# A Successful Treatment Model for Learning Disabilities

Mary Meeker

*Educators and psychologists who are concerned by the mounting numbers of bright students who aren't succeeding in school are looking for workable solutions to this perplexing problem. While not a panacea, the Meeker SOI paradigm offers practitioners a proven successful educational diagnostic and treatment model. The Meeker paradigm provides a framework for making expert referrals and/or diagnoses with corresponding educational treatment plans. Meeker's approaches have demonstrated a history of successful interventions for gifted learning disabled students. This article provides essential information for educators and clinicians who are looking for ways to address the paradox presented by those individuals who exhibit both gifted and learning disabling traits.*

The trouble with defining learning disabilities is that its definition is often mistaken for the causes, and therein "lies the rub."

There are many causes of learning disabilities, and a most interesting aspect is this: these causes do not differentiate whether or not the person is gifted.[1]

It is, therefore, necessary first to delineate a Learning Disabilities syndrome, because the term has become so popular that teachers and parents are haring the term with more and more frequency. The accelerated use of the term has led educators and psychologists to search for a clear and defensible definition that would include educational treatment.

## DEFINITION AND ASSESSMENT

Structure of Intellect (SOI) researchers, too, concerned with the need for an accurate, replicatable definition, were finding that (1) the SOI Learning Abilities tests successfully diagnosed undeveloped learning abilities in very intelligent children and (2) that specific treatment of SOI abilities made these students successful in school. Their assumption was that if treatment targeted to a learning disability was forthcoming, and the child prospered in school, then they could depend upon the SOI definition that *the absence of learning abilities defined learning disabilities*. These results from Structure of Intellect (SOI) tests and treatment in public schools as well as in clinics have made a strong case for a definition of the term to include accountable intervention and post assessment. (Meeker, 1974, 1980.)

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[1] The term "gifted" is fraught with definitional problems—from the old statistical concept derived from a percentage of scores under the bell-shaped curve (IQ tests) to the realistic modern definition that includes: (1) specific gifted intellectual abilities assessed with an instrument that is based on a theory of intelligence, (2) talent, (3) creativity, or (4.) social intelligence. (Meeker, 1985.)

The SOI defines learning disabilities as an absence of one or more learning abilities. With this definition, then, we clearly identified and treated twenty-six learning abilities. The clinical process usually begins when parents are notified that their child is either failing or not progressing satisfactorily in school. The search for cause begins with the use of a developmentally appropriate Structure of Intellect (SOI) assessment. These are the instruments available to teachers and psychologists:

1. The SOI Screening Kit (a one-on-one thirty-minute screen for seven learning abilities, expressive language fine-motor skills, and four psycho-neurological screening exercises). Developmentally appropriate for ages 4 through 8, used to identify potential learning disabilities and potential gifted abilities. The results are coded directly to a conference form to be used with parents.

2. The SOI Reasoning Readiness Test is a group test, appropriate for kindergarten through grade one (a forty-five minute assessment to be used in several sessions in small groups by the teacher).

3. The SOI Process & Diagnostic Test is a group test assessing eleven learning abilities. Each subtest requires a five-minute period.

4. The SOI-LA, Form A, is the basic test and consists of twenty-six learning abilities out of the ninety intellectual abilities factored in the Guilford Structure of Intellect theory of intelligence. The teacher can score all tests; computer diagnoses are also available on discs for the teacher.

With the exception of those universities where SOI is part of the course work, few teachers are given professional training in their college work to master diagnostic testing. So the thrust of SOI assessment instruments has been to provide group tests for teacher administration. *There simply are not enough school psychologists to serve the many students who need psychometric assessment.* Mastery of SOI constructs, testing, interpretation and instructional strategies does require additional professional training. This staff development can be covered initially

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in a two-day seminar that allows teachers to begin testing and to understand and communicate to parents what the results are and what the program will be.

Figure shows how the teacher records the test results.

Figures 3 and 4 are the conferencing forms to be used with the parent. The treatment is very specific for school and parents are told their child will have at least 30 minutes of intelligence training, three times weekly with the materials designated. On the right side of the form are suggestions of materials for parents so they can assist their child through at-home experiences.

# Place Figures 3 and 4 Here

*Limitations for the SOI Learning Disabilities Definition*

Competing with the learning disability syndrome in popularity currently is the ADD (Attention Deficit Disorder, with or without hyperactivity) (DSM III). ADD, if accurately diagnosed, does require medical treatment such as Ritalin or Dylantin, when an EEG indicates abnormal or erratic brain waves, or a nutritional, allergy examination. This article does not address ADD other than to alert the reader that ADD often masks one or more learning disabilities. Dr. Kenneth Zyke was the first pediatric neurologist to perform a double blind study on students who were unable to learn and who were being referred to school psychologists for testing as possible "brain damaged" or "emotionally disturbed." CIBA pharmaceutical company funded this study, and the research took place at Harbor General Hospital (a branch or UCLA Medical School) in Torrance, California, in 1965, 1966, and 1967 (Zyke, 1966).

