Augmentative Communication News

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UPFRONT

Law and public policy in many countries now specify that children with disabilities be educated alongside children without disabilities to the maximum extent possible. This shift away from segregated practices is known as inclusion. Inclusion means different things to different people. For this issue inclusion is defined as:

> "providing to all students, including those with significant disabilities, equitable opportunities to receive effective educational services, with needed supplementary aids and support services, in age-appropriate classes in their neighborhood schools, in order to prepare students for productive lives as full members of society."[1]

Inclusion does not mean just being in a regular classroom. Students with disabilities must have appropriate support services and supplementary aids to participate alongside their peers and benefit from their educational experiences in regular classrooms.[2] *Support services* for children with severe communication impairment (SCI) means a team with expertise in augmentative and alternative communication (AAC). *Supplementary aids* include low and high tech AAC devices, computers and other assistive technologies.

The purpose of this issue is not to argue that children who use AAC should be in inclusive education. Even those who support segregated educational environments say they do so only because children don't get the support they need in regular education. *(continued on page 2)*

University & Research

What's the verdict?

Research on inclusive education shows little, if any, evidence to support the belief that superior student outcomes occur as a result of placements in segregated settings.[3] Research and evaluation data on inclusion indicate improved academic, behavioral and social outcomes for both special education and general education students. Students with special needs who are educated in regular classes do better academically and socially than students in non-inclusive settings. Also, teachers in inclusive classrooms report an enhanced "sense of professional competence, as well as a new pattern of colleagueship with their peers."[4]

The National Center on Educational Restructuring and Inclusion (NCERI) recently conducted a study of inclusive educational practices.[5] Basic findings for both general and special education students reported by districts from all 50 states in the United States are:

- The number of school districts reporting inclusive educational programs has increased significantly from 1994 to 1995.
- Outcomes of inclusive educational practices are positive for all students.
- Professional outcomes for teachers are positive.
- School restructuring efforts are having an impact on inclusive

(continued on page 2)

(**UPFRONT** *continued from page 1*)
Inclusion in education, society, the work-place, family and community is the ultimate goal for all children. Because of the scope of the topic, two issues of ACN will deal with inclusive education. This issue contains an expanded **University/ Research** section. Also, included are secions on **Equipment, Governmental** and **Clinical News.** The next issue of *ACN* will feature expanded **Governmental, For Consumers** and **Clinical News** sections.

University/Research summarizes research on key factors underlying inclusive education. Compiled by the National Center on Educational Restructuring and Inclusion (NCERI) in New York City, this information is useful to the AAC community for two reasons. It confirms that inclusive education is not a passing fad to be ignored, and it documents positive outcomes for all students involved in inclusive education, including those with severe disabilities. Readers may use it to advocate for students who use AAC, or use it as a signal to prepare to support students in inclusive settings. The **Equipment** section takes the stance that technology is integral to the success of inclusive education. Comment on ASHA's position statement on "inclusive practices" appear in the **Governmental section. Clinical News** suggests ways to introduce AAC techniques to a class.

Alliance '96 participants are now preparing to take the next step toward measuring the outcomes of services and devices in AAC and other areas of assistive technology. I am looking forward to working with participants to develop a portfolio of materials to inform and guide practitioners in the measurement of outcomes in assistive technology. For information about the availability of the portfolio, call (408) 649-3050.

Sarah W. Blackstone, Ph.D, CCC-SLP

What's the verdict? *(cont. from page 1)*

educational programs and visa versa.[6]

These findings should serve as a signal to the AAC community to prepare for the future. We will be increasingly called upon to support students in an environment that our training and previous career experience may not have prepared us to do. W need to get ready for new challenges that lie ahead.

More, not less inclusion

The trend in the U.S. (and elsewhere) is toward more, not less, inclusion. In 1994, 267 school districts in 47 states reported inclusive education programs. In 1995, 891 districts in 50 states said they had inclusive education programs. This suggests that, at least in the United States, more districts are complying with current laws (see **Governmental** in the next issue of *ACN*). Inclusion is not a passing fad; it can not be ignored.

