As part of a 3-year study to identify emerging issues and trends in technology for special education, this bibliography describes 45 relevant journal articles. The journal articles cover the areas of personnel preparation, educational policy, systems change, and instruction. For each article, a critical summary is presented which includes the identification of specific implications for the future. Publications are listed alphabetically by author and range in date from 1980 through 1991. (DB)
Identifying Emerging Issues and Trends in Technology for Special Education

Annotated Bibliography: Training, Education, Policy, Systems, Change, and Instruction

Lewis Polsgrove

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COSMOS Corporation is conducting a study of the issues and trends affecting the role technology will have in the 21st century for individuals with disabilities. This three-year study is funded by the U.S. Department of Education, Office of Special Education Programs (OSEP), under Contract No. HS90008001.

COSMOS Corporation was founded in 1980, and is located in Washington, D.C. Since its inception, the firm has conducted a wide range of applied social science projects for public and private organizations and foundations. COSMOS's specialties include: conduct of case studies; identification and validation of exemplary practices; evaluation of education, job training, and human services programs; provision of technical assistance to state and community agencies; and strategic planning for public agencies and public firms.

Project participants include expert panels, project fellows, an advisory board, a consortia of practitioners, and project staff. These experts in the fields of technology and special education have come together to examine the issues and trends in these two fields, and how they impact the use of technology for special education in the 21st century. Three expert panels have started examining these issues: one with a focus on technology outside the field of education, one on special education instruction, and one on evolving service delivery systems in special education. Over the three year period their research will be synthesized and become the basis for predictions about the future.

This document is one of the papers commissioned in the first year. The purpose of the paper is to present information on one or more issues as part of the expert panel discussions. It is being shared with people inside and outside of the project to stimulate discussion on the impact of technology in the early 21st century. Readers are welcome to comment on these findings and contact COSMOS Corporation for further information.
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From 1975 through 1986, federal funds were made available in the form of "Dean's Grants" to colleges of education to help prepare teachers to teach mainstreamed handicapped students. Models of preparation ranged from curriculum infusion to required courses. This study provides follow-up data from practicing teachers who completed a curriculum infusion model at one large midwestern teachers' college. A questionnaire was developed consisting of demographic information, competency statements related to mainstreaming, types of handicapped students teachers had encountered, and open-ended questions. Results indicated that 60.5 percent of secondary teachers, and 66 percent of elementary school teachers, felt that certain knowledge and skills necessary to teach handicapped mainstreamed students was not acquired during their preservice program. The most frequent response dealt with development and implementation of IEP's. A second theme concerned the need for improved skills in adapting curriculum for different types of handicapped students. A final major response theme indicates a need for more knowledge about classroom management in general, and methods for working effectively with behaviorally disordered students in particular. Limitations to this study include:

- Small number of respondents (80 teachers);
  - and
- Graduates were all from the same university.

Recommendations by the author take the form of a greater working partnership within universities between regular and special education departments, the development of a dual major, and the actual merging of regular and special education.
While the aforementioned limitations make it difficult to draw concrete conclusions, it is interesting that the knowledge and skills found lacking are the very ones which special education teachers utilize almost daily. Perhaps these are areas of expertise which warrant the qualifier "special."

Implications for the Future. This study may indicate that an intensive and on-going training program is necessary to prepare regular educators for teaching students at risk for learning and behavioral problems. Technology might be harnessed to develop new methods for training teachers in this area.

This study examined the relationship between job burn-out and several variables, including special education category of the teachers' students, training background, age, and years of experience. A sample of 181 special educators participated in the survey. A profile of the special educator "at-risk" for burn-out is a younger teacher with undergraduate training in special education who teaches in a resource room or a classroom for students identified as behaviorally disordered. The question one must ask is, if these students are mainstreamed into regular education classrooms, would these results generalize? That is, would younger regular educators working with BD students be more prone to job burn-out? If so perhaps the classification of BD students as being merely mildly handicapped is unwarranted.

Implications for the Future. Perhaps undergraduate students need more intensive instruction by more highly trained special educators for dealing with students with behavioral disorders. The pool of teachers for this group of youngsters is steadily shrinking while the number of students displaying emotional and behavioral disorders is rapidly increasing.
Braaten, B., and Braaten, S., "Reform for Everyone?," Teaching Exceptional Children, Fall 1988, pp. 46-47.

This article examines the dominant themes of the REI from a special education perspective. Issues addressed directly affecting special education populations include: increased academic standards; evaluation of student achievement; discipline; increasing professionalism of teachers; governance; accountability; and parent choice. The authors conclude that the current focus of the school reform movement do not appear to include careful consideration for the needs of, or consequences for, at-risk and handicapped students.

Implications for the Future. If current trends continue, there is concern that certain segments of the special education populace--predominantly at-risk and behavior disordered youth--will go unserved.
Restructuring is the rising tide of the school reform movement. To restructure means to change the pattern or organization of an entity. However, for educators and policymakers, the vision of what a restructured school looks like and how it operates is not yet clear. Three major areas of focus for restructuring efforts in the public schools include curriculum, organization, and governance of schools. There is an increased emphasis on academics stemming from new knowledge, new standards, and the fear of international competition. These demands also create additional pressures on special education. Increased emphasis on academics and higher graduation standards has led to less curriculum flexibility in some districts and states, making integration of handicapped students difficult.

Organization refers to the administrative and functional structure of the delivery system. A call is made herein to develop a "quid pro quo" arrangement, as special and regular educators share and develop their teaching strategies, curriculum designs, and organizational skills.

The major issue in restructuring governance is where authority rests for the direction and supervision of schools. A site-based management model is proposed, with principals and teacher teams given more responsibilities for managing resources. An interesting dichotomy is raised regarding special education's role in governance. If more authority for special education is shifted to individual schools, how will program standards be maintained? On the other hand, if more authority is not shifted, special education may be seen as external to the core purpose of the school.

All teachers may benefit from the new sense of professionalism and autonomy reflected in restructuring, and a restructured school can look, according to the author, much like the best of special education today.
Implications for the Future. The resolution of these issues requires commitment and careful thought, and the implications are especially complex for special education.

This article serves as a review of some of the major writings in the REI debate. Summaries of statements by Will (1986), Stainback Stainback (1984), Gardner and Lipsky, (1987), Hallahan, Kauffman, Lloyd, and McKinney (1988), among others are presented. The authors' contribution paints a somewhat bleak picture of education in general. "The consensus seems to be that the students in the greatest need of help have benefitted little, if at all, from recent reforms in general education." The authors quote Lloyd as saying that 312 learning disabled students drop out of school every day. Furthermore they state: "It is projected that, by the year 2010, almost half of the students in the public schools in the entire United States will be minority students (Duckett, 1988). If students from low income backgrounds continue to fail at the current rate, both the proportion and absolute number of drop-outs and drop-ins (those not yet old enough to legally drop out) will grow rapidly in the foreseeable future. The problem facing American education is much greater than deciding who is to be responsible for mildly handicapped students (and their failure in school). The larger issue is how best to educate students who are likely to fail in school."