Zyke and his staff made extensive neurological and psychological studies of these children and o the basis of staff diagnoses, he assigned elementary-aged students to one of two groups—brain damaged or emotionally stressed. They were matched with other students who showed behavior problems and failure to learn but did not meet diagnostic criteria of the experimental group. All children were administered Ritalin.

The findings: Ritalin calmed down those students who had neurological damage; Ritalin had no effect on emotionally stressed or acting out students with any neurological impairment.

*Limitations to Diagnosis of Learning Disabilities*

Learning disabilities are identified in school situations and are reflected symptomatically as failure at learning to read. To isolate learning disabilities we must assume that if the child had abilities for learning, that learning would take place. We thus must eliminate from the category those children who began life or were born with learning limitations because of organically or genetically impaired conditions (such that their condition will keep them from profiting from learning). Unfortunately, these latter are treated educationally with the same curriculum as are those who are born intelligent but are not learning. And these students are treated with the same curriculum even though they are intelligent but are functionally unable to learn because of environmental problems and influences that negatively affect intellectual functions.

A search of Area II functions in Figure 5 will show how role modeling, environmental stress or social problems can be identified and targeted for assessment. These are not children who exhibit no ability to learn as are the impaired. These children show learning disabilities not because they have not

developed the learning abilities but because they are functionally unable to focus or work within the system. Their condition is such that their need is not for academic teaching but rather for counseling or conditioning techniques.

A search of Area III functions in Figure 5 will show why organically impaired, nutritionally deprived, visually dysfunctional, or auding dysfunctional children need to be accurately identified for corresponding treatment before they are labeled learning disabled. It is not possible to guess how many of theses organically impaired children or children damaged from birthing drugs or inadequate nutrition would otherwise have been gifted with disabilities. This is particularly true of any of the four kinds of dyslexia.

Even with this limitation to the population, however, not all:

> genetic (chromosomal, DNA, congenital) anomalies,
> perinatal (damage from birthing, forceps, drugs),
> prenatal (severe stressors, drugs, diseases that damage the brain, eyes, or ears of a would-be healthy infant),
> malfunctioning physiology (tendencies to allergies, visual dysfunctions and problems, hearing and speech),
> emotionally stressed and prone to disturbed behavior,
> abused (physically, sexually, verbally, nutritionally),
> attention deficits (ADD) not due to sensitivity to allergens,

exhibit learning problems. In fact, none of these conditions guarantees that the child will have learning disabilities. Nor do any of the conditions predict that a child will not learn—that is part of the "rub."

Learning disabilities when defined, then, as *the absence of learning abilities* (see Abroms and Meeker, 1980, for a summary of efforts to define learning disabilities), appropriately allows educators to discharge the responsibility with which they have originally been charged. The SOI definition provides a framework for adding to the curriculum the specific kinds of materials and strategies that will teach underdeveloped learning abilities that are necessary for successful learning of subject matter in otherwise intelligent children. (See also *Journal of Consulting and Clinical Psychology* 56(6) for excellent summaries of philosophical positions and up-to-date reviews of issues and problems with definitions.)

The Meeker paradigm (Meeker, 1975), Figure 5, shows the three areas within which any malfunctioning can be deleterious to the child's school performance.

Teachers are well trained to teach achievement in reading and arithmetic areas which compromise the highest levels of Area I and are at the top of the ladder in human functions. This fact alone, is the major reason for learning problems—that education starts at the top of the ladder without guaranteeing that Areas II and III are developed well enough to allow entry into Area I performance. Teachers do need training and retraining to master the are of understanding the total of human functions and where their expertise enters into the ladder of

human development. So when educational efforts are not enough, or when children fail, teachers who have been taught to go beyond failure to help children thrive educationally and ferret out the cause for lack of success, can follow this paradigm as a guide to identify which functions are not operating well. The areas and their functions in this paradigm offer a "road map" indicating where to look and what function to access for successful diagnoses of the problem.

## HOW TO USE THE MEEKER PARADIGM FOR DIAGNOSTIC AND EDUCATIONAL TREATMENT

Major human functions are divided into: those that are physiological, described in Area III, those that have to do with personality, character, social and emotional functions, described in Area II, and the cognitive, intellectual-academic functions in Area I.

The Meeker paradigm is an educational diagnostic and treatment mode. The use of the paradigm for diagnosis and treatment depends upon and demands accurate, complete diagnostic information. Secondly, treatment will consist of curriculum materials or instructional strategies that the teacher matches to the needs identified b the diagnosis. The paradigm offers a one-on-one matching of diagnostic findings with specific treatment.