The research also reveals that districts vary widely in the ways they choose to initiate and implement inclusive education. Programs have been initiated by individuals or groups from within a school district (e.g., parents, general and special education administrators and teachers), as well as because of pressure from outside a district (court decisions, state reform initiatives and federally funded systems change projects). While most districts initiate inclusion at the elementary school level, some do so at the preschool, junior high or senior high level. Very few introduce inclusive education at all levels simultaneously. Some districts begin with one classroom; others with a single school or across one or two grade levels. Most begin with students who have mild to moderate disabilities. However, students of all ages, disability categories and severity levels are currently participating in inclusive education programs. Some students require only minor curriculum adaptations, support services and no supplementary aids. Others, including most children who use AAC, require extensive, ongoing support services and supplementary aids. We in the AAC community are the ones who will provide these supports, and we need to know how to do so in the context of inclusive education programs.

Student Outcomes

Most available research on inclusive education is qualitative rather than quantitative in nature, because controlled studies are difficult to carry out, and matching students with severe disabilities to each other is rarely possible. This lack of quantitative research makes it difficult to generalize or draw definitive conclusions. Nevertheless, administrators, family members, teachers, clinicians

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and researchers are very interested in the outcomes research available for students in inclusive education—for those with and without disabilities.

Outcomes of students without disabilities. Researchers have investigated the fear that students with disabilities might have a negative impact on the social, academic and behavioral outcomes of students without disabilities. These concerns are not substantiated by existing data. Inclusive education does not result in: (a) curricula that are watered down, (b) classes that are continuously disrupted by adults supporting a child, (c) children imitating undesirable behaviors of children with disabilities or (d) students in regular education receiving less attention from their teachers. Instead, teachers report the attitudes, values and beliefs of students without disabilities are favorably affected. Parents confirm these findings. Table I lists studies that indicate students showed improvements in their appreciation of diversity and differences. No study found significant negative effects.

Outcomes of students with significant disabilities. There seems to be little doubt that children with mild disabilities are better off in regular education classrooms; however, until recently, researchers, administrators, practitioners and parents had little information to guide their decisions about children with moderate and severe disabilities. Table II lists research on the outcomes of students with significant disabilities in inclusive education. These studies indicate that students achieved greater success on IEP goals, made greater behavioral progress, and had other favorable outcomes in inclusive environments. For example, preschoolers exhibited better play skills and showed no differences in their development of academic skills. Claims that preschoolers are better prepared academically in segregated settings are not backed by research. Also, elementary, middle and high school students with significant disabilities benefit from their experiences in regular education. Behavioral and social gains, as well as progress toward achieving IEP goals and improvements in self-esteem, were cited.

Table I. Outcomes for students without disabilities
From Lipsky, D. and Gartner, A.

No deceleration of academic progress for nondisabled children in inclusive classrooms. *(Staub & Peck, 1994)*
Increase in their comfort with and awareness of human differences. *(Staub & Peck, 1994)*
Increase in their responsiveness to the needs of others. *(Staub & Peck, 1994)*
Receive the same amount of teacher attention. *(Staub & Peck, 1994)*
Lose about the same amount of instructional time to interruptions. *(Staub & Peck, 1994)*
Show an increased tolerance of other people. *(Helmstetter, Peck and Giangreco, 1994)*

While these studies are not specific to students who use AAC, they demonstrate that students with severe disabilities do benefit from inclusive education.

Inclusion and restructuring

The NCERI purports that school district restructuring efforts and inclusion are compatible movements within the educational system. Restructuring is an educational reform movement of the 1990s. Briefly, restructuring involves a shift from teacher-directed approaches to instruction toward student-centered approaches to learning that emphasize the construction of knowledge by the student. There are new roles for students (as active learners) and classroom teachers (mentor, resource allocator, coach). There is often more shared decision-making and site-based management and a greater use of interdisciplinary learning, cooperative learning and new assessment strategies (e.g., portfolios). Restructuring is enthusiastically *(continued on page 4)*

Table II. Outcomes for students with significant disabilities
From Lipsky, D. and Gartner, A.

