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UPFRONT

Literacy is a continuum of skills that begins early in life and can improve across the life span. Unlike talking and understanding language, which is innate to humans, learning to read and write typically requires formal instruction in a supportive environment. For people who are unable to speak, literacy is an important key to unlocking communication barriers and improving quality of life.

The May-June issue of *Augmentative Communication News (ACN)* focused on emergent literacy, the beginning of the continuum. This issue shines the spotlight on the acquisition of conventional literacy skills in individuals who use augmentative and alternative communication (AAC) techniques. Currently, few professionals have the breadth of expertise necessary to teach AAC consumers to read and write. Why? Because primary AAC team members (parents, speech-language pathologists and special educators) don't have the background and experience, and few are familiar with successful accommodations being made by master clinicians and researchers in AAC. Also, the literacy experts in today's schools—regular education teachers *(cont. on page 2)*

For Consumers

What's standing in the way?

It is not so easy to learn to read and write. Despite mandated education, illiteracy rates in many countries are surprisingly high. Reasons cited include: (1) problems external to individuals (*e.g.*, economic disadvantages, sociocultural barriers, poor instruction and language barriers) and (2) problems inherent to individuals (*e.g.*, limited intelligence, severe physical impairments, specific reading/writing disabilities such as dyslexia) and (3) lack of motivation.

Persons who use AAC have had to face significant challenges in developing literacy skills. Reasons include: (1) the difficulties individuals with severe communication impairments encounter as a result of their problems speaking, moving, learning, understanding, seeing and/or hearing, (2) the lack of support they have received learning to read and write and (3) the low expectations of others.[1] Put most starkly, no one has really bothered to teach them.

Research clearly demonstrates that an ability to articulate is not a prerequisite for learning to read and that holding a pencil is not a requirement for writing.[2] In fact, published books, newsletters and articles by individuals who use AAC long ago showed that people with severe communication impairments can develop high levels of literacy.[3]

(continued on page 2)

(**UPFRONT** *continued from page 1*)
(whose job it is to teach typical children to read and write) and reading specialists (whose job it is to make accommodations for students who have difficulty learning to read and write)—are rarely familiar with the needs and multiple challenges of individuals with severe communication impairments. The need for a team approach is obvious. To help AAC consumers develop skills along the continuum of literacy, we must collaborate and learn from each other.

For Consumers acknowledges reasons why literacy learning may be difficult for AAC users. **Governmental** shares a Literacy Bill of Rights presented by Dr. David Yoder, 1996 recipient of *The Joe Award* at the Pittsburgh Employment Conference. **Clinical News** focuses on literacy assessment. **University/Research** references important research findings about the development of conventional literacy skills in persons who use AAC. The **Equipment** section gives two examples of real people using technology to develop literacy skills. Thanks to those interviewed (and the many more who have written about literacy) for their thoughtful contributions and ideas. See page 8 for upcoming literacy-focused workshops and conferences, as well as lists of **References** and **Resources**.

Sarah W. Blackstone, Ph.D., Author

For Consumers *(cont. from page 1)*

[Note: When asked, these literate adults most often attribute their success to parents (often mothers) who expected them to read and write and who gave them opportunities to do so from early childhood.[4]]

Knowing the importance of environments that support and encourage the development of conventional literacy skills, families and professionals are now making efforts to ensure that people who use AAC have access to: a) reading and writing materials, b) technology that enables them to read and produce text, c) good instruction and d) people in their lives who support daily reading and writing activities.

People need more than an environment that exposes them to print—"they need to learn the rules which match phonological and orthographic codes."[5] When an individual has a supportive literacy learning environment and isn't learning to read or wrote, it is important that professionals sort out why. Assessing the literacy skills of individuals who use AAC, a large, heterogeneous group, is a challenge. However, if we don't make the effort to understand the unique literacy profiles of individuals having difficulty, we won't know what (or how) to teach them.

Cognitive Disabilities. Many AAC users have cognitive disabilities and learn slowly. By the time some are truly interested in print, they may be teenagers and enrolled in a "functional curriculum," with no one available to teach them reading and writing skills beyond a "survival" level.

