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Augmentative Communication News

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INSIDE THIS ISSUE . . .

UPFRONT

Segregation means the act of setting apart from the rest, i.e., isolation. Segregated settings symbolize society's rejection of one segment of a citizenry.

For years...we have maintained a public policy of protectionism toward people with disabilities. We have created monoliths of isolated care in institutions and in segregated education settings. It is that isolation and segregation that has become the basis of the discrimination faced by many disabled people today. Separate is not equal. It wasn't for blacks; it isn't for the disabled (Weicker, 1989, p.17).

This issue focuses on integrating AAC users into our educational system, the world of work, our communities, and the mainstream of society. All resources and references can be found on page 8.

In preparing the issue, I spoke with government employees, a lawyer, teachers from regular and special education, clinicians, school administrators, parents of children being mainstreamed, vocational specialists, professors, and individuals who use augmentative techniques, a total of 29 people. I am grateful to them for sharing their experience, frustration, and visions.

Listening, reading, watching, reflecting, thinking, we are learning. "Normalization," "deinstitutionalization," "mainstreaming" are steps along the way to something fundamental and non negotiable, the right of all people to participate in society. Integration is not an experiment or a demonstration project, not a gift to those *(cont. on page 2)*

For Consumers

Life is Not a Dress Rehearsal!

In the past, most people who were unable to speak were considered too "handicapped" to be enrolled in regular schools or employed in a productive manner. Today an increasing number of individuals with even the most severe disabilities are learning, growing up, living, and working alongside their able-bodied peers. Unfortunately this does not include everybody, everywhere...NOT YET.

This section considers steps we (parents, teachers, clinicians, individuals who are severely speech impaired, manufacturers, administrators) can take to make integration happen.

- Step 1. Examine the attitudes and expectations of those around you...and your own. The expectation level of professionals and families is often quite low. Limited expectations, interventions that may have focused on socialization rather than achievement, a caring that sometimes bordered on protectionism, and an acceptance of institutional attitudes that somehow "special" made being "separate" okay. We may inadvertently be maintaining barriers. *We can not be part of the problem.*
- Step 2. Develop a set of basic assumptions, like those listed in Table I *(see page 2)* leading to the conclusion that integration is the only option.
- Step 3. Actively support successful integration programs and work to improve programs that fall short. The active and essential ingredient is commitment, on the parts of *(cont. on page 2)*

Upfront (from page 1)

less fortunate, not something you must earn or prepare for. We should not be asking "*if, why, where, or when*" to begin. The question to ask is "*how*" to make integration work in our schools, neighborhoods, and communities? The rest is all action!

Our mission in AAC is to insure each individual's right to communicate. Although AAC technologies and strategies have an impact on the lives and communication skills of individuals with severe speech difficulties, I believe it will be integration that makes the real difference. I believe we must play an active role in making that happen.

In **For Consumers**, four initial steps are presented toward making integration happen for individuals with disabilities. **Clinical News** provides a perspective and ideas for meeting challenges in our educational and vocational systems. The **Equipment** section addresses the roles technology can play in the process of integration. In the **Governmental** section some U.S. laws and programs protecting the civil rights of individuals with disabilities are summarized. Finally, in **University/Research** a relatively new AAC program is highlighted, the State University of New York in Buffalo.

In September, the ACN author and publisher will be on editorial assignment in New Zealand and Australia. Look for a report in the November issue on what's happening "Down Under" in the area of AAC. During the time we're out of town, the Hotline (408) 649-3050 will be ~~unmanned~~ *unwomaned*. We return on October 3rd. Talk with you then.

Not a Dress Rehearsal (from pg. 1)

administrators, teachers, employers, peers, parents, and neighborhoods. Commitment means coming together to create a consciously thought out and supported version of integration.

In our interview, Montgomery described four types of integration:

* 1) Physical integration. The individual is placed in a building where "regular" activities go on (e.g., school, classroom, community center, bowling alley, group home). Effectiveness is measured by amount of time the individual is physically present (e.g., 60 percent of the school day).
* 2) Social integration. The individual has opportunities to interact with able-bodied persons. Facilitated interactions occur in naturalistic settings (e.g., the playground, McDonalds, the classroom). Effectiveness is measured by the quantity and quality of interactions (e.g., amount of time interacting, speech acts, number of partners, attitudes of partners, etc.). The emotional components involved are very individualistic and hard to measure.
* 3) Academic or vocational integration. The individual participates in a structured learning or work environment with facilitation and support. Effectiveness is measured by how much and what is learned and accomplished.
* 4) Societal integration. The individual participates in community activities, i.e., leisure, vocational, living arrangements, public transportation, politics, etc. Effectiveness is measured against criteria, such as "how much like real life it is."