Had greater success in achieving IEP goals than did matched students in tradtional programs. *(Ferguson, 1992)*
Behaviorally challenged students showed gains in self-esteem. *(Burello and Wright, 1993)*
Students with severe disabilities in general education had IEP's containing more references to effective instructional methods than those in special classes. *(Hunt, Farron-Davis, Beckstead, Curtis, & Goetz, 1994)*
Gained greater acceptance from peers who don't have disabilities. *(Marwell)*
Made greater behavioral progress.*(Burello and Wright, 1993)*
Compared effects from many studies of inclusive versus noninclusive settings and found a small-to-moderate beneficial effect of inclusive education on academic and social outcomes. *(Baker, Wang and Halberg, 1994)*
Preschoolers with severe mental impairment exhibit lower rates of inappropriate play in integrated settings in comparison to thier behavior in segregated settings. *(Guralnick, 1981)*
Preschoolers show no difference in developmental progress on standardized tests. *(Nisbet, 1994)*
Preschoolers spend more time playing and verbalizing in positive interactions with peers. *(Nisbet, 1994)*
Students with severe disabilities in middle-school had positive experiences and improved attitudes. *(York, Vandercook, MacDonald, Heise-Neff, & Caughney, 1992)*
A statewide survey of high school students indicated more positive outcomes were associated with more contact and substantive interaction. *(Helmstetter, Peck, & Giangreco, 1994)*
Students with severe disabilities in cooperative learning groups independently demonstrated targeted basic skills and generalized them. *(Hunt, Staub, Alwell, & Goetz, 1994)*
In a six-year followup program at the elementary school level, significantly more positive attitudes, levels of social contact and support in the community were noted. *(Kishi & Meyer, 1994)*

University/Research **(from page 3)**

supported in some areas and is largely being ignored in others. Inclusion, on the other hand, is a civil rights and legal issue, not just an educational reform issue. Inclusion must not be ignored.

Restructuring and inclusion are common bedfellows because both attempt to make accommodations for the diversity of learning styles in today's classrooms and to prepare all children for the future. Also, both require staff to make changes in how they perceive and carry out their roles. Collaborative teaching models, problem solving and a shift from a focus on learning content to a focus on developing strategies to support the process of learning are common elements of both.

If inclusive education is easier to implement in a context of restructuring, as the NCERI suggests, then the AAC community has a stake in the success of current school restructuring reform efforts. It may be useful, therefore, to understand something about educational reform efforts.

In a recent book *Tinkering Toward Utopia: A Century of Public School Reform*, Tyack and Cuban demonstrate that historically most school reform efforts fail to have a long lasting impact on what happens in the classroom.[7] They cite attempts to convince teachers to infuse technology into their instructional practices as an example. Film, radio and television, they write, have had similar histories in public schools— "hyperbolic claims by advocates and then marginalization in schools."[8] Tyack and Cuban warn that most public school reform efforts are not long lasting because (1) schools are resilient institutions and very resistant to change; (2) reform efforts tend to be imposed from the top-down, by "policy elites;" and (3) reform efforts that bypass classroom teachers (the gatekeepers) fail. Their conclusion suggests that support by AAC professionals for teachers and parents who are trying to make restructuring work may help bring about the kinds of changes in the regular classroom that can provide more opportunities for students who use AAC techniques.

What about students who use AAC?

One can find a significant number of articles and books that testify to the success of children who use AAC in both inclusive and segregated educational environments.

- Calculator and Jorgeson's book *Including Students with Severe Disabilities in Schools: Fostering communication, interaction, and participation* describes the successful inclusion experiences of many children who have SCI.[9]
- In the June 1995 issues of *Communicating Together,* several authors describe positive outcomes for students who were educated in special classes. They point out that children who use AAC to be in classrooms with teachers specifically trained in AAC until communication and language skills are well established.[10]
- In *Exceptional Parent Magazine,* articles by parents recount the experience of inclusion from their perspective.[11]

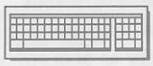
My own experiences have been positive:

- Working in the Berkeley Unified School District for the past six years on a collaborative AAC team, I am familiar with the outcomes of 22 children who use AAC techniques. All but two are now fully included in regular education classrooms. The two in a special class at the high school have parents who prefer a separate program. For them, inclusive experiences are provided in the community.

  Staff, administrators and parents agree that outcomes for the students fully included are more positive than they were 5 years ago when these children were in segregated classrooms. It is worth noting that these children had AAC team support in both settings. Thus, AAC support, although necessary, is not a sufficient explanation for what is seen as markedly improved outcomes.

Testimonials are not enough. The "Oh, wow" days are over.[12] No individual's opinions, experiences or beliefs should determine policy or dictate practices in the field. We need data. We need to know what the necessary educational components are for children who use AAC. Which supports and supplementary aids are useful, and which are not. What are the costs/benefits of inclusive education? of special classes? Are teachers, parents, students and support personnel who participate satisfied? Longitudinally, we need to know what happens to these children as adolescents and adults. Does their quality of life and functional communication skills differ from those who have attended school in segregated settings? How?