- Jim, a high school student with autism and mental retardation, is very interested in reading magazines about cars and movies. He is "drawn" to text. He greatly benefits when instructions are written down as they are spoken. He has a computer with *Write Out Loud* and *Co-Writer* loaded on the hard drive. What he doesn't have is a literacy curriculum in place.

The greatest barriers for Jim are school policies and practices that systematically remove literacy learning opportunities from the environment because he hasn't achieved a certain level of performance by a certain age. Too often, literacy is omitted from "functional curricula" and programs for people with disabilities.[6,7]

Physical Disabilities. Many AAC users have physical disabilities, *i.e.*, sensory and/or motor impairments. Visual, hearing, fine motor and gross motor problems complicate the processes involved in learning to read and write. To become literate, these AAC users require adaptive strategies and tools that make reading and writing accessible to them.[8]

- In class, Grace has a workstation setup that allows her to see the book she is reading and to use her eyegaze communication display to respond quickly to her teacher's questions. She has a *Dynavox* mounted on her electric wheelchair and a computer at home. Because of her athetoid cerebral palsy and visual perceptual problems, Grace benefits from having books scanned into her computer. Then, she can enlarge the text (or use a screen reader program) and read independently.

Without assistive technology the barriers to literacy for Grace would be insurmountable. Individuals like Grace are likely to have limited experiences exploring as children and being "out and about" as adults. This can have an impact on their opportunities for incidental learning and knowledge of the world, which can affect reading comprehension.

Language Disabilities. Generalizations about the language abilities of those who use AAC "should be avoided or qualified."[9] However, clinical experience and research confirm that language impairments are inherent in the diagnoses of specific groups of individuals who require AAC (*e.g.*, those with aphasia, autism and dyspraxia) and occur in other groups (*e.g.*, those with Down *(continued on page 3)*

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Governmental Literacy Bill of Rights

All persons, regardless of the extent or severity of their disabilities, have a basic right to use print. Beyond this general right, there are certain literacy rights that should be assured for all persons. These basic rights are:

1. The right to an *opportunity to learn* to read and write. Opportunity requires active participation in tasks performed with high success.

2. The right to have *accessible*, clear, meaningful, culturally and linguistically appropriate texts at all time. *Texts*, broadly defined, range from picture books to newspapers to novels, cereal boxes, and electronic documents.

3. The right to *interact with others* while reading, writing, or listening to a text. Interaction involves questions, comments, discussions, and other communications about or related to the text.

4. The right to *life choices* made available through reading and writing competencies. Life choices include, but are not limited to, employment and employment changes, independence, community participation, and self-advocacy.

5. The right to *lifelong educational opportunities* incorporating literacy instruction and use. Literacy educational opportunities, regardless of when they are provided, have the potential to provide power that cannot be taken away.

6. The right to have *teachers and other service providers who are knowledgeable* about literacy instruction methods and principles. Methods include but are not limited to instruction, assessment, and the technologies required to make literacy accessible to individuals with disabilities. Principles include, but are not limited to, the beliefs that literacy is learned across places and time, and that no person is too disabled to benefit from literacy learning opportunities.

7. The right to live and learn in environments that provide *varied models of print use*. Models are demonstrations of purposeful print use such as reading a recipe, paying bills, sharing a joke, or making a grocery list.

8. The right to live and learn in environments that *maintain the attitude that all individuals are literacy learners*.

Developed by: Yoder, D.E., Erickson, K.A. and Koppenhaver, D.A. Presented by D. Yoder at The 4th Annual Pittsburgh Employment Conference (PEC) for Augmented Communicators, August 23, 1996. Available from the Center for Literacy and Disability Studies. (See box on page 4 for address.)

For Consumers *(cont. from page 2)*

syndrome, cerebral palsy, mental retardation, etc.) as well.

Because linguistic abilities (and opportunities to learn to read and write), as opposed to speech production, are critical factors in developing literacy skills, we must be on the lookout for specific language impairments in AAC users. Impairments can manifest in problems with speaking, comprehending spoken language, reading (dyslexia) and writing (dysgraphia).