These all appear to be components of *total integration*. They are not mutually exclusive. *If you let it,* any place you start can lead to *total integration*.

- Step 4. Confront each "problem" (e.g., accessibility, lack of money for equipment, caseload size, limited staff expertise, lack of space, complexity of technology, and so on) as an opportunity to plan and implement yet "another creative solution."

Yes, there will be difficulties; and arguments will be made to maintain segregated settings. For example, a) *In segregated schools children can be grouped by age and disability whereas in integrated schools, they will all be in one classroom.* Note: Someone's missed the point! b) *As a parent I agree philosophically with integration. Pragmatically, I don't want my child to be a "test case."* Note: We hear you. But, if the commitment and support are there, your child can't lose, and you'll survive!

c) *The facilities are so much newer and more accessible at the Special Education school. What are we going to do with this beautiful building?* Note: Turn it into a community center and encourage integration for all ages!

No one thing works. But, life is not a dress rehearsal. Each day counts; the time is now!

Table I. Integration is the Only Option: A Dozen Reasons

1. Integration is a moral and civil rights issue, protected by law in many countries.

2. Integration is good for all citizens. It allows individuals who are able-bodied and those with disabilities the opportunity to develop the attitudes, values, and skills required to get along with one another as interdependent members of society.

3. There are no prerequisites. Integration is not something one prepares for or becomes entitled to after achieving operational competence on an electronic device, or attending a special class, or learning to talk.

4. Public education is society's means of developing the skills and attitudes of the next generation. Segregated educational settings do not, can not, and never will prepare individuals to function as adults in society.

5. Integrated education is not less expensive than special education, but it does not have to be more expensive. Note: Outdated administrative systems often make it much more difficult to deal with because funding comes from several budget lines.

6. In the end, integration will cost less. Research shows that students, even those with severe handicaps, are more likely to find and hold jobs when leaving school if they have been involved in community-based schooling and integrated education. Note: those integrated early are more successfully employed as adults.

7. No evidence exists that students in segregated settings get a better education than students in integrated settings.

8. In integrated settings there are fewer children, per teacher, with special needs. Thus, the intensity of care is decreased. With adequate support, teachers can do what teachers are supposed to do...Teach. And, children can do what they are supposed to do...Learn.

9. Nondisabled peers are often the best models of socially and academically valued behaviors. All children benefit from the incidental learning and world knowledge they acquire in integrated settings.

10. Integration enables people with and without disabilities to become friends.

11. Everyone has disabilities and abilities. Through exposure, misconceptions about persons with disabilities are overcome and community members learn to accept and value the inclusion of these individuals.

12. Disability is an equal opportunity army. Anyone may join the ranks.

(Parts adapted from pamphlet entitled "Integrated School Communities: Ten Reasons Why." Available from Minnesota Integrated Education Technical Assistance Project. Institute on Community Integration, Univ. of Minn., 6 Pattee Hall, 150 Pillsbury Drive SE, Minneapolis, MN 55455.)

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Clinical News

Education and Employment issues

Individuals who are integrated with support in their communities have enhanced communication opportunities. They get to know individuals in their neighborhood. They receive instruction where they live, practice skills in the actual settings where they are needed, gain familiarity with the locale and develop a sense of belonging. Community workers (storekeepers, policemen, etc.) and neighbors become aware, learn to interact, and get to know them. While independence is important, we are all interdependent. Living, working, and going to school in the community gives persons with disabilities a network of natural supports and communication partners.

Educational Settings

The goal is for children to stay in the regular curriculum with their age-matched peers to the greatest extent possible. Obviously, for students with severe speech problems and other multihandicapping conditions, adaptations are needed.

Communication Skills needed in Regular Education

A way to raise your hand, indicate choice & preference, write, manage printed materials, participate in classroom interaction, express needs/wants, transfer information, establish social closeness, and maintain social etiquette (Beukelman, 1989).

Preschool. Many feel strongly that children should be integrated early, i.e., in infant/toddler and preschool programs. Reverse mainstreaming can work. The active involvement of AAC teams during the early years provides more time to become familiar with technology and develop language and communication skills. Integrating preschools, like integrating neighborhood schools may be logistically difficult to accomplish, but it's worth it.