At present, we do not have research that answers these questions. A review of the *AAC Journal* since 1985 revealed only two articles indexed under education and mainstreaming and no article indexed under inclusion. One article described inclusion as a best practice.[13] The other studied vocabulary usage in regular classrooms.[14] Hopefully, researchers will begin to address the myriad of questions being raised by practitioners who are trying to support students with severe communication impairments in inclusive education programs.



Equipment

Technology and inclusion

Trying to make inclusion work without technology is like trying to win a fight with one hand tied behind your back. However, it is not only having access to the technology, but also how and when the technology is used that can make a difference. Sometimes the kinds of questions school districts ask about technology have led to practices that do not support the use of technology as a powerful tool for inclusion.[15]

The wrong questions

If a question leads to answers that increase segregation, or that decrease children's access to the tools needed to learn alongside their peers, it is probably the wrong question. Examples of some wrong questions are:

- How much one-on-one practice with a computer (or an AAC device) do students need before they are ready to go into a regular education classroom?
- How can we set up a computer station in the back of the classroom for a student with severe motor impairment who needs it to write, speak and do math?
- During what activities should the individual who uses a speech output communication device be allowed to use it?
- When should we bring children with disabilities to the resource room to practice using technology?
- How can we use new technologies to adapt standardized tests so we can then use them to assess individuals with disabilities?

These questions are based on erroneous assumptions about *readiness*. Some imply that technology is an end in itself, rather than a tool to enhance learning and participation within the regular classroom. Other questionable assumptions reflected by these questions are that (1) drill and practice with a computer or an AAC device is an effective way of mastering skills; (2) standardized tests should be used in nonstandardized ways with the kinds of students who weren't originally included in the standardization sample or (3) educational tools (computers and assistive technology) which allow a child to communicate and participate in classroom activities alongside peers and to access the curriculum more successfully should not always be available to students who need them. In short, the idea of segregating students with disabilities to provide them with technology time as a way of preparing them for inclusion is an old, outmoded and discredited idea about readiness.

Technology: A tool for including students

The technology introduced to a classroom by a student who uses AAC techniques can benefit all the children. If it is a computer, it might be the only one in the classroom; or it might have a CD-ROM and encyclopedia software that others can use as a reference. If it is a communication device, it might allow the student to give a group's report to the class.

In addition to the technology itself, the expertise that comes with this technology can help classroom teachers who are technophobic learn (a) that computers (with appropriate software) are powerful instructional tools and (b) that AAC devices allow a child to participate and make the child easier to teach. A description of three programs/ projects designed to support the use of technology in inclusive education follows.

1. Technology in the Classroom. The American Speech-Language-Hearing Association (ASHA) conducted a 3-year project called Technology in the Classroom.[16] The project's goals were to develop materials to help professionals and families meet the needs of children with severe disabilities who could benefit from assistive technology and computers in the home, school and community. Samples of best practices were solicited from programs throughout the United States and Europe. Project staff worked with local and national sites in developing a series of products. Products include: (a) Four modules: *Education*; *Communication*; *Hearing and Listening*; *Positioning and Mobility*.[17] These provide detailed descriptions of how to integrate technology in a child's life. Each was designed to be used by parents, teachers and support service providers in small groups or individually. (b) The videotape, *Technology in the Classroom,* was designed to introduce the modules and provide examples of the use of technology in inclusionary settings.[18]

2. CAST. At the Harvard-Kent School in Charlestown, MA (and in four other schools around Boston), the Center for Applied Special Technology (CAST) is demonstrating a way to deal with the increasing diversity of the American classroom. CAST bases its efforts on the belief that true inclusion is difficult to achieve, primarily because it requires a curriculum, not simply a classroom, that is accessible.[19]

The idea of providing equal access to the existing classroom curriculum through technology is a powerful one. Technology can capitalize on strengths and offer alternative access and instructional methods to accommodate differences. CAST's Equal Access project developed and tested models for supporting inclusion with technology. CAST believes that the fixed print of traditional textbooks, for example, *(continued on page 6)*

Equipment *cont. from page 5)*

is as equally a serious impediment to the integrated learning of many students as staircases are to the student in a wheelchair. Printed text presents information in the same way for everyone, yet students' varied learning styles call for alternative formats, and their learning difficulties require individualized help and support.[20]

CAST is spearheading the development of software for regular education that incorporates access and instructional features. One outstanding example is the Wiggleworks curriculum that CAST developed for Scholastic.[21] This early reading (K-2) curriculum not only takes full advantage of a multimedia format to promote student motivation and success in early reading, it builds in alternative access routes for children with disabilities and makes it easy for individuals to work together cooperatively, while keeping track of who worked with whom. Children can turn on and off the many special features built in to give kids with disabilities easier access to the curriculum (e.g., enlarged type, word by word sound, etc.).