We do not yet have an understanding of the prevalence of dyslexia or dysgraphia among AAC users. We do know that literacy requires the integration of language forms, and that individuals who use AAC symbols, devices and techniques have language learning experiences that differ from other children.

We also know that some individuals can decode words but have difficulty comprehending meaning. Others can comprehend the meaning of passages despite difficulty with decoding skills.[10] Also, some individuals with language impairments (*e.g.*, those with Down syndrome and autism) seem to gravitate to and benefit from text-based materials. For them, the visual representation of language, particularly when provided by AAC symbols, may provide a scaffold to language comprehension, as well as an expressive tool.[11]

- At 2 1/2 years, Josh, who has a diagnosis of autism, tested 12 months on the Preschool Language Scale. At age 3 years 5 months, he was enrolled in a rich emergent literacy preschool experience *(i.e.*, daily reading and writing opportunities, use of print in song and circle time, Golden story strips with *Boardmaker* symbols and words, and symbol and word books from class trips to the zoo.) After 4 months Josh was able to match words to symbols on his daily schedule and in storybooks and to write his name independently. He also began to speak the names of letters and words he recognized. Written language seemed to provide a scaffold to an oral language system that hadn't been making much sense to him.[6]

In summary

To gain a better understanding of how families and professionals can help move AAC users along the continuum of literacy skill development over time, it is necessary to sort out: (1) the strengths individuals bring to the processes of learning literacy skills, (2) the impact of environmental factors on an individual's literacy experiences and (3) the effects of physical, cognitive and linguistic impairments on an individual's literacy learning success.

Clinical News

Assessment: First things first

Individuals who have difficulty learning to read and write vary tremendously in terms of their strengths and weaknesses. Thus, instructional strategies will be successful only when guided by careful and ongoing assessment.[12] AAC practitioners use assessment as the vehicle with which to develop a working *hypothesis* about where to start and, once the intervention process is underway, what to do next.[13]

This section focuses on helping practitioners in AAC ask the right questions—an important first step in assessment. Table I on page 5 summarizes information about the assessment of conventional literacy skills in persons who use AAC. It is organized into three domains known to influence the development of literacy skills in AAC users: (1) the contexts within which the individual learns, (2) the literacy skill components that underlie conventional reading and writing abilities and (3) the tools and technologies required to access literacy experiences. Each domain is further divided into sub-areas. Column three gives examples of assessment questions relevant to each area, and column four suggests methods for collecting data.

1. **Contextual factors** *[The physical, social, cultural, linguistic and instructional environments of learners.]* Assessment questions should reflect the importance of determining environmental expectations and opportunities for literacy learning. In addition, evaluators should seek specific information about the quantity and quality of literacy experiences caregivers and teachers provide.

   Useful methodologies include structured observations using carefully constructed checklists, questionnaires and interviews with family, teachers and peers. Teachers also find portfolio assessments useful in assessing contextual factors—lists of books read at school and home, examples of adaptations made to books/magazines, teacher and parent logs, progress notes, learner diaries and so on.

   Assessment of contextual factors requires the active participation of family members and professionals involved in the everyday lives of learners. Evaluators need knowledge and skills in language (speaking, listening, reading, writing) and an ability to observe and measure contextual variables across multiple environments.

2. **Literacy skills** *[The subskills that underlie reading and writing, e.g., phonological processing.]* Reading and writing are related, but are not mirror images of one another. "Experience in one may enhance growth in the other and their development may be intertwined."[14] Sulzby and Teale believe "reading and writing are not separate in a child's learning, nor do they develop sequentially. Instead, the two processes are mutually supportive and are intimately related to oral language."[15]

   Reading specialists should assess major skills to inform themselves about an individual's current ability to read and write in multiple contexts for multiple purposes. Only if there are problems should they assess specific underlying skills (*e.g.*, spelling, word-attack).[16]

   – The primary goal of reading instruction is to improve an individual's ability to read silently with comprehension.