The Participation Model

Beukelman recently described an integration model being developed and implemented at the University of Nebraska for those who use AAC aids and techniques (preschool through college). In contrast to a communication needs approach to assessment and intervention, they are measuring a student's *access* and *opportunity* to *participate* in the regular education curriculum. The model is developed for the competitive student, i.e., the student who can, with assistance, keep up with the curriculum of age-matched peers. However, the concepts of *access, opportunities,* and *participation* are relevant to learners of all ages. The Participation Model addresses important issues related to the integration of AAC users in regular education, as summarized in Table II.

Table II. AAC in Regular Education

* 1. The regular education curriculum provides a road map. When we begin making up individual curriculum for children, it not only takes more time, but also takes the child away from an organized, systematic approach to learning. Too often these students end up on a road to nowhere!
* 2. Students must be communicatively ready to compete as they enter the school system or they will fall behind immediately.
* 3. Nonspeaking students must be supported in communication tasks that they cannot manage or rapidly develop the skills to manage.
* 4. AAC techniques must be integrated into existing curriculum so students can take full advantage of curricular structure and sequence.
* 5. AAC learning must be planned to compete minimally with academic learning. The extensive learning demands of some devices and AAC techniques may be incompatible with achievement in school.

To implement the model, staff first determine what activities occur each day and the level of participation expected of both typical and target students. Then, they identify barriers to participation in terms of a student's:

1) Opportunities (often affected most by the attitudes of those around the student) and the potential to increase opportunities by enhancing knowledge, increasing commitment, or changing policy & implementation practices.
2) Access to various contexts and activities (e.g., mobility, manipulation, communication, cognitive, linguistic, sensory, perceptual) and the potential to increase access through the development of natural skills, environmental modifications, and communication augmentation.

The next step is to develop a plan. The extent to which the student can compete in each activity and the support needed to be successful are delineated. The concept of "partial participation" is acknowledged as a viable solution. Ongoing, meaningful support to regular education teachers, aides, families, and students on the part of administrators, professionals in special education, and AAC team members is delineated. For example, a child with cerebral palsy may be required to complete 4 math problems on the computer, while classmates do 20 at their desks. Or, individual or small group instruction may be provided in a resource room to facilitate the development of math skills.

Not all students who use AAC are "competitive." In fact, most of our students have learning disabilities and/or are mentally retarded. These students will not learn at the same rate as peers. The goal for these students is to build their academic skills to the greatest extent possible using adapted curricula, when necessary, and to integrate them for world knowledge subjects such as social studies, science, music, art, homeroom.

There is another group of children (and a large number of adults) who have been largely deprived of their education. For them, we must "catch up!" Using adapted curricula, many of these people can be taught to read, do math, spell, etc.

For students with severe and profound mental retardation, more functional approaches are followed. Although goals are different, basic skills and world knowledge continue to be part of their curriculum. These students also benefit from integration with age-matched peers. A greater emphasis, however, is placed on job skill training and community integration.

Roles and responsibilities

Professionals seem to have difficulty assuming the roles required to make integration work. One reason cited is we are not used to working together. Most university training institutions segregate special education from regular education from health-related training programs. Second, *(cont. page 4)*

(continued from pg. 3)
our traditional inservice training methods raise awareness, but do not produce implementors. Karlan's recently awarded U. S. Dept. of Ed. grant **Training school personnel to use environmental communication teaching methods with students who use AAC** (#H023 9005) investigates the effectiveness of two feedback methods on changing teacher behavior and student outcomes. Stay tuned.

Typical roles and responsibilities of integration team members are:

The **Parent's** primary role is to provide a supportive family and develop the child's knowledge base. Some parents help with homework, facilitate participation in after school activities, and play an advocacy role. Another role for families is to make the child as attractive as possible.

Regular Education Teachers set the attitudinal tone for the class and provide the predictable educational path that support staff can follow. A good teacher will develop educational strategies that allow AAC users to participate. Other professionals will be asked to support the teacher so functional, academic, and social goals can be accomplished in the school. The classroom teacher does not assume responsibility for implementing technology. They have a curriculum to teach and a classroom to manage!

School Principals, Directors of Special Education, Superintendents are designated leaders. Ideally, they are active advocates for integration; however, their job descriptions also involve economics and "keeping the peace." Integration can still be successful if they remain passive; but, it's more difficult.

Aides/Personal Attendants are often undercompensated, undervalued, and untrained. Yet, these individuals have been the key to many an AAC student's success. They need our support. Good aides work for the teacher to implement the curriculum and make learning possible. They often carry out suggestions of special education personnel (including AAC team members) to customize and program vocabulary, act as interpreters, take care of feeding, bathroom needs, etc. In their spare time they foster peer interaction, self confidence, and independence in their students.

