural Programs

Two-thirds of this country's school districts are located in rural communities. Rural communities, though diverse in themselves, are as a type quite distinct from urban communities. In her book, *Rural, Exceptional and At Risk* (1991), Helge lists an array of variables that characterize these differences, including transportation, community structure, geography, communication, personnel turnover, unique student populations, technical resources, and availability of special services.

In an effort to become more like urban schools, many rural school districts in the 1970s and 1980s elected (or were forced) to consolidate, based on the idea that
"bigger is better." This trend now has started to reverse, and we believe that "smaller is better" will be the trend in the coming years, particularly with regard to special education. Individualized instruction, peer support, parent involvement, and community partnerships are easier to accomplish in smaller schools, where parents and students are known by everyone. Special education teachers who are generalists will become part of every rural school team. Distance learning and advanced technology will allow faculty and students to access needed training and specialized support services. Students with severe disabilities, who often are adopted by the entire community in rural settings, will continue to have a circle of friends that will last a lifetime.

Urban Programs

A few years ago we wrote a related article (Ludlow and Lombardi 1992) dealing with the future of special education. Then, as now, we predicted changes in service delivery systems, personnel preparation, and licensure; changes in the use of technology; and continued growth in early identification and intervention programs. A response paper (Rousseau and Davenport 1993) to the article agreed with our predictions but noted two areas that needed to be mentioned: urban education and programs for juvenile offenders.

Urban environments, particularly inner-city schools, have greater percentages of minorities and culturally divergent learners than other environments. These minorities and culturally divergent learners also are
over-represented in school dropout rates and juvenile detention and correctional facilities. As special education and special educators become a more integral part of general education, there will be more and stronger links between schools and community resources. Early intervention programs for students considered “at risk” for failure will include special educators who have skills in behavior, environmental, and transitional management. For students with special needs who have serious emotional, social, and behavior problems, alternative, community-based schools and unique residential settings will increase. Special education in detention centers and jails will be dramatically increased.

In like manner, resource centers supported by city and state funds will provide family guidance and counseling as well as individualized attention for students to reinforce public school programs. Services at these centers will vary according to the needs of their clients. The model for services will be fashioned after either an Individualized Intervention Plan (IIP) or a Family Intervention Plan (FIP).

Learning from Other Countries

A report from the World Conference on Special Needs Education, held in Salamanca, Spain, in June 1994, affirmed the principle of education for all and specifically endorsed the concept of inclusion for students with special needs. Representatives from 92 countries and 25 international organizations encouraged collaborative efforts by regular education and special education per-
sonnel in meeting the needs of students at risk for failure, as well as students who are identified as having disabilities. Concern was expressed for greater special education support at the middle and secondary level to discourage early school dropout.

Even the People’s Republic of China, in which educators stress group instruction, has witnessed growth in special education over the past 15 years, though still fewer than 200,000 out of about 8 million children with disabilities are receiving special education services.

Advances in distance education and proposed policy changes should assist China and other countries in meeting the demand for special education and special educators. We believe that instant communications through advanced technology and international meetings and conferences will allow effective and efficient policies and programs concerning special education to be available and practiced worldwide.
Conclusion

The questions we have posed for ourselves in considering the future of special education are fundamentally questions about the meaning of education in a democratic system, in a changing economy, and in a global society.

In a world where computers and televisions transmit information more effectively, efficiently, and consistently than many teachers can, teachers must assume new roles as facilitators of individualized learning strategies.

In a world where conflicts between individuals or groups threaten to escalate into violence and tragedy, children must learn from an early age an understanding of diversity and skills for cooperation.

In a world where the knowledge explosion changes facts and theories as soon as they are discovered or promulgated, schools must provide students with higher-order and critical thinking skills.

In a world where economic competition and rapid social change demand that people continually be able to update their knowledge and retool their skills, education must establish habits of lifelong learning.

The primary impetus for special education services continues to be the Individuals with Disabilities Edu-
cation Act (IDEA), which mandates that school systems provide a free appropriate public education for all students with disabilities from ages 3 through 21. However, other provisions in other laws also guarantee that the schools will provide special services even if IDEA should be discontinued. For example, since 1973 Section 504 of the Rehabilitation Act has prohibited any program that receives federal financial assistance from discriminating against persons with disabilities by denying them opportunities to participate in or to derive benefits from that program. Even now, this provision ensures that individuals with disabilities who are not otherwise eligible for special education still receive services to accommodate their needs in school.

The Americans with Disabilities Act, passed in 1990, similarly forbids all public entities from engaging in discrimination and requires them to make reasonable accommodations to ensure access by people with all kinds of disabilities to all programs and services offered to the general public. Public school systems, as public entities as well as programs that receive federal funds from a variety of sources, likely will always be responsible for providing educational programming to accommodate students with special needs.

We believe that the schools of the future will no longer provide specialized, often isolated programs for students with disabilities, which often characterized special education in the past. Instead, they will offer individualized supports for all students. And the efficacy of special education will be judged by the quality of life that students with disabilities achieve.
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Phi Delta Kappa Educational Foundation

The Phi Delta Kappa Educational Foundation was established on 13 October 1966 with the signing, by Dr. George H. Reavis, of the irrevocable trust agreement creating the Phi Delta Kappa Educational Foundation Trust.

George H. Reavis (1883-1970) entered the education profession after graduating from Warrensburg Missouri State Teachers College in 1906 and the University of Missouri in 1911. He went on to earn an M.A. and a Ph.D. at Columbia University. Dr. Reavis served as assistant superintendent of schools in Maryland and dean of the College of Arts and Sciences and the School of Education at the University of Pittsburgh. In 1929 he was appointed director of instruction for the Ohio State Department of Education. But it was as assistant superintendent for curriculum and instruction in the Cincinnati public schools (1939-48) that he rose to national prominence.

Dr. Reavis’ dream for the Educational Foundation was to make it possible for seasoned educators to write and publish the wisdom they had acquired over a lifetime of professional activity. He wanted educators and the general public to “better understand (1) the nature of the educative process and (2) the relation of education to human welfare.”

The Phi Delta Kappa fastbacks were begun in 1972. These publications, along with monographs and books on a wide range of topics related to education, are the realization of that dream.