



What is SOI-IPP?

Cognition Before Content:

Every year, school systems all across the country devote resources to educational programs that focus on improving the quality of the curriculum or the quality of the teachers. SOI programs focus on something much more basic: the quality of the students. Are they able to think? Are they prepared to learn? Can their ability to learn be improved?

SOI assesses, profiles and develops cognition and perception—the abilities and skills that are essential to the classroom—enabling learners to become quality students.

The success of SOI can be traced directly to fundamental science:

- intelligence is not fixed at birth
- multiple intelligences can be developed
- a student's 'teachability' can be nurtured at any age

Learning: It's dependent on more than just the teacher and the curriculum, but the student and his or her ability to learn.

SOI is founded on the fact that the brain is the cornerstone of education. If students aren't able to process or retain information, it doesn't matter what you teach them or how you teach them, they're not going to learn.

'D' students—even 'B' students—very often have a desire to succeed that exceeds their ability to learn. They may be strong in some areas, but weak in others. They may have 20/20 eyesight, but can't read left to right or compute right to left. They may work well with close supervision, but have trouble working independently.

The SOI-IPP program works to improve attention span, memory, comparison/contrast thinking, eye-hand coordination, systems reasoning and other skills essential to the learning process, helping students perform better in school and in life.

"The ... [SOI-IPP] program allows students to feel good about themselves and to assess their weaknesses and build on their strengths. I have seen students 'blossom' in a very short period of time."

-Sandy Felts. Fall River Elementary School, Big Sandy, W. Va.

COGNITIVE ABILITIES

The SOI tests assess and help develop 26 cognitive abilities.

	ABILITY	CURRICULUM AREA	CONSEQUENCE IF UNDERDEVELOPED
COMPREHENSION	VISUAL CLOSURE	Reading Readiness	Will not see the word completely; susceptible to reversals
	VISUAL CONCEPTUALIZATION	Reading Readiness	Difficulty with classification, will be inhibited in science
	CONSTANCY OF OBJECTS IN SPACE	Mathematics	Difficulty manipulating spatial relationships
	NOTATIONAL RELATIONS	Arithmetic/Mathematics	Difficulty with “discovery” method; relationships not seen
	NOTATIONAL PROGRESSIONS	Arithmetic/Mathematics	Poor arithmetic foundation; weak on arithmetic “facts”
	VOCABULARY	Reading & Language Arts	Will have “word holes” in sentences
	VERBAL RELATIONS (ANALOGIES)	Reading & Language Arts	Difficulty with “discovery method;” poor at analogies
	EXTENDED VERBAL COMPREHENSION	Reading & Language Arts	Inability to “track” long or involved sentences and instructions
MEMORY	MEMORY FOR VISUAL DETAILS	Reading & Language Arts	Weak in memory for details
	VISUAL ATTENDING	Reading Readiness	Difficulty with spelling; may lose visual concentration
	VISUAL SEQUENCING	Reading Readiness	Will not be able to “hold” and process or sequence data
	AUDITORY SEQUENCING	Arithmetic	May have auditory discrimination problems
	AUDITORY ATTENDING	Arithmetic	Will not be able to “hold” information presented vocally
	INFERENTIAL MEMORY	Mathematics	Problems “holding” unconnected facts until implication found
	SEMANTIC AND VERBAL MEMORY	Reading & Language Arts	Difficulty seeing connections in reading material
JUDGEMENT	VISUAL DISCRIMINATION	Reading Readiness/Spelling	May mistake letters or omit small words in sentences
	JUDGING SIMILARITIES OF CONCEPTS	Reading Readiness	Problems with similarities & differences; low reading comprehension
	NOTATIONAL CONCEPTS	Arithmetic/Mathematics	Difficulty using “set” concepts; difficulty with “new math”
	NOTATIONAL PROCESSES	Arithmetic/Mathematics	Susceptible to “math anxiety;” unable to handle ambiguity

COGNITIVE ABILITIES (CONTINUED)

	ABILITY	CURRICULUM AREA	CONSEQUENCE IF UNDERDEVELOPED
PROBLEM SOLVING	PSYCHOMOTOR COORDINATION	Writing	May be slow at work requiring hand-eye coordination
	APPLICATION OF NUMERICAL FACTS	Arithmetic	Difficulty “seeing” arithmetic solutions
	SPEED OF WORD RECOGNITION	Reading	Will lose place while reading; skipping words or lines
	FORM REASONING AND LOGIC	Mathematics	Will have difficulty with “thought” problems
CREATIVITY	CREATIVITY WITH OBJECTS	Spatial/Graphic Arts	Will be inhibited in tasks without explicit instructions
	CREATIVITY WITH NOTATION RELATIONS	Mathematics/Programming	Difficulty assimilating new math concepts; “timid” exploring solutions
	CREATIVITY WITH WORDS AND IDEAS	Creative Writing	Slow or pedantic in writing; poor in composition

PERCEPTUAL SKILLS

These eleven perceptual skills are specifically targeted for evaluation and development.

	SKILL	CONSEQUENCE IF UNDERDEVELOPED
SENSORY INTEGRATION	CROSSING MIDLINE OF BODY	Will have difficulty carrying out a sequence of movements in the proper order
	MENTALLY CROSSING MIDLINE	Will have difficulty carrying out a sequence of movements with automaticity
	BALANCE	Will have difficulty sitting still, focusing on instruction
	BODY IN SPACE	Will have difficulty with left/right distinctions, spatial relations and visualization
	EYE-HAND COORDINATION	Will have difficulty with handwriting, drawing, and the capacity to learn
VISUAL PERCEPTION	NORMAL READING DISTANCE OBSERVATION	If a student has less than 20/40 vision, we recommend referral to an optometrist or vision therapist
	TARGETING AN OBJECT	Will have difficulty moving the eyes from one point to another, essential for good reading skills
	MOVING ACROSS THE PAGE	Will have difficulty with reading comprehension and attention span
	AIMING AT THE TARGET	Will have difficulty aligning the eyes inward when an object is near and outward when an object is distant
	SHIFTING BETWEEN SEAT WORK AND BOARD WORK	Will experience “blurring” when looking up at the blackboard
	TEAMING OBSERVATION	Will not see the whole page

VISION / LEARNING INDICATORS IN SOI TEST

These SOI abilities are cognitive representations of visual functions.