Special Education Specialists (including AAC team members) provide crucial support to the regular education teacher, aide, family, and student. The nature of this support is highly individualized and flexible. Special education teachers may adapt the curriculum and recommend software enabling a child to do her math or write a letter. A speech-language pathologist may suggest ways to maximize a child's active participation during each activity (e.g., Use the device for circle time and use miniboards for reading comprehension. Ask multiple choice questions during science, etc.). They often specify vocabulary and design overlays. The occupational therapist may increase access by modifying the position of the child or the technology. A computer resource/technical person will help set up equipment and solve problems.

Students bring to the situation a willingness to try; a willingness to fail; and faith to try again. Like everyone else, they bring their unique personality, their abilities, fears, and dreams.

Peers and Other Students form a variety of relationships: tutors, classmates, helpers ,and friends. Everyone concurs. Young children are never a problem; junior high and high school students may be. For example, in one school a recently mainstreamed high school student was called "drip face." Bets are on that if the student who drooled had been in an integrated, neighborhood elementary school, his group of natural supports would have been in place prior to high school. The perpetrators of "drip face" quickly would have been "**history**"...so to speak!" Another possibility is the student would have been more aware of the social consequences of drooling, and may have participated more in therapy sessions designed to decrease drooling.

Educational Synthesizer (I am told the term was first used by Diane Bricker) is responsible for providing coordination and continuity. "The Buck Stops Here." This person has the knowledge, skills, time and responsibility to help the team think about where the student is going, interface with other professionals, agencies, and curriculum. They also assist disabled students to get help to deal with growing up issues, e.g., taking control of your own life, etc. This may become a future role for special education teachers as classrooms are disbanded.

Potential conflicts and solutions.

Therapeutic vs. educational goals. Children with disabilities have both therapeutic and educational goals. Time is a major problem; time to complete assignments, go to O.T. and speech therapy, learn symbols on a communication display, practice conversational skills, go to the bathroom, eat, change position, play. Oh yes, time to learn. *Not enough hours in a day.*

Teachers can not teach students who are not in their classroom. Priorities need to be set and agreed to so children can achieve in school. The trend is for clinicians, readers, resource personnel to provide services in classrooms. For example, P.T. sessions may be held during the class's physical education period. Consultative models and co-teaching strategies facilitate achievement. In some cases, teams even decide to provide special services after school hours. Summer vacations are also important times:

Note: If an individual needs intensive therapy or training, he/she may not be able to get it in the "mainstream." Options are available and should be considered. These decisions are not easy. It is difficult to weigh what you are giving up by segregating a child against what might be gained, and visa versa.

Academic vs. social and life skill goals. Several AAC professionals who work in integrated schools report children want vocabulary in their devices and on their communication displays that support academics. They also want "electronic pencils." Are AAC professionals placing too heavy an emphasis on teaching children to express basic needs and develop conversational strategies? Do we orient our intervention toward socialization rather than achievement? Obviously, it is not an either/or situation. We need to strike a balance.

Making Friends. The relationships we form with people vary. Not everyone likes everyone else. Friendship is just one kind of relationship. Friends share similar interests. Severely disabled students with normal intelligence make friends with age-matched peers rather easily once they have a means of communication. Children with mental retardation are also accepted by age-matched peers when they are integrated. Those interviewed agreed, however, that children with behavior problems have difficulty forming friendships with peers, particularly if their behavior is unpredictable.

A powerful essay about relationships can be read in the pamphlet "It's about relationships" by Marsha Forest. Her videotape "With a little help from my friends" illustrates how to facilitate children's understanding and involvement in the formation of relationships.

Interdependence and independence. When to help and when to challenge? Both are important. Technology partially solves the problem of dependence. However, we need to be aware of (and change) our own behaviors. We must not foster dependence. Aides are encouraged to set a student up for an activity and WALK AWAY. Research shows interaction increases when aides and job coaches stand away from the individual.

Note: this not only helps the student, but enables the aide to do other things, e.g., prepare materials for the next lesson, work with other children, program the device for tomorrow's circle time, etc.

Employment

Very few individuals with severe speech and physical disabilities are employed. Even our college graduates have had difficulty. Talented people are not working or are not challenged by their jobs. Table III summarizes ideas to assist in the "job finding" process.