The authors conclude by stating that the General Education Initiative would place more students in educationally bankrupt classrooms, served by programs designed for upper middle class students. "Unlike the GEI, we do not call for abandoning the special education profession's infrastructure. Instead, we call for taking advantage of special education's professional capabilities to spearhead a drive to redesign education for all students with special needs."

Implications for the Future. More attention needs to be paid to training personnel to deal with both low income and minority students.
As these students are over-represented in special education classrooms, a re-evaluation of the achievable goals of the GEI is in order.

Fifty primary research studies of special versus regular class placement were selected for use in a meta-analysis. Each study provided a measure of Effect Size (ES), defined as the post-treatment difference between special and regular placement means expressed in standard deviation units. ES was used as a dependent variable in order to assess the effects of independent variables such as placement; type of outcome measure; internal validity; and other educational, personological, and methodological variables. Special classes were found to be significantly inferior to regular class placement for students with below average IQ's, and significantly superior to regular classes for behaviorally disordered, emotionally disturbed, and learning disabled children.

The authors note that the most vocal advocates of mainstreaming have built their arguments on philosophical rather than an empirical foundation. Their own study indicated that category of exceptionality revealed differential placement effects. Slow learners, or educable mentally retarded children experienced negative consequences from special class placement, while positive effects from special class placement were found for LD and BD/ED children.

**Implications for the Future.** The implication for the regular education initiative's for re-integration of mildly handicapped children into regular classrooms would appear to be that categories of handicaps are not interchangeable, and that some students fare better in special education classes. Further analyses of area of exceptionality are warranted before wholesale implementation of the REI is undertaken, so as to insure that, in the fervor of school reform, education does not, once again, fail these children.

The Council for Children with Behavior Disorders finds little justification for the belief that the radical restructuring advocated by REI proponents would provide better educational alternatives, particularly as behaviorally disordered students are concerned. Numerous doubts about the research bases and policy implementations underlying the REI have been expressed by a host of preeminent scholars in the field of special education. Concerns about the assumption that regular educators will welcome with open doors BD students who exhibit least acceptable behaviors are voiced.

Implications for the Future. The historical failure of the 'unitary system' of education in dealing with a continuing heterogeneous population of students reaffirms the need for an array of service options in the future.

The REI has been gaining momentum. However, the movement has not escaped criticism. One of the criticisms is that regular classroom teachers’ views regarding many of the beliefs or assumptions of the REI are unknown. The present study was undertaken to provide this type of data. Ninety-four regular classroom teachers in northwest Iowa were asked to agree or disagree with a series of statements on the REI position. The results showed general disagreement with the statements, suggesting that the respondents do not share similar concerns or beliefs regarding the current delivery of special education services. Specifically, one of the two most frequent suggestions for improving the current special education system was to expand services to provide for more time in the resource room, more one-to-one assistance, or resource room assistance to students who are not now eligible (such as slow learners). The second most frequent suggestion dealt with earlier identification, and the speeding up of the referral, testing, placement process.

Implications for the Future. The importance of expanding the dialogue of the REI beyond the confines of special education cannot be overemphasized. Service delivery models are only as effective as the service deliverers implementing them. Seemingly innovation perceived as imposition may encounter resistance, and regular educators need to be consulted before external constructs are superimposed onto their classrooms.
As the need for definitive course evaluation changes with the impact of accountability movements, preservice teacher education courses must be carefully assessed with regard to consumer satisfaction as well as specific utility in the field. This study investigated ongoing program evaluation techniques designed to assess students' perceptions of the efficacy of a direct instruction course at the end of the course and after a full-time eight-week internship experience for preservice special education teachers. The course evaluation was obtained through verbal feedback data gathered post-internship, while summative data involved the use of a Lickert-scale form related to best and least liked portions of the course. Of the 18 direct instruction components measure, three showed significant increases. Overall, this study revealed a high level of satisfaction with direct instruction components that increased after field-based experience. Implications for teacher education, as well as future research are discussed.

Implications for the Future. This study is consonant with previous research indicating that a direct instructional approach is highly effective for teaching children with disabilities. Whether this conclusion holds true with children with significant difficulties or whether they require a more exploratory and self-driven approach to instruction remains unclear.
The most intense and controversial issue presently receiving attention in the special education professional literature is the Regular Education Initiative (REI) debate. The proposed merger of special education and regular education into a unitary system has attracted both strong advocates and critics. This article examines the current parameters of this discourse, identifies specific problems and issues related to this debate, and suggests strategies for overcoming perceived obstacles and improving the overall dialogue. Particular attention is given to key groups—for example, local educators and students themselves, who have been largely excluded from the REI debate. Most of the suggested benefits for the REI movement will never accrue unless its present discourse is expanded to include these groups.

**Implications for the Future.** Research appears to indicate that the most effective model of education may be that of a participatory democracy, wherein input, as well as output, is to be expected. If people—students, teachers, and administrators—are taught to govern themselves, the ideal of a democratic society can, perchance, be realized.

The merging role of the special educator as a collaborative consultant with regular educators, administrators, and parents has prompted concern for the development of communication and interaction skills. A training program was developed at Fayetteville State University to meet the immediate need of providing a mechanism by which in-service educators could learn theory and skills in consultation as a component of their master's degree program in categorical special education.

Implications for the Future. Fayetteville State is not alone in its commendable undertaking of training teachers as collaborative consultants; many other institutes of higher education have also incorporated this coursework into their curriculum. However, growing costs for specialist education needs to be translated into increased wages for educators. The REI initiative, or any other movement calling for additional coursework or responsibilities, is pointless without a pay-off for those thus engaged.

In this article the authors contend that the ALEM research cited by Wang and Walberg is neither well documented, nor conclusive. In addition, they refute allegations by Ms. Wang that they did not contact her prior to writing their "Evaluation of the Adaptive Learning Environments Model", Exceptional Children, (55:2), an article which was critical of the research carried out regarding ALEM. In fact, four contacts were attempted: one by phone, one by registered letter, a non-conclusive meeting, and finally by mailing a copy of their final manuscript.

The Fuchs' analyze the data base for ALEM programs and find little evidence of successful implementation and educational success. Furthermore, they point out that ALEM is an elementary-level program, and lauding it as "the" tool needed for successful re-integration of special education students into regular education classrooms is misleading. They go on to counter, point by point, contentions leveled at them by Wang and Walberg in the latter's article entitled "Four Fallacies of Segregation" in the same issue of Exceptional Children.

Implications for the Future. It appears increasingly clear that tomorrow's children require more than a modified curriculum.

Public policy in special education has failed to yield suitable definitions, identification and assessment procedures, or reliable prevalence estimates of mild handicapping conditions, such as learning disabilities, mild mental retardation, and mild emotional disturbance. In the absence of professional agreement and compelling empirical evidence, federal and state policies represent a "consensual theory" of special education for mildly handicapped, based primarily on several psychometric-oriented assumptions. Recent research has failed to support these assumptions and has provided evidence which is interpreted to show the overarching importance of teachers' decision-making, specifically decisions to refer a child for special education. This article argues the need for a rethinking of basic assumptions in special education for the mildly handicapped. Specifically, the authors recommend the design of:

- New identification procedures at the school site level; and
- A program of research aimed at investigating teachers' referral decisions.

