

Light on Literacy:

The Reading System for Children with Autism

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The Current Situation

Enormous effort goes into teaching language to children with autistic spectrum disorders (ASD). That effort, though, is focused almost exclusively on spoken language. Minimal work is directed towards teaching the other form of language that is central to human communication: namely, written language. As a result, literacy in the ASD population is seriously constrained, often to the point of non-existence.

The overall picture can be characterized as follows. A small percentage of children, mainly those at the highest cognitive levels, do achieve reading proficiency. Aside from this group, it is rare to find ASD children displaying any reasonable mastery of reading. Most children cluster into one of three groups.

1. Some fall into the group known as hyperlexics. This term refers to individuals who independently (i.e., without being taught) learn to decode, or read words. However, they show little or no comprehension of what they have decoded. Essentially these children are word callers who look at a text and say the words, much as if they were reading a telephone book.
2. Many ASD children who do not show independent mastery of reading are given instruction, generally in the form of bits and pieces of a traditional reading curriculum. For example, an entire year may be spent on teaching children to recognize the ten or twelve names of their classmates in written form. This approach, which provides a fractured and often meaningless set of skills, is not necessarily thought to be productive. Rather it is seen as the only option given the children's level of functioning.
3. The many ASD children who are either non-verbal or minimally verbal are essentially ignored. These children are deemed to be so limited that no discernible effort is made to teach any significant aspect of written language.

Despite what is commonly thought, this situation is not intrinsic to the children's limitations. Rather it stems in large measure from the two major systems that dominate the teaching of reading. These are **phonics** (which concentrates on sound analysis) and **whole language** (which concentrates on independent writing and complex stories). Neither system is appropriate or productive for most ASD children.

The limited, or non-existent reading skills in ASD children is not due to the children's limitations but the absence of an instructional system that works.

Having never seen the possibility of a workable system, many parents do not even have reading on their radar screens. When the idea is broached, their response is a mixture of wonder and skepticism. Often they will state that their deepest desire is to have their children read, but in their wildest dreams they cannot permit themselves the luxury of thinking that this goal could ever become reality.

The abandonment of reading does not simply mean the loss of a good opportunity. It is the loss of a golden opportunity. Think for a moment about the hyperlexic children. What is

remarkable about these children is that their learning is not based on their having been taught. Rather, they learn because they teach themselves. This type of self-initiated, productive, highly motivated activity is extraordinarily rare in this population. It contrasts dramatically with the far more pervasive, amorphous, undirected roaming that marks so much of their day. It also stands in dramatic contrast with the resistance and discomfort they show when required to deal with spoken language. **Reading is clearly a focus of interest and joy that is unique in the world of ASD.**

What is more, our experience has shown us that, with the right program, almost all ASD children—even those whose behavior would suggest they are extremely limited—share the interest that hyperlexic children show in reading. It is not an exaggeration to say that written language has a magical attraction for ASD children.

Further, once the skills start to develop, there is no reason they need be limited to the word calling activities of hyperlexic children. The children's interest and motivation easily allow the instruction to move to significantly high levels of language mastery—often levels that are far higher than those that can be achieved with spoken language.

Reading is a focus of interest and joy that is unique in the world of ASD children. Written language holds a magical attraction for them. Further, once the skills begin to develop, they can be extended to teach higher level language skills—skills that have often prove so elusive when the teaching is confined to spoken language.

There is one proviso: if this is to take place, we need to use techniques that work—techniques that suit the children's needs, abilities, and motivation. In turn, this is possible only by looking beyond the two current approaches that have shown themselves unequal to the task. When this is done, the vast range of ASD children—even those who are totally mute—show a desire and skill in reading that is truly amazing and rewarding.

That is what **LiterASDy** is all about.

Key Features

1. Teaching writing

Written language, like oral language, has two components. In oral language, there is speaking and listening; in written language, there is reading and writing. Writing typically receives far less attention than reading. Yet it is critical if the children are to be able to produce the language they are learning and use it to communicate with others. It is even more critical for mute children than for those who possess spoken language since writing is the only vehicle they have for producing the language they are learning.

Writing, whether in the form of handwriting or keyboarding, demands motor skills. For most ASD children, fine motor skills are one of their weakest areas. Left to their own devices, when

they are asked to handwrite, the letters often are simply big shapeless masses sprawled across the page. Left to their own devices, when the children are asked to keyboard, they engage in seemingly random movements, hitting keys in a meaningless fashion that ends up with little more than jamming the keyboard.

All this can change rapidly and dramatically through two simple techniques. One involves modeling by the adult. As the child watches, the adult produces a single letter such as a “c.” This is then combined with the second technique where the child is asked to copy the model while the adult supports the child’s hand, or hands, as the movement is executed.

“Supporting the hand” is different from what is commonly referred to as “hand over hand” activity. In the latter, the adult typically moves the child’s hand to achieve whatever action is desired. This is not the case with “supporting the hand.” Here, the adult never moves the child’s hand to execute the copy of the model. The holding is limited solely to support and the adult waits until the child executes the action.

The support achieves several goals: 1. It frees the child of having to determine where and how to position his/her hand. Total concentration can be devoted to the movement that has to be executed. 2. It stops the child from engaging in extraneous, non-task related movements that so commonly interfere with task completion. 3. The adult’s willingness to wait for the child to execute the movement conveys the message that the adult is calm and in control. This is a major step in allowing the adult to assume the directive role that is essential to effective teaching.