Limited speech and slow communication rates are not insurmountable barriers to employment. In fact, job coaches report no problem finding jobs for nonspeaking individuals who are ambulatory, irrespective of the level of retardation. They are employed in assembly industries, clerical positions (filing clerks, shelving books in a library), food preparation (airlines, fast food). They are custodians, hospital aides; mail distributors, etc.

Technology and environmental modifications enable others to be gainfully employed, as well. Examples of jobs currently held by pioneers in the world of work are in the areas of: *Quality control; Medical correspondence; Building Security (video screens); Data entry (although most individuals are too slow); Computer programming; Bookkeeping; Desk top publishing; Data-based research; CAI software design; Writing.*

Several points about communication skills and employment are summarized below:

* 1. Not all jobs require speed. Productivity is not always a question of speed.
* 2. Not all jobs require sophisticated communication skills.
* 3. Computer access solutions remove physical barriers to many jobs.
* 4. Communication problems are often overcome as soon as people become familiar with one another.

Although important, and the focus of this article, school and work are not our only activities *(and often not our favorite!)*. Integration means having a "home," playing, traveling, shopping, visiting with friends, and so on.

There are some common ingredients for success:

- committed people (and the support they need)
- positive, problem solving oriented attitude
- adequate planning
- expectations for success
- a structure that fosters team building and involvement
- an emphasis on similarities rather than differences; abilities rather than disabilities
- Doing It!

Table III. Life after 21 . . . Get a Job!

1. Begin the process early. Write into a child's educational plan at least one vocational objective beginning in the early teen years. That gets everyone thinking.

2. Involve vocational rehabilitation counselors as soon as an individual becomes eligible (even if they are not yet looking for work). Check the Transition Laws in your state.

3. Find out what an individual wants to do and is interested in. Find out what they mean by "work." For example, one program spent months trying to get a job without success for a 62 year old man with seizures, orthopedic problems and incontinence. Work to him, they later discovered, meant social contact. He was unconcerned about "getting paid." Now he is a volunteer in a program for the elderly. Note: Please, don't misunderstand. **People should be paid!**

4. Seek help from a consumer action support group. See the Governmental section.

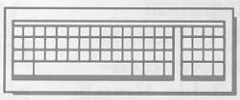
5. Move to an area that has a Supported Work program. Able-bodied people do it all the time. Richmond reports "it's worth it." After spending 4 frustrating years searching for a job, he moved to Birmingham, Alabama, an area which has a highly individualized and successful supported work program for individuals with severe physical disabilities. He is now competitively employed and a role model for others. His next goal...He'll buy a condo.

6. Maintain a positive attitude, be flexible, and realistic, even while you shoot for the moon. Being a receptionist in a busy office is not going to be easy (or much fun) for someone unable to speak or write. Pick a career that is easy to market in the area you wish to live.

7. Consider the kind of training you need, and find a way to get it.

8. Get some experience working, even on a volunteer basis. Make sure the job tasks are well defined, and a single contact person is specified for you (or the job coach) to deal with. Use these experiences as proof of "productive work" later on.

9. Market the person/yourself, as well as your skills.



Equipment

Technology Narrows the Gap

AAC aids, techniques, and strategies are powerful tools for integration. They offer ways to accomplish communication tasks and enable people to participate actively in their education, family, leisure activities, job, and community. *That's the good news!*

Assistive devices and special techniques like manual signs, special symbol sets, communication aids, and adapted work stations are often perceived of, or actually can be, barriers to integration. *That's the bad news!* Technology *preparation* is not an excuse to postpone integration. Consider the following:

1) No one is ever completely prepared to enter a new situation. We are not "prepared" for kindergarten or college, for the jobs we take on, for marriage, for parenting, and so on. We learn how after we are there.
2) We learn to use tools by using them to accomplish whatever needs to be done.
3) It takes time, lots of time.
4) The attitude "I'll get the individual on a high tech device and then worry about education" is a mistake.

The Pennsylvania Assistive Device Center *(717-657-5840)*, a leader and pioneer in the statewide implementation of technology in educational settings, has 5 years of experience. In 1984, they began providing communication aids to students. They **did not wait** for professionals to develop the skills needed to support the technology. They put the communication aids and related equipment *out there* and then provided *(and continue to provide)* active and ongoing support to developing local augmentative communication specialist teams.