Implications for the Future. Current assessment procedures, including the field of psychometrics, appear to be undergoing scrutiny which could lead to their dismantling. The implications of such a design would include a decrease in assessment costs, and a subsequent increase in direct delivery services.

This study explored the relationship between classroom teachers' self-reported tolerance levels for maladaptive behavior in their classrooms and experienced supervisors' evaluations of the teachers' effectiveness. Teachers were assessed on the Teacher Effectiveness Evaluation Form (TEEF), covering research-based practices for effective instruction for low-achieving students. Self-report instruments measured teachers' tolerance for maladaptive behavior and their propensity to resist placement of handicapped students in their classes. Those teachers with the most effective teaching strategies for low-achieving students tended to report that they:

- Tolerate less maladaptive behavior in their classrooms; and
- That they may actively resist placement of handicapped students in their rooms.

Implications for the Future. If the above cited study is indicative of the feelings of most general classroom teachers it would seem to imply that those teachers who are least effective would be the most likely to accept handicapped students, thereby providing an inferior education for students with handicaps. Since this is the charge which REI proponents have leveled against special education, the proposed merger would do little but change the face of those indicted, while masquerading as improvement. "New and improved" is an advertising ploy to which most Americans have habituated; educational reformers need be wary less their cry against conventionalism be perceived as but one more commercial appeal for "bigger and better" schooling.

Two bodies of research used to support the REI are:

- The literature on the efficacy of special education; and
- Studies examining the Adaptive Learning Environments Model (ALEM), a program for educating handicapped children in regular education classrooms that is often cited as an example of effective practice.

The support provided by these lines of research, however, is minimal. The efficacy literature contains many limitations in terms of methodology, the age of the studies, and an emphasis on physical placements instead of practices within the placements; even if these limitations are overlooked, the results of the efficacy studies do not totally favor regular education over special education for mildly handicapped students. The ALEM studies provide insufficient information on program and subject characteristics and contain a variety of methodological limitations that call into question their conclusions. Though these limitations in the research supporting the REI do not prove that special education is effective, the authors believe a variety of regular and special education service configurations for mildly handicapped students should be available, in both present and future settings.

Implications for the Future. Additional research into both the effectiveness of the Alem program and the efficacy of the current special education system appear to be warranted.

This study assessed students' preferences about where and by whom they receive instruction for learning difficulties. Subjects were 686 special, remedial, and regular education students in grades 2, 4, and 5 from classrooms that used a pull-out, in-class, or integrated model for specialized instruction. Results of student interviews indicated that children's preferences for in-class and pull-out services were affected by the service delivery model used in their classroom and their grade level. The majority of children preferred to receive additional help from their classroom teacher rather than from a specialist.

Implications for the Future. Aside from the obvious difficulties in generalization from a study limited to particular grade levels within a particular region (Puget Sound, Washington), the breakdown of students--101 special education students, 236 remedial students, and 349 regular education students--would naturally skewer the findings towards favoring regular classroom instruction. A larger number of the sample were in regular education classes; hence, given that students preferred their current service delivery model, the percentage overall would reflect this fact. Although the authors seem to conclude that in-class instruction is the preferred delivery model, vacillation within the article leaves one confused upon why this conclusion is drawn. For instance: "Considering that the majority of respondents served in pull-out programs preferred this option, that half of the respondents served in in-class programs preferred pull-out, and that embarrassment was often cited as a reason for selecting a service mode, students apparently view pull-out as no more embarrassing and stigmatizing than in-class services, a finding which runs counter to the perception of many educators" (p.520). Later on in the piece the authors state: "Concerning mode of service delivery, the present results suggest that the majority of students would be inclined toward
a total mainstreaming model such as the integrated classroom model or the adaptive learning environment model. Vagaries such as these detract from the reliability of the research, and raise the question as to whether or not the authors entered into this study with the preclusion that mainstreaming should be the preferred method of service delivery. It is to be hoped that evidence, not opinions, will guide our footsteps, and that hard-fought educational gains are not usurped in the emotionality of the moment.

In any classroom, teachers may structure academic lessons so that students are:

- In a win-lose struggle to see who is best;
- Board/Executive Committee/Steering Committee Learning individually on their own without interacting with classmates; or
- Learning in pairs or small groups helping each other master the assigned material.

Of the three, cooperation is the only instructional strategy congruent with the goals of mainstreaming. The essential elements of cooperation learning and the specific actions teachers need to take to implement it are presented in this article. When cooperative learning is implemented effectively, positive relationships between handicapped and nonhandicapped students result. Far more positive interaction between handicapped and nonhandicapped students within instructional situations and during free-time, as well as increase friendships result from cooperative learning experiences.

Implications for the Future. While cooperative learning strategies are one method for the integration of handicapped students into the regular classroom, they are not the only strategy, nor do they necessarily serve the ends of all students all of the time. Careful consideration of when, and to what extent, configurations of cooperative learning strategies should be implemented in the classroom would aid in the effectiveness of utilization.
The authors of this article take issue with several "basic assumptions" inherent in the pro-REI literature. These are:

- That students are overidentified as handicapped;
- That student's failure is largely attributed to teacher failure;
- That regular classroom teacher's can be trained or re-trained to ensure teaching and management strategies which would essentially make special education unnecessary;
- That the variance in student behavior and academic performance in regular classrooms can be significantly diminished or eliminated; and
- Significant new resources or technologies of instruction exist that will permit regular classroom teachers to achieve both reduced variance and higher mean behavior outcomes.

Overidentification of Students

The authors cite data from the U.S. Department of Education (1987) indicating not merely a leveling off in numbers of students identified as handicapped, but an actual decline in the percentage of the child population receiving services.

Attributions of Student's Failure

"Suggestions that teachers are responsible for teaching all students who may be placed in their classrooms, regardless of objective learner characteristics, and that 'good' teachers by definition are
those with whom all students will learn reflect a naive environmentalism."

Regular Classrooms Teachers' Opinions, and Skills

   Questioned herein is the validity of the assumption that regular classroom teachers, even those possessing techniques and skills for working with handicapped students, will have the time, instructional resources, responsiveness to administrative and parent demands, willingness, and tolerance necessary to incorporate handicapped students into their classrooms.

Variance in Student Behavior, and Academic Performance

   "Instructional time being relatively fixed and all else being equal, then, the variance in learning outcomes among students grouped in those classrooms must inevitably increase. With increased variance in performance, greater discrepancies between the 'haves' and the 'have nots' will be observed, and renewed calls will be made to 'better, serve those who are low achievers.'"