Because school psychologists are a relatively new addition in education, the general situation in American schools is that a student is usually tested on an IQ test and is assessed as average, below, or above in intelligence. The conceptual implication using a molar or general intelligence approach is that achievement should be commensurate with the IQ score, and that once results are given to the teacher, somehow the teacher is supposed to address individual needs. A frequent example, to illustrate this, is that of a student failing in arithmetic. The teacher refers the student to the psychologist when his or her efforts make no difference. The IQ score indicates normal expectancy; the achievement tests indicate achievement that is below grade level and the cum folder results indicate this has been the case consistently. SOI analysis will show that of the six learning abilities (see Figure 6) this student has not developed auditory memory in the six years of schooling and it is that particular function which needs treatment, not the general, rote arithmetic skills practice given as remedial arithmetic. The solution is not "more arithmetic" (or reading) but is, instead a program to develop the auditory memory that is lacking (or in the case of reading, the visual memory). The paradigm will have shown no Area II or III problems, only that arithmetic is low. SOI testing then will show which ability is low and the teacher will be able to have a much more effective diagnostic and treatment program.

### *Qualified Diagnoses*

In-depth training in the art of testing, and test selection procedures is usually reserved for psychologists who work with psychometrics. Education is perhaps the only profession in which those who are equally needful of this information do not receive the specifics of training. This withholding of information is not

commonly practiced in medicine, engineering, or science where professionals are well trained in the interrelationships of tests and symptoms.

The educational practice of relegating testing and diagnostic findings on learning disabled to psychologists who limit their battery to an IQ test and the House Tree Person Test and who do not give exact treatment plans to match their findings often does not serve the teacher, the children, or their parents well. Too often the testing psychologist sees the child for only an hour or two and will neither see the child again nor be aware of the program beyond a standardized IEP (Individualized Educational Plan). The testing information is often no more understandable to teachers and parents than are the meanings of achievement test scores variously reported (stanine, standard score, percentile, etc.) and received by them.

It is the teachers who are on the firing line and who best know the behavior and symptoms of their students. It is they who need an understanding of standardized testing procedures, of which tests to select for what purpose or age, of differential testing procedures and how to interpret the information and develop it into an educational program that will answer the needs of the student who needed testing in the first place and to change the student's program so as to reduce educational failure for any student who is not thriving in the standard course of study.

Once the function is assessed, treatment can be matched to the findings.

*Use of the Paradigm*

At the SOI Testing Center in Los Angeles we reviewed our records on gifted children with learning disabilities studied. Dating back to 1974 we found the most common presenting problem that led parents to seek help outside of the schools was under achievement (i.e., gifted, not performing). The ratio of nonperformance is six to one, six boys for every girl. Using the paradigm as a guide, the analysis showed the breakdown presented in Table 1.

DISCUSSION

Twenty-five of these girls were found to be visual dyslexics, only one was an auding dyslexic. The girls' dyslexia generally showed up in poor sequencing and in reading speed (NST) due to visual dysfunctions of one kind or another. When treated visually, and with SOI Modules Training (CFS, CSS, CMS, ESS, NSS), gains were made to their satisfaction.

Of the 2,037 gifted boys, 345 were dyslexic and, matched with girls, they had even more severe reading problems. We noted no speech problems, but 12 of them needed caloric ear stimulation tests (we referred all suspected auding dyslexics to the House Hearing Center in Los Angeles for a caloric ear stimulation test). Not all of these children came from California schools. We receive referrals from many of the states and several countries such as Dubai, England, Mexico, Puerto Rico, Canada, and Japan.

Each diagnosis led to treatment. We found it necessary to separate gifted children with simple learning disabilities (that is, undeveloped learning abilities) because they were easily treated with the specific SOI modular booklets and they could work on these at home or at school. However, although the same materials and modules may be used with dyslexics our methodology is very different. We use what I call the "water on the stone" approach. That is, the dyslexic must work the same module over and over—not different material—until somehow an ability clicks in. One boy repeated the CMS module 26 times before the neural connections were finally made and he was able to track extended verbal information and instructions.

Incidentally, one reads in the literature how the visual, auding, and tactile tracts are integrated in the cerebellum and with cerebella integration of sensory motor skills, there is great improvement in integrated responses; however, to have this integration generalize to the academic performance requires that the visual tracts and auding tracts that connect the two hemispheres be developed. We accomplish this cognitively by presenting figural spatial exercises (right hemisphere primarily) at the units level. This is called a horizontal SOI teaching strategy (Area I).

Gifted children with learning disabilities often have an emotional overlay (Area II) that needs documentation and treatment, even though this is not the charged responsibility of the teacher. But fear, failure, math anxiety, perfectionist tendencies on the part of so many gifted children, some parents and some teachers, and/or the fear of failure or rejection by parents all make treatment more complicated. we have found that teachers can, by treating the cognitive or intellectual ability, have Area I results spill over into Area II with the resulting success in achievement leading to recuperation with increased confidence.