Integration tools for individuals with severe expressive communication disorders may include: motorized wheelchairs; computer work stations; portable communication aids with intelligible voice output; printers; switches; software; a variety of light technology communication aids, books, and displays; velcro; holders for paper; special adaptations for pencils; rubber signature stamp; and so on. *(continued on page 6)*

The success of integration depends on the ability of those involved to operate whatever technologies/tools are available. Equally important is the efficiency and effectiveness of an *individual's natural means of expression,* and the skill of *partners* to read *reliable signals* and use *"quick and dirty" strategies* to facilitate participation.

A Potpourri of Ideas to Facilitate Integration

1. **Use "yes/no" questions and multiple choice formats.** Individuals can respond using their electronic systems, communication displays, and/or speech, gestures, eye pointing, etc. In classrooms, multiple choice questions can be asked by pairing each choice with a color, letter, or number on an ETRAN or miniboard. Anywhere, anytime, you can pair choices to a location in space.. For example, to get a response to the question **"Who did it,"** Say, **"the lady"** (arm up), **"the man"** (arm down), **"the giraffe"** (arm to right), or **"the elephant"** (arm to left). Then, wait for the individual to look at the correct location.

2. **Place a flip chart near a student** who uses AAC techniques. A teacher can write down key words or draw icons that capture the discussion as he teaches the lesson. Then, this can be used to review information and/or assess comprehension (using listener assisted scanning techniques.)

3. **Instruct a student** to raise their hand to indicate a desire to answer a question, and then raise their hand a second time when the answer is prepared.

4. **Engineer the environment.** Kiernan reports that the average cost for providing modifications to working environments is less that $100. Favored materials are velcro, tape, plywood, and human ingenuity.

Classroom modifications suggested by the Rosenthals include raising, lowering or widening a desk or table; Adapting a chair; Providing easels, clipboards, masking tape and paper weights to hold work; Using pencil holding or carefully selected marking devices; and arm braces and weights.

On a college campus, Horn says some professors/teaching assistants have come up with ingenious ways to allow students to participate. One idea is to plug a student's device into a monitor in the classroom so comments and responses can be read by classmates and teachers. Because of synthesized speech intelligibility problems, she suggests students prepare an outline and distribute it to classmates prior to giving an oral report. Both these methods would be applicable for some work environments, as well.

5. **Keep a binder in the classroom** with all modified materials. This will e nable support personnel to find materials and make it unnecessary to recreate materials in the future.

6. **Provide a way for support personnel to be unobtrusive.** In a classroom setting, support personnel may need to prepare materials, observe progress, take data, and confer with each other without disrupting the class. Configuring the classroom with the teacher in the middle and student desks surrounding the teacher is one strategy that works.

7. **Modify regular curriculum materials** to fit the needs and skills of the individual:

a) Cut up assignments and put items on colored paper

b) Use a copier to enlarge, simplify, darken and/or separate items on written materials

c) Write-in multiple choice answers for questions or write numbers or letters beside possible answers on an assignment sheet.

d) Laminate paper materials (i.e., clocks, money, number lines, that students will use over and over again.

e) Computer programs found most useful include word processing and blank slate math software (e.g., Math Blaster).

8. **Set up work stations.** For physically disabled students, a work station is required. It acts as an individual's replacement for books, paper, pen, environmental control, and so on. A problem for students is their need for multiple work stations. Even 3rd graders are changing classes for subjects. This allows elementary school teachers to teach their specialty areas. In the future? We need work stations that are portable and enable individuals to use robotics.

9. **Evaluate the use of preprogrammed vocabulary.** Many report the time spent programming devices for certain activities is not worth it because students do not use it. Vocabulary needs in integrated settings are dynamic. Students often do not have the time to learn to associate new symbols, new vocabulary and remember to use them at appropriate times in class.

A final comment: An assistive device is meant to be a tool, not an additional, frustrating task.

NEWS Multiple Display Users

MCRI Vocabulary Page Holders

Now available for the Touch Talker, Light Talker, WOLF and other devices.. Designed to hold multiple vocabulary pages, they provide quick access to multiple displays. Depending on the individual's physical capabilities, users (or a partner) can quickly change displays. Prices range from $15 to $60. For information contact Pamela Mathy-Laikko at Meyer Children's Rehabilitation Institute (402) 559-6460.