3. CompuCID. CompuCID (the Computer Classroom Integration Demonstration) was a three-year demonstration project that focused on the use of computers as tools to promote the integration of students with special needs into regular classrooms in six school systems across the U.S.[22] The project demonstrated how computers and cooperative learning can enhance the integration of students with disabilities into public school classrooms. In the demonstration schools, computers and children with special needs were integrated into the regular classroom.

The program was designed to help regular education teachers, staff who work with students with disabilities, the students themselves, and their parents learn about the many ways that computers can help children and youth to more fully participate in regular classroom learning activities.

The most innovative outcomes of the CompuCID project were: (1) the use of cooperative learning techniques using the computer for the specific purpose of integrating students with special needs with their peers; and (2) the mastery by a group of typical teachers of specific software and its use in promoting cooperative learning activities across a wide range of age groups, disability categories and ability levels.[23]

Some better questions

These projects and programs can help school districts raise a whole new set of questions. Rather than seeing computers as a tool for a single child with a disability to practice a skill or play a game, we can ask how to use them as instructional tools for teachers and contexts for cooperative learning. Rather than think of communication devices as boxes that allow a child to make choices and respond to questions from time to time, we can encourage teachers to ask how to use them to encourage interaction and shared learning among their peers. More examples of better questions are:

- How can we utilize available technology in ways that truly give children equal access to the classroom curriculum?

CAST's work, IntelliTools[24] and Don Johnston, Inc.[25] are among the companies offering access to technology that supports inclusive education.

- How can we help teachers use technology as an instructional tool that can provide an environment where children with different learning styles and capabilities work cooperatively to accomplish curriculum goals?

A recent series of eight books by Harvey Pressman and Peter Dublin under the series title *Integrating Computers in Your Classroom* emphasizes the uses of classroom technology as a diversity accommodation tool and provides many examples of classroom activities designed to facilitate the inclusion of students with disabilities via technology and cooperative learning.[26]

- What can we do to help support the process whereby nondisabled peers of included students become familiar with their technology and become natural classroom technology aides, thus enabling the adults to recede further in the background during the child's interaction with peers?

Teachers report benefits for all children when peers take responsibility for helping a child to learn to use technology. Also "programs in which students with handicaps serve as tutors for other students with handicaps and for those without . . . serve to integrate students with handicaps, to promote respect for their capacity, and to enable them to learn by teaching."[27] The introduction of technology into this "reverse" tutoring process can potentiate the process, because computers can support the tutoring, check the correctness of answers, and help supplement missing knowledge and factual information.

Asking more of the right questions is a start that can lead us to finding better answers. Learning how to use technology to support learning and other classroom activities can pay off in a better education for all children.

Governmental

ASHA takes a stand squarely in the middle

The Association for Speech-Language-Pathologists and Audiologists'* (ASHA) adopted a position statement on *Inclusive Practices for Children and Youth with Communication Disorders* at the December, 1995 Annual Convention in Orlando.[28] This position statement may stand historically as an almost perfect reflection of the ambivalence and confusion of many in our field toward the important subject of inclusive education.

The position statement ended up defining "inclusive practices" as covering a wide range of approaches including (via some considerable efforts at circumlocution) segregated, pull-out services! Despite the fact that the term *inclusive* in all other educational contexts refers to supporting children in regular education, the statement defines "inclusive" as covering direct (pull-out) programs, as well as classroom-based service delivery, community-based models and consultative interventions.

The ASHA position statement includes a very good review of the literature on inclusive education. It acknowledges that available research "provides tentative support for inclusionary efforts," and even warrants "guarded optimism" for the effectiveness of providing services in the classroom. It cites research that indicates positive support for serving children with communication impairments in regular education classrooms rather than "pulling them out for individual therapy."

The statement ultimately falls back on the old "need for additional study and therefore we won't change anything stance." It concludes that the "speech-language pathologist (in consultation with everyone else, of course). . . is in the ideal position to decide" which of the "inclusive service delivery models" best serves "each individual's communication needs," including pull out services.