Microeconomics of Teachers' Behavior

   The comparison is drawn between a scenario wherein the federal deficit could be reduced while taxes were lowered, all without cutting defense spending or doing harm to worthwhile social programs, and a situation wherein regular classroom teachers are being told by REI advocates that they can teach all students more effectively while accommodating more difficult-to-teach students in their classrooms. From this perspective teachers are forced to choose between maximizing mean performance of the group by concentrating resources on improving performance of the most able learners, or minimizing variance by concentrating on the least able learners. From a policy perspective, it is important to make the point here that new instructional resources will not automatically be allocated to the benefit of low achievers unless they are channeled explicitly to the low achiever, that is, the
decision about how to allocate them to pupils is taken out of the hands of the teacher.

**Implications for the Future.** Attempts to solve the problem of mildly handicapped students and other low achievers are doomed to failure if instructional resources are not allocated with explicit "tags" and priorities. While the "blame game" is an easy exercise for shuttling problems back and forth between components of a system, it does little good for all involved. An erstwhile attempt at remediating the differences and discrepancies in-house must be actualized before we can expect any significant gains in learner outcomes.

The law requires that all handicapped children be educated. Logical absurdities represented in this position are discussed. Philosophical questions regarding the definition of education and the determination of educability are scrutinized. Counter-productive outcomes of social policy based on blind faith are examined. Moral and ethical dilemmas by the establishment of limits of educability are addressed, as are suggestions for dealing with these issues proffered.

**Implications for the Future.** If, as common sense dictates, not "all of the people all of the time" can be served within the limitations of one unitary structure of education, the question then becomes: "What do we do with those whose limitations exceed our modifications?" The answer seems to warrant the "continuum of services" model in place within special education, so that "some of the people" are not served at the expense of the rest.
Kavale, K. A., "Addressing Individual Differences In the Classroom: are We Up to the Job?," Teacher Education and Special Education, 1989, 12:(4)179-182.

Special education appears to have missed the essence of individualization, (meeting individual needs), and regular education, by its nature, teaches at the mean. The resultant dilemma adversely affects exceptional students, who fall below the average in most classroom situations. A list of potential solutions is offered, including: methods courses focusing on validated practice, not practice based upon historical precedent; effective inservice training for instructors; state and university partnership for teacher preparation.

The problem once again boils down to adequate funding for education. Since "best practice is based upon quality research," funding must be allocated to obtain quality results. Effective inservice training, in order to be effective, must spend the extra nickel. Finally, less students in the classroom enhances the ratio of teacher to student and allows for more individualized instruction. If special education is to be criticized in this regards it should be remembered that these teachers are often given excessive numbers of pupils, and they then become guilty of "teaching to the mean." Regular education classes, if they are to effectively address individual needs, will need to also reduce this ratio. The result may be better education for all students; however, it will cost more.

Implications for the Future. It is clear that training for both regular and special educators must improve if we, as a profession, will be able to cope with the swelling numbers of children with disabilities. Moreover, the classroom of the future must be able to deliver appropriately trained and carefully programmed instruction that is at once challenging and interesting. How emerging technology can meet these goals remains a challenge.

In this article the authors contend that the assumptions underlying separate programs have produced a system that is both segregated and second class. A brief background of P. L. 94-142 is presented, beginning with Brown v. Board of Education. This legislative landmark is cited as being the model for advocacy efforts in the 1960's and 1970's for people with handicaps. Pennsylvania Association of Retarded Citizens (PARC) v. Commonwealth and Mills v. Board of Education are also mentioned, the former overturning a law which had relieved schools of the responsibility of enrolling "uneducable" or "untrainable" children, while the latter stipulated that a district's financial exigencies could not be the basis of excluding students with handicaps. With the passage of PL 94-142 (EHA) a free public education of all handicapped children was insured.

The authors focus on several areas of special education which emerged from 94-142 as being the "most troubling". These include the referral and assessment process, least restrictive environment (LRE), and parental participation. Cost, professional judgement with regard to identification, and discrimination are cited as being problematic with referral and assessment, while segregated programs and their educational outcomes come under scrutiny within the LRE issue. Parental involvement, while accommodated by law, is difficult to mandate if parents do not become actively involved. One study noted that upwards to 70 percent of all IEP's developed lacked parental input. While this may be a sad state of affairs, it is not to be misperceived as being the fault of the courts, nor of special education. There are a multitude of reasons which could explain lack of involvement--single parent households, defeatism, lack of child care for siblings, to name but a few--and to attack the field of special education on this issue seems unwarranted.
The authors go on to say that it is not special education but the total educational field which must change. The general education system, in its response to slow learners, immigrants, low achievers, and the disadvantaged is indicted as being guilty of excluding these children from access to regular education classes and thereby increasing the number of students in special education. A merged, unitary system is called for, which requires adaptation in society and education, not merely the individual.

While this paradigm shift towards a more holistic, ecological approach for understanding and service delivery is certainly called for, it in no way precludes the necessity of the continuum of services which special education can, and does, provide. The proposed merger, to be effective, must guarantee that legislation cited regarding individuals with handicaps is still enforced, and that appropriate identification and allotment of revenues is insured to those to whom services have been, prior to the 1950’s and 1970’s, historically denied.

Implications for the Future. While the intent of this article is commendable, the implications could be devastating to special needs students if their rights are not protected. Hard fought legislative gains cannot be scrapped in the tide of a new wave of reform. If identification procedures are not in place, who decides to whom resources are allocated? If a continuum of services, up to and including separate placement if necessary, is not extant, who provides and with what resources? In short, does merger necessarily equate with quality, and if so how so?

Restructuring education to better accommodate students with learning problems in regular classrooms has become a topic of some concern for professionals in special and regular education. Advocates of the Regular Education Initiative (REI) argue that problems in the current special education service delivery system mandate the need for addressing alternative approaches to providing special instruction to the large numbers of mildly handicapped students in America’s schools. Those opposed to expanding the partnership between regular and special educators argue that current teacher training, attitudes, and administrative structures work against efforts to place very many exceptional students in regular classrooms for instruction. The authors see value in both sides of the argument, and are concerned that all of the dialogue may not lead to action. They believe that exceptional students should be educated with nonhandicapped peers to the maximum extent possible.

Implications for the Future. System-level, school-level, and child-level concerns must be addressed if efforts to operationalize this idea are to be given a reasonable scientific test. Evidence, not emotions, must be presented, not so that one particular side or the other may win some hypothetical argument, but so that students may win a fair and equitable education.

The purpose of this paper is to present the concept of policy analysis, as distinct from policy advocacy, in light of recent proposals for the restructuring of present special and regular education practice with mildly handicapped students. The essential features of policy analysis are described in the context of recommendations made by advocates of the REI. It is concluded that a comprehensive policy analysis is needed to clarify the objectives of this initiative both to understand its implications for educational policy and to assess its likely impact.

Implications for the Future. Thoreau stated that you can't hit a target you don't aim for. He further qualified this by saying that it is far better to fall short of a goal than to have no goals at all. What is needed in the miasma of educational reform movements are clear cut goals, with a technology in place to achieve those goals, before unclear "calls for action" are advanced.