$ Governmental

Protecting Civil Rights: U.S. Laws and Programs

- Section 504 of the Rehabilitation Act of 1973 and the Civil Rights Restoration Act of 1988 means federal funds no longer support or assist discrimination.
- Fair Housing Amendments of 1988 means federal funds will no longer build multifamily housing that do not allow all Americans inside.
- Public Law 94-142 and Public Law 99-457 mean children with disabilities have a right to a "free appropriate public education" (FAPE) within the mainstream of society, i.e., "least restricted environment" (LRE).
- The Americans with Disabilities Act, if passed, guarantees against job discrimination and promotional practices on the basis of disability. New transportation facilities will be built to be accessible, as will auditoriums, convention centers, stadiums, theaters, restaurants, stores, hotels, transportation terminals, gas stations, doctor's offices, office buildings, business, parks, and recreation facilities. Telephone carriers offering services to the general public will provide TDD relay services.

Benefiting from Laws andPrograms

Laws and programs confuse families, individuals with disabilities, and professionals. In the area of AAC, we are more familiar with the educational system than we are with rehabilitation services programs.

To: Australian Subscribers.

We would love to interview you if you are in the Melbourne area September 29 - October 1 Contact Louise Dunne (03) 537-2611 for our schedule. She has very kindly offered to help us.

Vocational rehabilitation (1.5 billion dollars). Most individuals have the right to an evaluation (and a yearly reevaluation, if deemed ineligible). Many AAC users need to request extended evaluations (18 months in duration). During that time the support services of a job coach, training, equipment, and so on may be provided. Eligibility depends on "productive enterprise." This can include full or part time, supported employment, home or cottage industries, and self employment. Few rehabilitation counselors have experience working with individuals who have severe disabilities. We need to work with them.

Supported employment (2.5 million dollars). This program is for those who require ongoing support services to work (**at least 2 hours per week**). Ongoing training, transportation, adaptations to computers, etc. can be provided. The evaluation period for supported employment is also 18 months.

Independent Living services (2.5 million dollars). Eligibility is defined by each state. Services include attendant care, auxiliary aids, training, as well as access to supported apartment settings, group homes, alternative family living.

The U.S. Government also funds Protection and Advocacy (P&A) Systems programs. Staffed by attorneys, social workers, and other advocates, these programs provide a full range of services including the ability to pursue legal, admin-istrative and other appropriate remedies to protect the rights of individuals with disabilities.

1. **Protection and Advocacy for Persons with Developmental Disabilities**. Governors have designated a program, independent of any service provider, to serve as the P&A system. Those who have chronic mental and/or physical impairments (with an onset prior to age 22) are eligible.

2. **Client Assistance Program** (CAP). Governors have designated an agency to provide information and assistance to individuals seeking and receiving services under the Rehabilitation Act, including assisting in pursuing administrative, legal, and other appropriate remedies to ensure the protection of rights.
Note: The P&A and CAP agency is the same in most states. In others, Vocational Rehabilitation operates the CAP. The remaining CAPs were designated to non-profit agencies, except in Alaska where a for-profit corporation was designated.

3. **P&A for Persons with Mental Illness.** Eligible individuals must reside in facilities which provide 24 hour care and treatment, or have been discharged from the facility within the past 90 days.

For details contact: *National Association of Protection & Advocacy Systems*, 220 Eye Street. N.E. Suite 150,Washington, DC 20002 (202) 546-8202.

University & Research

University at Buffalo

At the State University of New York at Buffalo, the Communication and Assistive Device Laboratory (CADL) is developing a major research focus investigating the relationship between humans and their communication technologies, in terms of learning and performance. Affiliated personnel include faculty members in the Departments of Communication Disorders and Sciences (CDS), Dr. Jeffrey Higginbotham (Director), Dr. Judith Duchan and Leanne Fernandes, and Occupational Therapy, Dr. Jennifer Angelo. In addition, faculty from Artificial Intelligence, Linguistics, Philosophy, and Psychology are involved. Current research projects in CDS and OT relating to individuals with severe communication handicaps include:

National Institute of Neurological and Communicative Disorders and Stroke Career Development Award (Jeff Higginbotham). The goal of this 5 year project (which is currently in Year 1) is to improve our theoretical understanding of the impact of augmentative communication devices on social communication processes. Objectives include: 1) determining the influence of information output characteristics on several dimensions of social communication and language; 2) developing a performance model of augmentative communication; and 3) evaluating the model with regard to its ability to predict how particular combinations of device and social variables affect conversational performance in experimental and naturalistic contexts. Both able-bodied persons and individuals with handicaps will participate. The project will result in the development of specifications relevant to social communication for use by developers & manufacturers of AAC technologies.

Comparison of Three Scanning modes used in augmentative communication systems. (Jennifer Angelo). This project will compare three scanning modes (automatic, inverse, and step). The investigator hopes to determine which mode permits the fastest scan rate for individuals with cerebral palsy, while allowing a 90% accuracy level.