Where does this leave the practitioner? Squarely between the proverbial rock and hard place. At a workshop on inclusion at that same ASHA convention, many speech-language pathologists complained that their jobs are often structured in ways that accommodate "pull out therapy" but prevent flexible scheduling, team-teaching, collaboration and curriculum based intervention—so critical to successful inclusion. Many feel as though their districts are asking them to be everything to everyone. They do not feel supported in their efforts to implement the law and support children with communication disorders in regular classrooms by ASHA's position statement.

*ASHA changed its name at the December 1995 convention. The acronym remains unchanged.

Clinical News

Introducing AAC to classmates

Children need to know how a student who uses AAC communicates. One way to introduce AAC approaches to children is for the inclusion specialist, speech-langaguage pathologist, parent and child to prepare a special lesson for the class. Table III gives an example of a lesson plan. The activity is designed to increase awareness of AAC modes and to allow students the experience of "talking" using a limited vocabulary. It is a good way to facilitate discussion about the role of partners and the importance of gestures, facial expressions, vocalizations and other signals. Also, it is fun.[29]

Table III. Sample lesson plan. Introducing AAC to a class: Making and using communication boards.[29]

Materials: Paper with or without grids, symbols that relate to a preselected topic, scissors, pens, paste, pencils.

Step 1. Show examples of communication displays. Including some that are similar and some that are different. **Step 2.** Answer all questions. The student who uses AAC should answer as many of their questions as he/she can. **Step 3.** Tell students they are going to develop a communication display using symbols, words and/or drawings (depending on the skills of the class). Then, tell them they are going to use the display to talk to a classmate. **Step 4.** Give them a topic to discuss.	For example a recent holiday, a field trip, a movie they have all seen, music or politics. **Step 5.** Provide materials they will need to make a display (see above). Make sure they each have enough appropriate symbols to select from. (Generally between 20 and 30 symbols). **Step 6.** Give them time (15-30 minutes) to make their display. Provide assistance as needed **Step 7.** Pair them up. Each student uses his/her display to talk to a peer. Only one child should pretend he/she can not speak at a time. After about 5 minutes, they should switch roles.

Another way to introduce AAC techniques to classmates is to set up stations throughout the room. Each station represents one way a person who uses AAC might communicate. For example, there might be seven stations: a communication board, communication device, manual signs, conversation book, schedule book, no-tech and a hard-to-understand speech station. As children in the class rotate through these stations, they not only learn about diverse ways of communicating, but also have an opportunity to practice interacting using different modes of communication.[29]

References

[1] Lipsky, D. & Gartner, A. (1995) Common questions about inclusion: What does the research say? *Exceptional Parent*, 25 (8):36-39.

[2] The Individuals with Disabilities Education Act (IDEA). 20U.S.C. 1412(5)(B).

[3] Lipsky, D. & Gartner, A. (1995). The evaluation of the inclusive education programs. *Bulletin of the NCERI*, 2:2, 1-7. (single copies free, NCERI, CUNY Graduate Center, Rm 1530, 33 W 42nd St, NY, NY 10036.)

[4] *Ibid.* p. 1.

[5] Lipsky, D. (1995). *National study of inclusive education* (Second edition). New York, NY: National Center on Educational Restructuring and Inclusion.

[6] Lipsky, D. (Fall, 1995). National study on inclusion: Overview & summary report. *Bulletin of the NCERI* , 2:2, 1-8.

[7] Tyack, D. & Cuban, L. (1995). *Tinkering toward utopia: A century of public school reform*. Cambridge, MA: Harvard University Press.

[8] *Ibid.* p. 124.

[9] Calculator, S. & Jorgensen, C. (1995). *Including students with severe disabilities in schools: Fostering communication, interaction, and participation*. San Diego, CA: Singular Publishing Group, Inc.

[10] *Communicating Together*. (June, 1995). 12:2, 2 -17.

[11] *Exceptional Parent*. (September, 1995). 25: 8, 54-65.

[12] Parnes, P. (1995) The oh, wow days are gone forever, Canadian Administrator reports. *Outcomes in AAC Conference report*. Monterey, CA: ACI.

[13] Calculator, S. & Jorgensen, C. (1991). Integrating AAC instruction into regular education settings: Expounding on best practices. *Augmentative and Alternative Communication (AAC)*. 7:3, 204 - 214.