The purpose of this paper is to discuss a number of policy issues associated with proposals by proponents of the REI to reform special education practice by creating a more integrated system of general education that better serves mildly handicapped and "other special needs" students in mainstream settings. The paper focuses on five issues and concerns with of specific proposals by Reynolds, Wang, and Walberg, including:

- The clarity of goals and objectives;
- Potential conflicts in the values driving educational policy;
- Arguable assumptions about political and practical feasibility; and
- The adequacy of the evidence to support recommended changes from a policy perspective.

Implications for the Future. It is to be concluded that additional research and policy analysis are needed to provide a better understanding of the implications and consequences of various proposals associated with the REI, and to identify alternative solutions that might achieve constructive changes within the broad boundaries of present policy.

The Integrated Special Education-English Project (ISEP) was designed to facilitate the gradual integration of special education and English teacher preparation programs. In the ISEP, special education and English faculty cooperatively teach methods courses that prepare student teachers to implement English instruction with handicapped and nonhandicapped students. A description of the ISEP model is included and a case study is used to illustrate its implementation. Results from the case study indicate that the student teachers who participated in the ISEP improved their special education and English teaching skills. Participating faculty reacted positively to the cooperative processes inherent in the ISEP. Education departments benefit from the ISEP, as well as the handicapped and nonhandicapped students who are the recipients of the integrated English instruction. The ISEP is thought to be a helpful tool in assisting academic departments in the gradual merging of regular and special education teacher preparation programs.

Implications for the Future. Such an approach to teacher training is particular to secondary educators. A "dual major" consisting of special education along with a specified subject area may make the transition of some handicapped students into mainstream settings more successful. The willingness of prospective teachers to undertake such an endeavor remains an area of concern.

A questionnaire designed to solicit information on types of modifications facilitative of regular class teachers' acceptance into their classrooms drew responses from 100 regular education teachers. Data indicated that regular educators' participation in the mainstreaming process, rather than availability of specific classroom modifications, was an important factor in their accepting handicapped students. While no significant differences were noted in number of modifications as a function of diagnostic label, teachers did indicate that preferences for mainstreaming modifications differed from their current situations. Reduced class size and support services were the most desired modifications. In addition, a majority of teachers noted that the availability of a paraprofessional, for at least half of the school day, was needed for successful mainstreaming. The data are discussed relative to mainstreaming and current educational trends, with emphasis on the factor that "employee input" facilitates success and goal accomplishment.

**Implications for the Future.** If change is to be imposed upon the regular classroom teacher, consultation as the modifications necessary to accomplish the desired goals should be solicited.

Implications of the regular education initiative (REI) for students with behavioral disorders (BD) are examined in the context of integration and right to treatment. Arguments that BD students are being overidentified for special education are refuted. Labels for BD students are seen as important indicants for the seriousness with which professionals take their problems, not as the source of students' spoiled identities. Eligibility for services that encompass appropriate education, right to privacy, and implementation of appropriate interventions are viewed as particularly problematic issues related to realization of laudable goals of the REI.

Implications for the Future. If we do away with labeling, have we done away with the condition that warranted the label in the first place? Obviously not. Deleting the word "cancer" from the lexicon in no way cures those afflicted. Let us be careful that the "patent medicine" advocated by extremists is not an elixir which obscures treatment by attempting to homogenize the maladies of all patients.

Two common assertions regarding the REI are that general educators have neither the willingness nor the competence to serve students with handicaps. Illinois educators were surveyed to examine their attitudes and perceived ability to work with students with handicaps. Of 1,012 surveys sent, 314 (31 percent) were returned. Teachers ranked specific types of resources necessary to facilitate integration of students with handicaps.

Although the authors make use of the phrase "as a group" when describing willingness/ability to work with special education students, analysis of the mean data indicates that both moderate and severe/profound mentally retarded and SED/BD students were identified as being the groups teachers were least willing to integrate. Since these groups pose the most potential disruptions to the mainstream education process, care must be taken that these specialty areas are not swept under the rug of the REI.

Implications for the Future. It appears clear that there will continue to be a contingent of youngsters who, whether they have severe learning problems or emotional and behavioral difficulties, will not be able to function in a totally mainstreamed environment. To what extent advancing technology can be bent to teach these youngsters remains a challenge for the future.

This investigation identified the reasons that teachers leave the special education classroom and examined the patterns and trends in teacher dropout in order to help in the retention of quality special educators. A survey instrument was developed and used to determine the factors that teachers identified as to why they left the special education classroom. Survey items were tabulated, and adjusted frequency scores were reported. A contingency analysis determined whether there were associations among any of the factors and the demographic characteristics. The most significant factor for leaving the special education classroom was the excessive amount of paperwork. Other important factors included pupil load, inadequate resources, and lack of recognition. If quality special educators are to be retained, it would seem that the restructuring of special education would address these issues, so that teachers can spend more quality time addressing their students.

**Implications for the future.** A frequently overlooked contribution to special education that could be made by emerging technology concerns the need to reduce the massive administrative responsibility required in developing IEP's and monitoring student progress.
Pugach, M. C., "Restructuring Teaching," Teaching Exceptional Children, Fall 1988, 47-49.

An analysis is undertaken of the common themes of two frequently cited reform proposals: "Teachers for the 21st Century," (Carnegie Forum on Education and the Economy, 1986), and the report of the Holmes Group, (1986). These overlapping themes include: upgrading the quality of professional education to produce competent teachers; supporting collegial, interactive decision making among professionals; developing professional autonomy; and the differentiation of staffing with lead and master teachers.

The impact on special education which Ms. Pugach describes appears to be one of diminishing returns: the more the special educator imparts to the regular classroom teacher, the less the role of the special educator within the educational system. To quote the author: "As general classroom teachers are empowered and trained to be expert professionals, their ideas about instruction and management can be expected to be increasingly worthy; they will be less reticent and more skilled in developing creative, workable alternatives for students with learning and behavior problems. The question is whether those who have been used to having "special" professional identities can feel comfortable in an interactive, collegial environment in which they will no longer be the experts exclusively. Should reform succeed, all teachers stand to gain from enhanced conditions of work. But for special educators, the challenges of reform present some new limitations as well."

Implications for the Future. The obvious implication under the scenario drawn by the author is that special education as an entity will no longer exist. Entire schools of Special Education within universities will become extinct; special education classrooms will disappear while their former charges will re-emerge into the classrooms of newly "empowered" regular educators; and students with learning and behavioral problems will be presented with "workable alternatives" by
this new class of super-teacher. The feasibility of such taking place remains to be PROVEN.
The calls for educational reform that have dominated the professional and lay literature for the past few years have been decidedly silent in discussing the role of special education as a contributor to a solution to the problems being raised. This article summarizes some of the more prominent reports with regard to their treatment (and nontreatment) of special education. A brief description of each of the reports cited follows.