When these techniques of modeling and hand holding are combined with the systematic teaching of letters, within 3 to 6 weeks most children master production of the entire alphabet—both in terms of handwriting and keyboarding. The hand support is maintained for however long the child requires. For some children, the period is a few months; for others, it may be for a year or more. Happily, most children move on to achieve the goal of independent writing. At no point, though, does the absence of fully independent writing delay the move to actual reading and writing. After the first few weeks devoted to letter production, systematic instruction in reading and composing messages begins.

“Hand support” is an amazingly effective, albeit seriously neglected, technique in enabling ASD children to achieve effective handwriting.

In contrast to “hand over hand” activities, the adult does no leading of the hand. Instead the child has to determine and produce all the movements. The benefits are enormous!

Within 3 to 6 weeks, most children can produce all the letters of the alphabet in a clear and readable manner.

2. Using the computer

It's phenomenal to watch children interacting with computers. They have a level of comfort, skill, and motivation that is spectacular to see. This is as true of ASD children as it is of children without these problems.

The power of the computer is unmatched when you want to teach material such as reading. It takes the relatively dry and tedious details that are essential and unavoidable and transforms them into attractive games and information.

We take advantage of this opportunity by having much of the reading instruction take place through a computer program (the Sentence Master—a program developed by this author and published by Laureate Learning). Since the program is not designed for ASD children, certain modifications are necessary. For example, just as in the writing activities, hand holding may take place to limit the extraneous pressing of keys that detract from learning.

The computer is a phenomenal tool for teaching reading and much of the reading instruction takes place via this medium.

The initial work always involves an adult staying with the child to direct the activities on the computer. Children with serious emotional and cognitive limitations may show some initial resistance to the computer since they are uncertain of where they are being taken. However, the programs rely on repetitive, predictable appealing patterns. After a few weeks, the children are fully aware of the patterns and their resistance dissolves. Like the higher level children, within a relatively short period of time, most of them are working independently at the computer in completing each of the sessions.

3. Using real language

When reading is taught in a traditional manner, the units that are emphasized are sounds and words. Even were ASD children not to experience the problems they do with isolated sounds, neither of these units is sufficient for true reading or writing.

Literacy, like spoken language, rests on using meaningful messages. Words like *girl*, *house*, *sit*, and *hat* are essentially devoid of meaning when they appear on their own. They start to convey real messages only when they are embedded with other words to form the sentences and sets of sentences that convey real information.

Sentences, like so much of language, have received far less attention than they should in the teaching of reading. One of the features of books, for example, is that they are composed not simply of sentences, but sentences that link together. For example, a story might start by showing a picture of a boy in bed with an accompanying text as follows:

*There was a little boy.
He was tired.
He wanted to sleep.*

To a sophisticated language user, these sentences are simple and obvious. That is not the case for ASD children. First, the sentences are in the past tense but the training of many of the children has never led them to go past the present tense. So the meaning of the sentence is diminished or lost. Second, *the boy* in the first sentence gets transformed to a *he* in the second and a *him* in the third. Noun to pronoun changes in English are difficult for ASD children. Yet without them, the text loses all potential meaning.

The reading and writing has been designed to teach systematically the hundreds of conceptual and linguistic transformations that children need to master in order to deal with what appear to be even simple sentences. It is not possible to outline here the precise way in which the material is structured to achieve the necessary learning. Suffice it to say that lots of repetition with tiny changes is involved in getting the ideas across to the children. Fortunately, repetition is no problem for the computer. It is an ideal instrument for offering the children the endless examples they need to acquire what more skilled children can learn through a few encounters.

The content of the reading and writing is always geared towards helping the children master the sets of sentences that are critical to meaningful language.

4. Teaching comprehension

Comprehension is known to be one of the weakest areas of literacy for ASD children—even for those who seem to be decoding effectively. Once again, the difficulties arise largely from the techniques used to teach it.

The vast majority of work in comprehension rests with asking the children questions—questions like “*Who was in the story?*” “*What did she do?*” and so on. For most ASD children, questions represent one of the most difficult aspects of language. And even when they answer correctly, they have no sense as to why the question is being asked and what the significance of the answer is.

Question asking has a definite role to play but it must come into the process far later and under much more careful controls. Far more effective means of comprehension are available. For example, receptive language is known to be one of the simplest types of language you can ask of children. So once the children have learned about 15 words, a set of key command words is taught such as *make*, *put*, and *turn over*. Once these are learned, objects are shown and the child has to read and carry out the actions conveyed by such commands as “*make the girl sit*,” “*put the truck here*,” and “*turn the chair over*.” This is but one of a number of techniques used to transform words into meaning.

Despite their common use in teaching comprehension, questions are complex and confusing and so they are avoided. Instead, easier levels of language, such as following commands, are used to initiate the comprehension process.

5. Time commitment

The time commitment is not extensive. Each teaching session takes about 45 to 60 minutes. At a minimum, there should be 5 sessions a week. The program continues so long as the child is making progress. Most children can accomplish second to third grade reading within a one to two year period. Those who show themselves to be relatively proficient in language can move on to higher levels, including handling curriculum texts like those in science and social studies.

A Concluding Note

The LiterASDy program has been used successfully with hundreds of children including mute children who were thought to be incapable of language. The development of literacy in this population is of enormous benefit in enhancing the children's cognition and language and in stemming the downward spiral that so commonly occurs as the children mature. It also offers the enormous benefit of enabling others, both parents and professionals, to see the children in an entirely different light.

It seems strange to have to stress the value of literacy. It seems so self-evident. It is necessary, though, because the dominant view, for so long, has been to give up on literacy and essentially relegate it to a background set of splinter skills.

We cannot stress strongly enough that this is not the case. Because of the children's intrinsic motivation, literacy is one of the easiest areas to teach—given the right techniques and the commitment to do so. We would be delighted to have you join us in our efforts to offer the incredible world of written language to your child.