Computer use by individuals with severe handicaps (Patricia Wood) examines the hypothesis that by developing skills which permit individuals with severe physical and mental handicaps greater environmental control, their interactions with human and nonhuman aspects of the environment will increase. Preliminary results suggest after instruction on the use of special input devices, most subjects participated regularly in various computer based activities. In addition, individuals more frequently followed commands and visually explored the environment.

In addition to the research emphasis, there is a commitment to a transdisciplinary approach for training students from various disciplines at the master and Ph.D. level. A major goal of the CADL staff is to teach students about other specialties and how to work together with other specialists. The program also teaches students to act as facilitators for individuals with multiple handicaps. Intervention approaches are stressed that enable those who have multiple handicaps to achieve transitions to least restrictive environments. CADL faculty have a U.S. Department of Education Personnel Preparation grant. For a master's degree, students can select from among courses related to AAC. In the CDS Department there is a concentrated focus on technology and clinical research.

Courses related to AAC in CDS: AAC and the multiply handicapped child; Introduction to severe communication handicaps and AAC; Current approaches to transdisciplinary service delivery; Assessment and intervention with severely communicatively handicapped persons; Research issues in severe communication handicap.
Related courses in OT include: Technology & students with handicaps; Adapting the environment.

The specialty Ph.D. degree in the area of severe communication handicaps has an interdisciplinary focus drawing from recent advances in the field of cognitive science. Students are required to minor in either linguistics, cognitive psychology or computer science (artificial intelligence). They receive intensive research and teaching training.

Courses include: Research methods; Advanced theory seminar; Topical seminar; Introduction to cognitive science; Seminar in cognitive science.

Master and Ph.D. degree fellowships are available. **For additional information contact Jeff Higginbotham (716) 636-3410 or Jennifer Angelo (716) 831-3141.**

Note: This program began in early 1987. See what can be done in just a few years!

Resources and References

David Beukelman, Professor, Barkley Memorial Center, University of Nebraska, 402-472-5463.

Marilyn Buzolich, Non-Oral Communication Services, Daly City, CA, 415-992-7039.

Phillipina Campbell, Dir., Family Child Language Center, Tallmadge, OH 216-633-2055.

Brenda Carson, Employment Specialist/Consultant. UCP of Greater Birmingham, AL, 205-251-0165.

Carol Cohen, Rehab. Program Analyst, NIDRR, Washington, D.C., 202-732-5066.

Susan Daniels, Assoc. Commissioner, Rehabilitation Services Administration, Washington, D.C. (202) 732-1347.

Mary Dillman, National Outreach Coordinator for Prentke Romich Co., Houston, TX, 713-471-1530.

Diane Dyk, TEDI Project, Bismarck Public Schools, ND 701-221-3765.

Diane Eger, Program Admin. Speech & Language, Allegheny Intermediate Unit, Pittsburgh, PA, 412-394-5815.

Pamela Elder, Augmentative Communication Service, Birmingham, AL, 205-251-0165

Karen Franklin, UCPA, Washington, D.C. 800-872-5827

Judy Frumkin, Private consultant; faculty, SUNY-Cortland, NY (315) 682-8779.

Charles Goldman, Lawyer, Washington, D.C. 202-347-7550.

Christie Horn, Coordinator of Handicapped Student Services, University of Nebraska, Lincoln, NE, 402-472-3787.

Doug Iker, Asst. Director of Special Education, Grand Island, NE, 308-381-5925

George Karlan, Professor, Spec. Educ.. Purdue Univ., West Lafayette, IN, 317-494-733.

Bill Kiernan, Director, Training & Res. Inst. for Adults with Disabilities, Children's Hospital, Boston, MA, 617-735-6777.

Jane LaBran, Student and consumer, Monterey, CA, 408-373-5721

To: CEU Subscribers

Please send a note estimating how many hours you will spend reading the 6 ACN issues for 1989 in preparation for the November test. We can petition ASHA for more CEU credits if we have your data. Thanks to the few (N=3) who already responded.

Bill Lee, Computer programmer and consumer, Bowie, MD 301-262-7018.

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Patricia Porter, Professor, Univ. of NC, Deputy Director for Developmental Disability Services, State of NC, 919-942-8386.

Betsy Minor Reid, State Consultant, Dept. of Education, CO (303) 866-6694.

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Florie Winklharrer, Mother of consumer. Wappingers Falls, NY 914-297-1697

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