**A Nation at Risk (1983)**

This report clearly focuses on the importance of "excellence" primarily as the way to maintain a competitive edge and regain our preeminent status in the world. The report appears to favor individualized instruction as the best way of "improving education for the benefit of all," but the interpretation of individualized instruction clearly would allow for separate classes on perceived student ability. To quote the report: "The twin goals of equity and high quality schooling have profound and practical meaning for our economy and society, and we cannot permit one to yield to the other either in principle or practice."

The report is critical of current teacher training programs, favoring the need for increased academic preparation to the exclusion of preparation in management and pedagogical skills.

**Horace's Compromise (1984)**

This work by T. R. Sizer focuses primarily on secondary schooling, and not once is special education even mentioned. He is decidedly critical of the tracking system, favoring instead a program whereby students would progress at their own pace within subject areas. Also taken to count is the specialist system, (not special education), which he terms as a "villain." "The multiplicity of specialists undermines
the ability of the system to meet the individual needs of high school students within the classroom, according to Sizer, since every specialist hired both reduces a district’s ability to provide lower teacher-student ratios and perpetuates teacher’s dependence on specialists."

High School: A Report on Secondary Education in America (1983)

This book, written by E. L. Boyer, also takes to count the tracking system. However, he devotes a chapter to "Special Students, Special Structures" which advocates differential arrangements for the gifted and the "high-risk" student. Gifted students would earn credits by examination and independent study, while students at the other end of the spectrum would receive counseling, continuous assessment, and dropout prevention programs. He anticipates the need for remedial services, but advocates a five-year teacher preparation program which would have a heavy academic emphasis while, theoretically, preparing teachers for the heterogenous groups of students for whom they would be responsible.

A Place Called School (1984)

Written by J. I. Goodlad, this work again calls for a more individualized approach to student needs. He considers tracking "a retreat rather than a strategy," and calls for more cooperative, rather than competitive, means for education. He recommends that all general education teachers be required to have an area of specialization, but would also be called upon to teach almost all subjects in regular classrooms. When problems arise, teachers with the relevant expertise could serve as "in-house" consultants.

In the concluding section of the article, "In Search of a Relationship," the authors indicate that there is a failure to clarify the interface between general and special education. This will clearly hamper any attempts at reform, or worse yet, "destroy some of the tenuous progress that has been made in special education to date." "Now that it is clear what the reports have said that relates to
special education, let us consider what they have not said, namely, the implications of these recommendations both for students labeled "handicapped" and for the preparations of their teachers."

Implications for the Future. Given that these reports may serve as guiding agents for any restructuring within the educational system, it is dismaying that more attention has not been paid to special education. Overlooking the needs of a considerable segment of the school-age populace is a "compromise" which increases the "risk" of failure for the American educational system.

The authors examined the current movement toward excellence in special education from the standpoint that diagnostic assessment of prospective candidates for teacher education programs will develop a more rigorous and highly selective pool of future teachers. The recently adopted needs-based teacher training model in the State of Colorado was described, along with the implications for selecting preservice teachers, including special education teachers, at the undergraduate level. The project identified the difference between education and non-education majors on college entrance exams and admission criteria. Recommendations offered for consideration include: raising the GPA requirements to 3.0 on a 4-point scale, enrolling only those students who have completed either the SAT’s or the ACT, an oral presentation by students applying for teacher education programs, increased emphasis on the importance of cognitive processing, and the inclusion of strategies in teaching and learning.

While not berating the capabilities of current and prospective teachers, it appears that the push for excellence may have reached the college campus, and that it may have the same effect on educators as it does on at-risk students, i.e. pushing them away from education. Teachers, like students, are unwilling to work when they see no "pay-off"; increasing demands with diminishing returns can only serve to turn off the very people who should be turned on. Like the at-risk student staring at a barrage of tests, projects and coursework to be completed before graduation, the prospective teacher may well ask: Is it worth it?

Implications for the Future. Increasing admission and degree requirements for teachers without concomitantly increasing the potential financial benefits and place in the professional workplace may reduce the already limited pool of prospective special educators.
According to these authors, the categories used in special education for mildly handicapped students are neither reliable nor valid as indicators of particular forms of education. Their use is expensive and inefficient; they cause much "disjointed incrementalism"—the result of narrowly framed programs launched one by one—in service delivery systems. It is recommended that a program of pilot projects be initiated in conjunction with regular educators to redesign categorical programs and policies.

Implications for the Future. In just three sentences, the authors have seemingly swept aside the special education system in its present form. In their conclusion they state that they believe new models can be tried without undermining the hard-won rights of handicapped children and, to the extent that this is feasible, experimentation is to be welcomed. However, this article served as a springboard from which Wang et al. launched a categorical attack on, not only the categorical system but, special education itself. The current trend seems to call for a "block funding" approach to a unitary model, wherein services are assumed to be guaranteed to all, but which would allow local education agencies to determine how funds are to be allocated. The danger in this approach is obvious: the best and the brightest could receive first-class treatment, while the middle-of-the-roaders ride coach. Special and remedial students could become so much excess baggage, to be served with the scraps left over from those deemed more worthy. If the REI supplants the current dual model, there must be some regulatory system in place to insure special services to those whose needs just cannot be met in the regular classroom.

The Student-Teacher Self-Efficacy Model is described as well as how this model provides and explanation for the problems associated with responding to the national emphasis on mainstreaming and the Regular Education Initiative. The variables that contribute to the low self-efficacy of regular educators and special education students and the resultant interaction are discussed. Problems that the REI perpetuate are discussed. A rationale is presented as to why teacher preparation programs will need to reorganize if we expect regular educators to successfully mainstream special education students. Specifically, the inclusion of instruction in mild handicapping conditions for all prospective educators is suggested, as well as "specialist degree" training for educators wishing to major in a specific area of exceptional education.

The question arises as to excessive expectations for prospective educators, and, given the current lack of fiscal support for education, as to whether these expectations will be perceived to be worth the expenditure of time and energy.

Implications of the Future. It appears clear that a greater financial involvement by government and commercial interests will be necessary for the future to improve the quality of both regular and special education.
Proposals for the merger of regular and special education have been the subject of considerable debates among special educators. This article briefly explores some of the major arguments of the debate and some of the barriers that make rational discussion of this issue difficult, including disagreements about the current situation, the tendency to become defensive of existing systems, and the lack of a clear vision of what a merged system would look like. The article concludes with a strong plea for overcoming distrust and fear, and using the insights of the mainstreaming movement in schools to inform and guide changes in teacher education that would promote merger.

Ms. Sapon-Shevin appears to take it as a given that the "dual system" of regular and special education is inherently flawed. She makes the blanket statement that: "In actuality, no one argues that the "regular education" system as currently constituted is the optimum learning environment for children with learning problems." If this were the case there would be no REI debate, and several of her articles, including the current one, would be needless exercises in hypothetical hyperbole. She further states that many critics of the REI respond to broad, policy-oriented directions as though they were specific proposals for returning students now served in special education to the regular classroom. One could counter that many proponents of the REI act as if, by dint of repeated statements by policy-oriented special interest groups, the REI is the de facto wave of the future in education, and that these "policy-oriented directions" have, in fact, become specific proposals for wholesale return of special education students to the regular classroom.