   – The primary goal of writing instruction is to increase the ease of written composition so an individual can express his/her thoughts, using text in ways that are appropriate for the intended audience.

   Evaluators collect information about reading and writing skills using criteria-based measurement tools, standardized tests, teacher observations and portfolio assessment strategies. Of course, standardized tests and other available measures often are not appropriate for AAC users. [See box above for adapted materials to assist you in literacy assessments.]

   Professionals who assess the reading and writing skills of AAC users must have an understanding of language and literacy and an ability to make necessary accommodations for the literacy needs of AAC users in their natural environments.

3. **Tools.** *[All the materials, devices, software and equipment enabling AAC users to read and write.]* Assistive technology teams typically determine the need for devices, techniques and other adaptive materials. In addition, they should collect information about a user's operational and linguistic competence in using tools, as well as the availability of technical support in the environment.

Literacy learning profiles

Currently there is an absence of research-tested instruments or methods to assess important areas associated with literacy skill development in AAC users. Table I is a place to start. Remember however, that assessments of reading and writing should be ongoing and primarily accomplished by observing individuals engaged in reading and writing activities. Also, remember that information carefully collected over time by teachers, parents and

Assessment of Conventional Literacy Skills in AAC Users

1. Materials (adapted from a variety of sources) to help assess conventional literacy skills in persons who use AAC—ways to assess contexts, reader and writer skills, and technology. Center for Literacy and Disability Studies, P.O. Box 3888, Duke University Medical Center/Div. Sp Path & Aud, Durham, NC 27710. Phone (919) 684-6271. Fax (919) 684-8298. (e-mail—literacy@acpub.duke.edu)

2. Materials to help assess phonological awareness in persons who use AAC. Results can help target appropriate levels of intervention. Appropriate for all ages and a range of ability levels. Contact Beth Foley, Department of Communicative Disorders and Deaf Education, Utah State University, Logan, UT 84321; Phone (801) 797-1375. Fax (801) 797-0221. (e -mail—bethf@cc.usu.edu)

clinicians will gradually reveal an individual's unique literacy learning profile. Assessments should be strategic and efficient. This means the assessment of subskills (*e.g.*, spelling, word identification, letter sounds, *etc.*) occurs only if an individual has difficulty in the primary goals of literacy instruction—silent reading comprehension and writing composition.

Instructional Guidelines

Those interviewed concur that assessments should lead directly to instructional programs that reflect the following general guidelines:

- Make literacy instruction both meaning based (daily opportunities to be engaged in reading and writing activities) and code oriented (strategies, comprehension and word-level instruction).
- Examine how instructional time gets used. Compare the ratio of time allocated for (*continued on page 6*)

TABLE I. Assessment of Conventional Literacy Skills in AAC users
compiled in conjunction with D. DeCoste, K. Erikson, B. Foley, D. Koppenhaver, J. Light, C. Musselwhite