[14] McGinnis, J. & Beukelman, D. (1989). Vocabulary requirements for writing activities for academically mainstreamed students with disabilities. *AAC*, 5, 183-191.

[15] Pressman, H. & Blackstone, S. (in press). Technology and inclusion: Are we asking the wrong questions? *IMPACT*.

[16] Technology in the Classroom. Funded in part by the U.S. Department of Education. ASHA, 10801 Rockville Pike, Rockville, MD 20852.

[17] Cassett-James, E. L. *Education Module.* Blackstone, S. *(1992). Communication Module.* Trefler, E. *Positioning, Access and Mobility Module;* Flexer, C. *Listening and Hearing Module.* (1992) *Technology in the Classroom.* (eds. Harlan, N. & Bruskin, D.) Rockville, MD: American Speech-Language-Hearing Association.

[18] *Technology in the Classroom.* (1992). A videotape. Rockville, MD: American Speech-Language-Hearing Association.

[19] Harvard-Kent: Creating a school for all kids. (Summer, 1994). *Interfaces*. 1: 1, 4-7. CAST, 39 Cross Street, Peabody, MA 01960.

[20] *Ibid.* p. 4.

[21] *WiggleWorks* (1995). Scholastic. 1-800- scholastic.

[22] Foundation for Technology Access. *CompuKid Manual.* (1993). Available from FTA, 2173 E. Francisco Blvd. Suite L, San Rafael, CA 94970.

[23] Male, M. (1993). *Technology for inclusion: Meeting the special needs of all students*. Needham, MA: Allyn and Bacon.

[24] IntelliTools, 55 Leveroni Ct., Suite 9, Novato, CA 94949. (800-899-6687).

[25] Don Johnston, Inc. PO Box 639, Wauconda, IL 60084-0639.

[26] Pressman, H. & Dublin, P. (1994). *Integrating computers in your classroom*. New York: Harper-Collins.

[27] Gartner, A. & Lipsky, D. (1987). Beyond special education: Toward a quality system for all students. *Harvard Educational Review*. 57:4, 367-395.

[28] Position statement *Inclusive Practices for Children and Youth with Communication Disorders*. Rockville, MD: ASHA. (1995).

[29] Julie Maier and Mary Wrenn. Personal communications (1995).

References—Tables I and II

Baker, E., Wang, M.,& Walberg, H. (1994). The effects of inclusion on learning. *Educational Leadership*. 52(4):33-35.

Burello, L. & Wright, P. (1993). Strategies for inclusion of behaviorally challenged students. *The Principal Letters*, 10.

Ferguson, D., (1992) *Regular Class participation system (RCPS): A final report*. Eugene: University of Oregon. ($3; Dianne Ferguson, College of Education, 1235 University of Oregon, Eugene, OR 97403; 503 346-2491.)

Guralnick, M. (1981). The social behavior of preschool children at different developmental levels: Effects of group composition. *Journal of Experimental Child Psychology*, 31(1), 115-130.

Helmstetter, E., Peck, C. & Giangreco, M (1994). Outcomes of interactions with peers with moderate or severe disabilities: A statewide survey of high school students. *The Journal of the Association for Persons with Severe Handicaps (JASH)*. 19(4), 263-276.

Hunt, P., Staub,D. Alwell, M. & Goetz, L. (1994). Achievement by all students within the context of cooperative learning groups. *Ibid.* 290-301.

Hunt, P., Farron-Davis, F., Beckstead, S., Curtis, D. & Goetz, L. (1994) Evaluating the effects of placement on students with severe disabilities in general education versus special classes. *JASH*, 19 (3): 200-214.

Kishi, G. & Meyer, L. (1994). What children report nd remember: A six-year follow-up of th effects of social contact between peers with and without severe disabilities. *JASH*, 19, 4, 277-189.

Marwell, B. (1990). *Integration of students with Mental retardation.* Madison, WI: Madison Public Schools.

Nisbet, J. (1994). Education reform: Summary and recommendations. *The national reform agenda and people with mental retardation: Putting people first*. Washington, D.C. U.S. Department of Health and Human Services, 151-165.

Staub, D. & Peck, C. (1994). What are the outcomes for nondisabled students? *Educational Leadership*, 52 (4), 36-40.

York, J., Vandercook, T., MacDonald, C., Heise-Neff, C. (1992). Feedback about integrating middle-school students with severe disabilities in general education classes. *Exceptional Children*, 58 (3), 244-258.