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**SUMMARY**

A major but simple reconstruction of concepts is necessary if learning disabilities are to be treated successfully in school so that intelligent children are nurtured and their failure is avoided.

These conceptual changes are simple but basic.

1. An absence of learning abilities defines learning disabilities.

2. A change in the presupposition that the teaching of reading skills and arithmetic facts leads to the learning of those subjects! This we have found to be an erroneous deduction when diagnosing SOI abilities in children who cannot learn academic skills.

We have been engaged in practice now for over twenty-five years documenting what the specific abilities are that are necessary for the learning of educational skills. We have demonstrated unequivocally that intelligence can be taught, that it can be further developed, that children with learning disabilities lose them when the ability is taught to them. The teaching of the breakdown of reading skills (phonics blending, etc.) does not lead to reading. What does lead to reading success (enabling reading skills) are foundational learning abilities described in Figure 6.

**Figure 6**

The SOI-Learning Abilities Test is derived form Guilford's SI theory of intelligence. Twenty-six abilities have been found to be most related to achievement in :

**READING (Foundational abilities)**

CFU—Visual closure
CFC—Visual conceptualization
EFU—Visual discrimination
EFC—Judging similarities and matching of concepts
MSU-V—Visual attending
MSS-V—Visual concentration for sequencing

**READING (Enabling skills)**

CMU—Vocabulary of math and verbal concepts
CMR—Comprehension of verbal relations
CMS—Ability to comprehend extended verbal information
MFU—Visual memory for details
NST—Speed of word recognition

**ARITHMETIC**

CSS—Comprehension of numerical progressions
MSU-A—Auditory attending
MSS-A—Auditory sequencing
ESC—Judgment of arithmetic similarities
ESS—Judgment of correctness of numerical facts
NSS—Application of math facts

**MATHEMATICS**

CFS—Constancy of objects in space (Piaget)
CFT—Spatial conservation (Piaget)
CSR—Comprehension of abstract relations
MSI—Inferential memory
NSI—Form reasoning (logic)

**WRITING**

NFU—Psycho-motor readiness

**CREATIVITY**

DFU—Creativity with things (figural-spatial)
DSR—Creativity with math facts (symbolic)
DMU—Creativity with words and ideas (semantic-verbal)

The foundational SOI abilities defined in Figure 6 formed the basis for the New York Screening Kit test that has successfully identified potential learning disabilities and gifted abilities in entering kindergartners. Since the New York City population entering schools does so speaking over sixty languages, the kit had to be translatable and still validly meet the mandate of Chapter 53. This is the SOI prevention program:

The Creative Learning Workbook
LOCAN Reading Series for non-ready learners
LOCAN Blacks for Writing
Creativity Cards for Expressive Language
SOI FSM Memory Kit of Games
Spelling with SOI (MSS-I)
How the Alphabet Doubled (Motor Games)
The SOI Reading Readiness Primer and Teacher's Guide
The I Love My SOI Alphabet of Large Letters
The I Love My SOI Alphabet of Small Letters

These SOI materials do and will subvert potential learning disabilities should students enter school cognitively unprepared for the learning of academic skills in reading and arithmetic.

When the screen does identify potential gifted abilities, teachers can use these materials for enrichment and intensifying gifted abilities:

SOI Computer Games
Comprehension Sourcebook of Lessons
Memory Sourcebook of Lessons
Critical Thinking Sourcebook of Lessons and Handbook for Reasoning
Problem Solving—Convergent
Problem Solving—Creative/Divergent

We see changes in educational practice coming directly from the training institutions. The failures are mounting among American students—failures that lead to negative citizenship roles. Failure should not be the goal of an education. at some time we are going to have to take a look at our failures—we see them all around us in crime, drugs, alcoholism, homelessness, joblessness, poor health, increased unhappiness among intelligent people. The one constant that is mandated in America is education. We are failing this mandate.

If it takes the willingness to change to lower the failure rate in our schools, one place we can start is changing teacher-training practices.

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About the author: Mary Meeker began her career in gifted education as a psychologist in 1962 when, in an effort to understand kinds of giftedness, she analyzed IQ tests for structure of Intellect factors. In 1969 she developed the first *Sourcebooks* for teachers so that gifted programs could go beyond academics into the development of intelligence. She edited the 32 *Frameworks for Gifted* for the State of California (1970-1972) covering seven disciplines over four grade levels and is co-author of the SOI tests for identifying intellectual abilities. Her tests and materials have been published in Spanish, French, Japanese, and Taiwanese. She is dedicated to understanding intellectual giftedness and to helping educators broaden their perspectives on teaching all children.