DOMAINS/AREAS		IMPORTANT QUESTIONS	METHODS
CONTEXTS	PHYSICAL CONTEXTS	Are reading/writing/drawing materials available? accessible? Are environments arranged so individual can read, write and simultaneously be engaged with other family members/classmates? Can individual read and write alone? Is time and space devoted to reading/writing activities in multiple contexts?	Observation checklists (home/school); Questionnaires (home/school); Classroom schedule.
	LINGUISTIC CONTEXTS	Are texts meaningful? appropriate? Is selection of texts at reading level of AAC user? What level of text (letters/syllables, words, sentences, paragraphs) is the focus of instruction? Does person have access to expressive language forms during literacy activities? Which AAC system components are being used? What is nature of AAC user's participation in literacy activities?	Lists of books read; Portfolio examples of adaptations made (symbols, enlarged text); Sample communication displays; Observations of literacy activities; Questionnaires (home/school).
	CULTURAL/SOCIAL CONTEXTS	What are attitudes and expectations of parents? teachers? others? Do others model reading/writing? Who? How often? Are there opportunities for peer/sibling interactions around literacy activities? Is story reading a time for social closeness? Does individual have ways to express feelings, opinions, insights? Does individual have experiences that build world knowledge?	Observation checklists (home/school); Questionnaires (home/school); Home/school logs.
	INSTRUCTIONAL CONTEXTS	Is there a reading/writing curriculum in place? Are necessary adaptations in place? Is individual in inclusive environments? Does AAC user participate in literacy activities with peers? Are peers tutors? Are reading/writing on participation plans? Is scaffolding provided during literacy activities? How? By whom? How much time does individual spend reading and writing each day? How much do instructional staff know about AAC user's literacy skills? About how to teach literacy skills? Is there some balance between frequency and quantity of communications by students and by teacher?	Interviews with teachers/reading specialists; Observation checklists; Review of Individualized Plan, participation plans, class lesson plans, curriculum guidelines.
LIERACY SKILLS	READING COMPREHENSION (Form, Content, Use)	What is individual's silent reading comprehension level? What is individual's listening comprehension level? What are individual's word attack skills (ability to decode one, two and polysyllabic words)? Does person have difficulty understanding complex syntax? What is individual's automatic word recogntion (ability to read words in isolation when given flash presentation?) Can individual understand factual/literal information? inferential information? What is individual's receptive vocabulary? Does individual read books? magazines? *etc.* Which ones? How? Does individual comprehend different genres?	Graded word lists and passages in Individual Reading Inventories (*e.g.*, *Basic Reading Inventory*–J. Johns - ISBN 0-8403-8222-7);[16] Graded maze passages;[17] *Test of Reading Comprehension*;[18] Informal observations during teaching and reading of different genres.
	WRITING COMPOSITION (Form, Content, Use)	Is individual able to produce text independently? Can he/she use "little words?"[19] Do writing samples show good word choice, sentence construction, ability to express main idea, supporting ideas? Does individual's text show cohesion? coherence? Does individual use brainstorming, webbing, outlining, revision strategies? Does editing improve individual's work? What is individual's spelling level? What is individual's use of punctuation? Written syntax? What is individual's expressive vocabulary? Does individual write using different genres (report, poem, notes, journal, story, letter, term paper, group report)?	Collection of writing samples across genres–two selected by teacher; one by student. Examine according to language expression, message construction, form and text production. *Teaching Spelling*[20] to assess invented spellings.
TOOLS	ASSISTIVE TECHNOLOGIES	What materials are needed? What are provided? Are there other options? What technologies are needed? What are provided? Other options?	Lists of technologies used over time and across tasks.
	USER'S COMPETENCE	Does AAC user understand how to use devices/materials? Are devices used appropriately? What problems exist? Using devices/techniques what are reading rates? writing rates? How does AAC user ask and answer questions? What is user's accuracy? Intelligibility? Independence using devices?	Observation checklists (home/school); Questionnaires (home/school).
	SUPPORT	Does support staff/family understand how to use devices? Are contingency plans in place for equipment breakdowns? Does user need assistance setting up and accessing tools?	Observation checklists (home/school); Questionnaires (home/school).

Clinical News *(cont. from page 5)*

instruction and the amount of time learners actually receive instruction.

- Infuse phonics instruction into the curriculum.[21]
- Balance oral language and written language activities and skills.
- Provide meaningful literacy experiences integrated throughout the individual's day, across a broad range of genres (novels, poetry).
- Make sure AAC users experience success and that they have teachers with high expectations.
- Use encouraging words, *e.g.*, "Don't worry about spelling; it's your ideas that are important. Write first, we'll edit later."
- Edit gently. Focus on a few corrections at the learner's level of instruction.
- Encourage individuals to share what they read and write with others. Peer feedback is important.
- Avoid overuse of adaptations that can rob real reading and writing opportunities (*e.g.*, audio books and adult scribes.)
- Realize that AAC approaches are effective and powerful tools and may enhance reading comprehension as well as written expression.
- Make literacy a critical component of AAC users' programs.[22]

University & Research

At a glimpse

Since 1990, more studies relevant to literacy issues in AAC have been published and are in press or in preparation than were published over the previous four decades. This section briefly summarizes results from these studies so practitionners are aware of what we "know" and researchers can continue to build upon each other's work.