Her plea for merger is further weakened by citation of several other opinions as if they were hard fact. These include the contested notion that categorization and labeling are harmful to children, and
that separate, pull-out programs are ineffective. While these things are easy to say, they are much more difficult to prove. One must be wary that empiricism, rather than personal philosophical stance, is the guiding factor in a decision making process of such magnitude.

**Implications for the Future.** Mergers and modifications between regular and special education are currently taking place. While no one contends the legal and moral obligation to educate all students in the least restrictive environment, careful consideration backed by considerable research should determine exactly what that environment is to be. If we were to presently move, en masse, all special needs students into regular classrooms it is highly probable that the quality of education for all students would suffer thereby.
This article examines the omission of special education from the national reports in terms of negative implications for low-achieving students and those currently receiving special services. Current economic and political variables have minimized both the interface between regular and special education and society's willingness to attend to the educational needs of all children. An analysis of a recent report of the Heritage Foundation underscores the growing jeopardy of special education programs. As proposed, many of the recommendations of the national reports including the "push for excellence" (as interpreted by the schools) will have devastating results for many students, particularly those with special educational needs. National educational reforms must include special education if they are to be successful for all children.

Implications for the Future. The push for excellence may "push" certain segments of the school-age population right out of the system, thereby depositing them on society's doorsteps with inadequate skills and deviant attitudes. The question then arises as to whether a "reform" which subsequently deforms non-recipients is really progress.

Discussions on the REI have not addressed the significant differences that exist between the organizational structures, curricula, and other features of elementary and secondary schools. It is argued that wholesale application of the REI to both elementary and secondary schools is a gross over-simplification of a complex problem. This article reviews potential barriers to implementing the REI with mildly handicapped adolescents in secondary schools and then discusses a set of factors central to developing a workable partnership that is compatible with the intent and goals of the REI but that is also realistic in responding to the unique parameters of secondary schools. Among the factors cited are:

- A shared responsibility for low achievement;
- Clearly specifying roles for all parties;
- Offering comprehensive programming for handicapped adolescents;
- Designing instruction for optimal learning; and
- Accommodating the realities of the change process.

Implications of the Future. It appears that most of the literature regarding REI implementation is rooted in research done in elementary schools. A more careful analysis of services rendered, and their success ratio, in the secondary school system is warranted.
AREA: PERSONNEL PREPARATION


Because special educators are being called upon to work with increasing numbers of children from families that do not have both biological parents in the same household, it is important to determine if they have had the professional training to equip them with the knowledge and skills to effectively interact with these children and their families. This study examined the preparation of special educators to work with the family of the 21st century, a family that is increasingly more likely to be a single-parent or step-family. Data relating to special educators’ opinions of their undergraduate preparation, participation in inservice training, and judgement of the importance of preservice training to work with single-parent and step-families were collected. Results are presented and discussed. Areas for further investigation are suggested.

Implications of the Future. It is increasingly clear that educators of children with disabilities will be required to work more closely with families and other professionals in an integrated service delivery FRAMEWORK.

Neverstreaming is described as an intervention which helps to prevent academic difficulties that would lead to students being identified for separate, special education services. The key focus is an emphasis on prevention, and on early, intensive, and continuing intervention to keep students performance within normal limits. Slavin et. al.'s own "Success for All" program is cited as a tool for the Neverstreaming Approach, a tool whose purpose is to provide whatever is necessary to see that all students reach the third grade on time, performing adequately in basic skills--particularly reading. Beginning in first grade, one-to-one tutoring in reading by specially trained, certified teachers is implemented for 20 minutes each day, with an eight week evaluation period. A family support team either provides direct services to children and families or coordinates the services of other providers. A project facilitator works in each school to coordinate (with the building administrator) the "many elements" of the Success for All program. Data is cited from three elementary schools in the greater Baltimore, Md. area which seem to lend support for the program's ability to enhance reading levels. Several other programs--Reading Recovery and Prevention of Learning Disabilities--are also noted as being potential candidates to implement the Neverstreaming approach.

While Neverstreaming's goal is commendable, its focus on early prevention/intervention make its applications limited. The fact that the Success for All program was only tried in three schools within a certain geographical area raises the question of generalizability. Also, a cost analysis for the tutor, facilitator, and family support team is lacking.
It is suggested that the training and supervision of these tutors may well fall under the aegis of special education, thereby making the Success for All program another service rendered by special educators rather than a tool for use by general educators. As such, "Never-streaming" as a title may be a misnomer. The crux of the program seems to lie in remedial, in-class, one-on-one reading instruction, under the umbrella of special education. That the service is delivered in-class rather than as "pull-out", with family service and facilitator components, is the only distinction between it and some current remedial practices, (which may have a special educator, Chapter 1 tutor, Teacher Assistance Team, parental input component, etc). "Neverstreaming" may be a new packaging term for REI consumers, but its contents and constrictions should be carefully considered before it is "bought" and taken home to the kids.

Implications of the Future. The effects of the SFA reported in this article do not appear to support this approach for dealing with students at risk for learning problems. The challenge for the future regarding technology is attempting to find the appropriate medley of human and electronic resources to maximize children's learning. Whether we can identify "learner characteristics" that call for differentiated instructional approaches remains unclear.

The purpose of this article is to provide a rationale for the merger of special and regular education into one unified system structured to meet the unique needs of all students. The rationale for merger is based on two major premises. The first is that the instructional needs of students do not warrant the operation of a dual system. The second is the inefficiency of operating a dual system.

The authors state that all students differ along a continuum of characteristics. Special education, as it now stands, supplies a continuum of services to address characteristics which have, by nature of their deviancy from the norm, warranted special attention. Stainback and Stainback advocate tailor-made instructional programs for all students, whether bright, average, handicapped, or minority.

Implications for the Future. While it is true that all students do differ along a continuum of service needs, special education students needs differ to such an extent that alternative placements may be the logical least restrictive environment.

Removing this option from the educational repertoire, as the Stainback's propose, may hamper rather than help these special needs students. Tailor-made instructional programs for all students is an admirable proposal, however the cost of such an undertaking may far exceed that of operating a dual system.
Proposals for radical reform or integration of special and general education, known as the Regular Education Initiative (REI), are consistent with the Reagan-Bush administration's agenda for education. As a political strategy, the REI is consistent with the Reagan-Bush tendency to focus on a small number of highly emotional issues that distract attention from deeper analysis—in this case, the issues of integration, nonlabeling, efficiency, and excellence. The trickle-down theory is based on the presumption that the greatest benefits will be accrued indirectly by economically disadvantaged citizens under a policy designed to benefit more advantaged citizens directly. Implementation of such policies will very likely produce parallel results for those students who learn most easily and those who are most difficult to teach—higher performers will make remarkable progress, but the benefits for students having the most difficulty in school will never arrive. This theory is analogous to the "corporate socialism" scenarios witnessed by the American public over the past decade, wherein large scale bailouts of the Chrysler Corporation and the Savings and Loan institutions benefitted big business, but did little for the consumer.