	SOI FACTOR	DEFINITION	RELATION TO ACHIEVEMENT
CFU	COGNITION OF FIGURAL UNITS	Ability to scan horizontally.	Visual requisite for reading and closing letters into words that are meaningful.
CMU	COGNITION OF SEMANTIC UNITS	Ability to understand vocabulary and verbal ideas.	Cognition of ideas when reading.
MSU-v	MEMORY OF SYMBOLIC UNITS - VISUAL	Ability to attend to, concentrate on, and remember visual stimuli.	Critical for attending, concentrating, and recalling information presented visually.
MSS-v	MEMORY OF SYMBOLIC SYSTEMS - VISUAL	Ability to attend to, remember, and process visual sequences.	Critical for reading where the person is required to hold ideas in mind and manipulate sequentially information.
EFU	EVALUATION OF FIGURAL UNITS	Ability to distinguish small detail differences in figural materials; often called "visual discrimination."	Recognizing and working with small details. Especially critical for staying with reading over an extended period.
NFU	CONVERGENT PRODUCTION OF FIGURAL UNITS	Ability to reproduce the integrity of visual details that require eye-hand coordination.	Fine motor tasks that depend on writing or copying letters, numbers or words.
NST	CONVERGENT PRODUCTION OF SYMBOLIC TRANSFORMATIONS	Ability to differentiate and recognize printed or written words.	Speed of reading, finishing reading assignments.
CFT	COGNITION OF FIGURAL TRANSFORMATIONS	Ability to see space perspectives.	Geometry, algebra.
DMU	DIVERGENT PRODUCTION OF SEMANTIC UNITS	Ability to write or speak creatively.	Creative writing, marketing, teaching communication, high level jobs.

Student Steps to Success



Referred

Students who have been identified by their teachers as having academic or behavioral difficulties are referred to the SOI-IPP Lab. A trained paraprofessional supervises the cognitive psychomotor and physical exercises used in the SOI-IPP program.

Assess

In the SOI-IPP Lab we assess 26 cognitive abilities and 11 perceptual skills including attention, memory, verbal comprehension, visual sequencing, and auditory sequencing. We evaluate the test scores, construct a profile of each student's skills and abilities, determine what needs to be improved, and then create a specific program of learning development exercises for that student.

Profile

Each student's profile of cognitive abilities indicates areas for improvement, while giving teachers and parents a specific snapshot of the student's strengths, weaknesses and learning-style preferences.

Develop

During the next 5 to 9 months, the students attend the SOI-IPP Lab at least twice a week for 40 to 50 minute sessions. Cognitive abilities are developed with carefully structured exercises that build one aptitude at a time. Perceptual skills are strengthened through a series of physical activities that repetitively build the

neural 'bridges' necessary to achieve control of mind over body. These procedures literally 'bulk up' attention, memory, rule-following, concept formation, context comprehension, process orientation and the learner's other essential thinking skills.

Success

Students' academic performance dramatically improves, they connect with the learning process, and increase their capacity to remember and apply information. Once completing the SOI-IPP program they are ready to participate and learn in the classroom environment.

ABILITY		LOW	MEDIUM	HIGH
COMPREHENSION	Visual Closure	██		
	Visual Conceptualization	██████████		
	Constancy of Objects in Space	██████		
	Spatial Conservation (Piaget)	██████		
	Notational Relations	██████████		
	Notational Progressions	██		
	Vocabulary	██████		
	Verbal Relations (Analogies)	██████		
	Extended Verbal Comprehension	██████████		
MEMORY	Memory for Visual Details	██		
	Visual Attending	██████████		
	Visual Sequencing	██████		
	Auditory Sequencing	██		
	Auditory Attending	██████████		
	Inferential Memory	██		
	Semantic and Verbal Memory	██		
JUDGEMENT	Visual Discrimination	██████		
	Judging Similarity of Concepts	██████		
	Notational Concepts	██████████		
	Notational Processes	██		
PROBLEM SOLVING	Psychomotor Coordination	██████████		
	Application of Numerical Facts	██████		
	Speed of Word Recognition	██		
	Form Reasoning and Logic	██████████		
CREATIVITY	Creativity with Objects	██████████		
	Creativity with Notation Relations	██████		
	Creativity with Words and Ideas	██████████		

When students connect to
learning,

EVERYONE WINS.

The power of learning is awe-inspiring. When it happens, student achievement, self-esteem, and satisfaction are nurtured. Teachers are fulfilled. Their students achieve higher test scores, pay more attention, are better behaved. Schools are transformed. Test scores go up. Discipline referrals go down. The entire climate for learning and teaching dramatically improves. The school district enjoys increased academic performance and reduced demands upon special programs. Parents are proud. And to a very real extent, all stakeholders benefit from the academic and behavioral improvement of their children and young adults.

“The school staff have totally embraced the program and in a short period of time have it operating very effectively. The computer generated profile for each student and the prescription for the instructor make this program an invaluable asset to our overall school program.”

- Larry Coonradt, Principal, Los Piños High School, Lake Elsinore, Calif.



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