To date, most studies have focused on the contextual factors influencing AAC user literacy learning outcomes. Researchers currently are working to: (1) identify factors that impact skill development, (2) sort out issues related to tools and technology and (3) provide valid and reliable assessment tools that enable professionals to assess the literacy skill development of individuals with severe speech impairments.

Note: References on pages 6 and 7 refer only to Table II.

Table II. What the research says about conventional literacy skill development of AAC users

Context	HOME: (1) Preschoolers have qualitatively different experiences than normal preschoolers and fewer opportunities to read and write.[5,17,18] (2) Caregivers often assume people with SSPI are not capable of learning to read and write, so they don't expose them to literacy activities.[5,11,19] (3) Literate adults with SSPI attribute literacy success to early childhood experiences and support of adults (mostly mothers).[14] (4) Parents tend to dominate interactive exchanges during literacy activities.[17,18] SCHOOL: (1) Students who use AAC receive quantitatively and qualitatively less, rather than more, instruction in literacy (*e.g.*,15 minutes per day; 1/4 of allocated instructional time).[13,15,16,23] (2) Students seldom volunteer information, interact with peers during instruction, ask questions, read or write for their own purposes.[16] (3) AAC users experience frequent and regular interruptions during literacy activities.[13,23] (4) Teachers have low expectations for literacy in AAC users and tend to dominate interactive exchanges.[13,23] (5) Very few literacy instructors receive education and training in teaching children who use AAC systems to read and write.[16] (6) Students in special education settings seldom read or write texts of a paragraph or longer, and spend too much time completing worksheets and focusing on spelling and punctuation, activities which do not correlate positively with successful reading or writing skill development.[14,23]
Skills	(1) Individuals with SSPI can develop phonological awareness, perhaps the best predictor of reading ability in children.[3,8] (2) Different views exist on the role graphic symbols play in literacy skill development.[4,21,22] (3) Children/adults who use AAC can be taught to spell although it is not yet clear what approaches are most successful.[6,20] They seem to develop spelling skills in the same way as typical children.[6] (4) Given access to story-specific vocabulary, friendly text, opportunities to read and write and appropriate instruction, AAC users can learn a range of literacy skills.[1,2,9,10,11,26]
Tools	(1) Use of technology promotes literacy skills development in children with SSPI.[7,27] (2) Linguistic prediction can enhance the rate of text generation for individuals with SSPI and can provide valuable assistance to a wide range of individuals with various levels of spelling and/or language dysfunction.[12,24,25] (3) In designing lexical prediction techniques, how words are listed and the size of the window makes a difference.[24,25,28] (4) Using telecommunications can enhance literacy skills in adult AAC users.[10]

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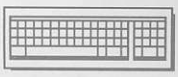

Equipment

Learning to read Reading to learn

Technology plays a significant role in the reading and writing experiences of individuals who use AAC. Text generating devices with speech output and linguistic prediction seem to support the process of learning to read and write conventionally. As skills develop and literacy becomes a tool, these and other features of technology can help AAC users compensate for slow rates as well as access resources that enhance learning and interaction, *e.g.*, the Internet. Two examples follow:

- Eric, who has spastic quadriplegia, is 16 years old. At age 10 he was not reading (or writing). By age 16 he used an IBM compatible laptop computer with *Scanning WSKE*. He reads at the 2nd to 3rd grade level and can write two or three sentences, although syntax is a problem. A literacy breakthrough came when he learned that the first (and last) sounds of words could be written and that word prediction techniques supported spelling. His ability to write reinforced his reading skills and visa versa. Today, he is fully included in high school. His team adapts assigned chapters from class texts. In psychology, for example, chapters are condensed to four or five pages, with three to four sentences per page. Writing assignments are also adapted. A literacy goal for the upcoming year is to use e-mail to expand both reading and writing skills in ways that are meaningful to him.[23]
- When Terry Lee, who has severe dysarthria and athetoid cerebral palsy, was 12 years old and in 6th grade, he enrolled in an after school literacy program. At the time, he was using a joy stick to operate his *Light Talker* and electric wheelchair. At school, he was fully included in all academic classes and reading above grade level. His writing, however, was at an early 2nd grade level. As part of the year-long after school program, he wrote in a journal three times/week using a MacIntosh computer and *Co-writer* software—the *Light Talker* was his keyboard emulator. His progress was remarkable. As his writing skills improved, he began to write in ways that were creative and caused him to discover that writing could help him clarify his thoughts and feelings. Just as reading had become a powerful tool for learning, writing was becoming a means of self discovery.[6]

These boys, and others who use AAC, need access to a broad range of technology to assist them along the continuum of literacy skills.

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Don Johnston Inc. Literacy Lectureship Award

AWARD for exceptional career efforts dedicated to enhancing literacy in people with disabilities. The winner will present a Keynote Lecture at the Sixth Symposium on Literacy and Developmental Disabilities in Research Triangle Park, NC January 23-24, 1997.

NOMINATIONS are due October 1, 1996. Include nominee's name, address, telephone number, along with no more than two pages describing the life-long contributions of the individual. Send to Dr. David Koppenhaver, Director, CLDS, Box 3888, Duke Univ. Medical Center, Div. Sp. Path & Aud., Durham, NC 27710.

YOUR RESOURCES

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Karen Erikson. CLDS, PO Box 3888, Duke Univ. Med. Cntr., Div. Sp. Path & Aud. Durham, NC 27710. (literacy@acpub.duke.edu).

Beth Foley. Dept. of Comm. Dis. & Deaf Educ., Utah State Univ., Logan, UT 84321. (bfoley@cc.usu.edu).

David Koppenhaver. CLDS, see address above.

Janice Light, Penn State University, Dept. of Communication Disorders, 217 Moore Building, Univ. Park, PA 16802. (jcl4@psuvm.psu.edu).

Caroline Musselwhite. 910 W. Castillo Dr., Litchfield Park, AZ 85340. (cmussel@aol.com).

Educational Opportunities

Closing the Gap Conference. Assistive technology in the literacy continuum. October 23, 1997. Workshop by D. DeCoste & M. Jacobs. Minneapolis, MN.

Sixth Symposium on Literacy and Developmental Disabilities. January 23-24, 1997. Center for Literacy & Disability Studies (CLDS), PO Box 3888, Duke University Medical Cntr., Div. Sp. Path & Aud. Durham, NC 27710. Phone (919) 684-6271. Fax (919) 684-8298.

Two week intensive summer course at CLDS. June 30 - July 11, 1997. For information write to address above.

Language and Literacy Summer Institute. Model developed during 1996 summer's 5 days/week, 4 week research project with children. May repeat in 1997. Write to Melanie Fried-Oken and Chloe Myers, Oregon Health Science University, Child Dev. & Rehab Cntr., 707 SW Gaines Rd., Portland, OR 97201.

Workshop on Literacy and AAC (2+days in July, 1997 with Beth Foley). Summer Institute of Dept. of Communicative Disorders & Deaf Education. Utah State University, Logan, UT 84321.

AAC in the Mountains, 1997. Focus on cognitively young child. July 21-23, 1997. Caroline Musselwhite, Sharon Sapp Crain, Pati King-DeBaun. Creative Communi- cating, PO Box 3358, Park City UT 84060.

Ask any of the individuals listed about workshops tailored to meet your needs.

OTHERS THAT CAN HELP. Kimberly Antonius, Judith Lariviere, Shirley McNaughton, Andrea Rowen (Canada), Martine Smith (Ireland), Margarida Nunes da Ponte (Portugal), Annika Dahl-gren Sandberg, Erland Hjelmquist, Tina Magnuson (Sweden), Sally Millar (United Kingdom), Jan Bedrosian, Linda Burkhart, Carol Goossens, David McNaughton (U.S.).