This article addresses such issues as quality of instruction versus place of instruction, the negative effect of block funding for students with special needs, overgeneralization about the stigmatizing effects of labeling ("we ignore what we do not label"), the mixed metaphor of Brown v. Board of Education of Topeka as grounds for declaring current special education practices a form of apartheid, and the "call for excellence's" probable negative impact on special needs students. That the REI was promulgated by Madeline Will, a political appointee of Reagan's, is not overlooked.
Implications for the Future. Dr. Kauffman's provocative article is a "must read" for anyone interested in the issue of the REI, and in the larger issue of political equity. Critical insights into the policy behind the emotional appeal are essential to formulating an empirical philosophy for educational reform.

The authors refute an article by Douglas and Lynn Fuchs within the same issue of Exceptional Children regarding the effectiveness of the Adaptive Learning Environments Model (ALEM), segregationism, and interpretations and readiness of the General Education Initiative (GEI). They go on record as saying that "the GEI is not aimed at eliminating or subordinating special education services," and that "the GEI thus recognizes that some students require greater than usual educational and related services."

There appears to be a certain shuttling back and forth regarding just whom the burden of proof is on to supply a rationale for either the continuation of a segregated "second system," or the merger of such into the aegis of regular education. "The failure of the present categorical system is at the root of the GEI" (p. 131). Flawed perhaps; failed, contended.

ALEM is re-affirmed as one feasible alternative for implementing a coordinated special and general education delivery system, with the authors defending ALEM's research base on five topics: general issues of research design and methodology; the extent of independent evidence in support of the ALEM; the comprehensiveness of the Fuchs' analysis of available empirical evidence; the ALEM's design and research base; and a response to specific criticisms of the program's database.

For the Fuchs' reply to this piece, the reader is referred to "Response to Wang and Walberg," within the same issue of Exceptional Children. A brief synopsis is included in this bibliography.

Implications for the Future. Implementation of the Adaptive Learning Environments Model as if it were a panacea for flaws within the current categorical system may prove to be a placebo which "cures" those who are already well, but weakens the condition of those special needs students who are ailing.

Careful consideration of the benefits, as well as the limitations, of ALEM appears warranted.

A prerequisite call for understanding the culture of the school as well as the processes of change that are associated with the innovations brought by the new wave of educational reform is presented in this article. The school as a culture and the change process and its implications are examined. Change is defined as a process rather than an event, and Barth (1972) is quoted as stating that "conflict inevitably accompanies change." The necessity for change remains implicit under the growing fervor of the Regular Education Initiative. P. L. 94-142 is cited as indirectly contributing to teacher resistance to mainstreaming attempts, because an understanding of the school's culture was not taken into account. The REI, according to Welch, may merely be an extension of the mainstreaming movement rather than a call for innovative reform. Before advancing a "second wave" of change within education a greater understanding of the culture of the school is advocated. Waugh and Punch (1987) are cited as listing six general variables related to teacher receptivity to change:

- Basic attitudes towards education;
- Resolution of fears and anxieties associated with change;
- Practicality of change;
- Perceived expectations and beliefs about the change in operation;
- Perceived school support; and
- Personal cost appraisal for change.

Implications for the Future. One caveat needs to be amended to this article regarding the change process. While change may be the
only constant in our expanding universal community, change, in and of itself, does not necessarily constitute progress. Careful analysis of those programs currently in place which are working is as important as focusing on those aspects of service delivery which may require repair.

Madeline Will was the Assistant Secretary for the Office of Special Education and Rehabilitative Services, U.S. Department of Education. This article is an adaptation of her keynote address at the Wingate Conference held in Racine, Wisc. in December of 1985. It has become the cornerstone of the Regular Education Initiative.

Ms. Will states that a review of "separate special systems by parents, teachers, and administrators say clearly: programs have achieved mixed results for some children." In specifying limitations inherent in special programs she criticizes the "pull-out approach" to meet the educational needs of students with learning problems as being an unwitting barrier to their successful education. She further states that special programming can work against a coherent strategy for the provision of services to all students who need individualized assistance. In defending her allegation that "special programs frequently address failure rather than prevention," she specifies that monies and programs are authorized for students only after they have been identified as possessing a handicapping condition. Early intervention is cited as a means of ameliorating this situation, although it is not made clear how identification for early intervention would be achieved.

Because there has been a dramatic increase in the number of children and youth who are unable to learn adequately in the general education system, Ms. Will calls for a "collective contribution of skills" between regular and special educators towards the end of providing an individualized education plan for all students. A curriculum based assessment is advocated as a means of addressing "momentary learning problems" without resorting to special education categorization and labeling.

Although in conclusion she states that this "does not mean the consolidation of special education into regular education," this speech
has sparked just such a dialogue within the ranks of special education. It is only recently that regular education was invited to take part in this discourse. Whether it is a willing partner in this enterprise remains to be seen.

Implications for the Future. Since this article appeared in 1986 future implications are already being realized. Specifically, the divisiveness spawned by the Regular Education Initiative within institutes of higher learning has caused scrutiny of existing service delivery system models and has created a climate of potential proactive change. Departments of special education within institutes of higher learning have traditionally served as leaders in the field of research. While quality research is essential to bettering educational outcomes, bantering amongst professionals is all too often reduced to rhetorical stance statements. An air of open-mindedness guided by empirical evidence regarding issues surrounding the REI should prevail.

In response to the increased integration of students with disabilities into mainstream elementary and secondary classrooms, many teacher education programs are requiring all prospective teachers to take at least one special education course. However, there is little evidence that these courses give teachers the competencies they need. Regular classroom teachers with at least one year of experience who had taken such a course were queried as to the value of the information presented to them after they had begun to teach with mainstreamed students in their classrooms. Of the 114 respondents, only 51 percent reported that they felt adequately prepared.

Implications of the Future. The suggestion most frequently given for ways to improve the preparation program was to afford more direct exposure to handicapped students. In the arena of education, it is becoming increasingly important that practice not lag behind theory. The implication for teacher preparation is that a more rounded educational experience for prospective educators be afforded at the university level.
PAPERS AVAILABLE FROM COSMOS

The papers commissioned by the project are available upon request include:

"Technology and Interactive Multimedia" by Ray Ashton;

"VLSI Technology: Impact and Promise" by Magdy Bayoumi;

"Conceptual Framework: Special Education Technology" by Richard Howell;

"Demographic Characteristics of the United States Population: Current Data and Future Trends" by Beth Mineo;

"School Reform and Its Implications for Technology Use in the Future" by John Woodward;

"Textbooks, Technology, and the Public School Curricula" by John Woodward;

"Workforce 2000 and the Mildly Handicapped" by John Woodward;

"Virtual Reality and Its Potential Use in Special Education" by John Woodward; and

"Annotated Bibliography: Training, Education Policy, Systems Change, and Instruction" by Lewis Polsgrove.

Copies of these reports are available upon request.