


## The Language Basis of Learning Disabilities: Cognitive-Linguistic Assessment and Literacy

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CONNBIDA - October 21, 2011



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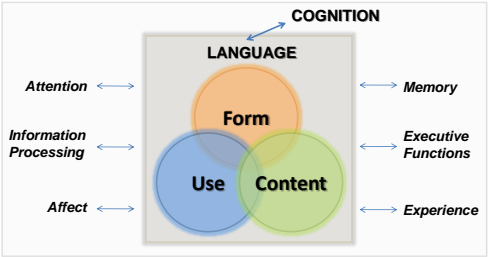
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## Language and Cognition

Bloom and Lahey, 1974; Soifer 2000



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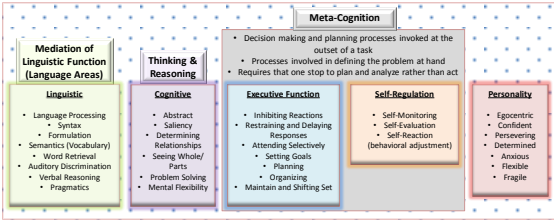
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## Linguistic Cognitive Chart

(Soifer & Zahner, 2001)



**Mediation of Linguistic Function (Language Areas)**

- Linguistic
  - Language Processing
    - Syntax
    - Formulation
    - Semantics (Vocabulary)
  - Word Retrieval
  - Auditory Discrimination
  - Verbal Reasoning
  - Pragmatics

**Thinking & Reasoning**

- Cognitive
  - Abstract
  - Saliency
  - Determining Relationships
  - Seeing Whole/Parts
  - Problem Solving
  - Mental Flexibility

**Executive Function**

- Inhibiting Reactions
- Restraining and Delaying Responses
- Attending Selectively
  - Setting Goals
  - Planning
  - Organizing
- Maintain and Shifting Set

**Self-Regulation**

- Self-Monitoring
- Self-Evaluation
- Self-Reaction (behavioral adjustment)

**Personality**

- Egocentric
- Confident
- Persevering
- Determined
- Anxious
- Flexible
- Fragile

**Meta-Cognition**

- Decision making and planning processes involved at the outset of a task
- Processes involved in defining the problem at hand
- Requires that one stop to plan and analyze rather than act

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### The Components of Language

**FORM**

- Phonology – the sound system
- Morphology – word structure
- Syntax - grammar

**USE**

- Communicative aspects
- Discourse structure
- Intentions and purposes

**Content**

- The meaning component
- Vocabulary and beyond

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### How are the components of oral language related to learning and literacy?

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### Form

How components of oral language are related to learning and literacy

**Phonology**

The essence of decoding: Reading words off the page

- Rhythm of language
- Sounds and symbols
- Playing with sounds – on purpose
- Speech production
- Making sense of sounds

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### Form (continued)

How components of oral language are related to learning and literacy

#### Morphology

Rules for word formation (a bit of SAT prep in here!!!)

- Adding and changing meaning
- Pronunciation
- Spelling

#### Syntax

Rules for understanding and creating sentences

- Listening and reading comprehension
- Writing

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### Content – The Meaning Component

How components of oral language are related to learning and literacy

- World knowledge
- Word knowledge
  - What did you mean by...?
- Word Use
  - Don't be so literal!
- Relationship between and among words

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### Content (continued)

How components of oral language are related to learning and literacy

- Decoding ← → Comprehension
- Word Categorization
  - How do those words go together and who cares?
- Word Retrieval
  - Our old friends, "thing" and "stuff"

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### Use – Interactive, Social Aspects

How components of oral language are related to learning and literacy

- Knowing what to say, when and how!
  - Purposes and intentions of language
  - Styles and codes of communication
- Narrative, discourse and conversational skills
  - Tell me a story...
  - School talk and everyday language

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### Use – Interactive, Social Aspects

How components of oral language are related to learning and literacy

- Reading with intent
- Monitoring comprehension
- Purposes for reading and writing

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### Components of Reading Comprehension

- Decoding: Accuracy and Fluency
- **Language Comprehension (listening first!)**
  - **Semantics: Word, Concept knowledge**
  - **Syntax: Language Structure**
- World/Prior Knowledge
- Metacognition
  - Thinking about thinking
  - Strategy knowledge and use
- Motivation and Attention

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### Executive Functions and Reading Comprehension

- Reading must make sense
- Understanding is the result of planning to understand
- Prioritizing leads to maximizing time and effort
- Accessing background information helps organize new information

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### Executive Functions and Reading Comprehension

- Self-checking enhances goal achievement
- A flexible mindset provides opportunities for increased understanding
- Understanding is improved by self-assessing

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### The Literacy Continuum

- Precursors of Literacy: Oral Language Skills
- Pre-Literacy Skills
- Early Literacy Skills: Decoding and Spelling
- Components of Reading Comprehension

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## The Literacy Continuum

- Comprehension of Different Forms
- Comprehension Strategies
- Literacy Lapses
- Developing Effective Reading Strategies

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## Areas of Investigation in Diagnostic Language Evaluation

### Basic Linguistic Processes

- Semantic Skills
- Syntactic Skills

### Higher Level Linguistic Processes

- Language Processing and Comprehension
- Narrative & Conversation Skills
- Verbal Reasoning
- Reading Comprehension
- Writing

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## Semantic Knowledge and Use: Basic and Higher Levels

### Basic

- Vocabulary knowledge
- Knowledge about words and their relationships
- Ability to find the word you want to you when you want it
  - Word Retrieval

### Higher Levels

- Lexical Knowledge
  - Synonyms
  - Antonyms
  - Categorical Knowledge
  - Denotative/Connotative meanings
- Multiple Meanings
- Figurative Use

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## Implications of Disrupted Semantic Knowledge and Use

### What does a disrupted semantic system sound like?

- Limited vocabulary
- Use of fillers (e.g., like, um, stuff, things)
- Word retrieval errors
- Reduced ability to provide synonyms or definitions
- Incorrect word choices

### Implications on Reading Comprehension

- Decreased ability to understand a word in different contexts
- Poor understanding of multiple meaning words
- Poor content area vocabulary
- Literal understanding of idioms and slang

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## Semantic Knowledge and Use: Basic and Higher Levels

### Basic Grammar

- Simple sentences
- Parts of speech
- Fragments
- Early occurring conjunction use
  - Without conjunctions complex sentences cannot be produced!

### Higher Level Grammar

- Complex sentences
- Embedded clauses
- Dependent / Independent clauses

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## Implications of Disrupted Syntactic Knowledge and Use

### What does a disrupted grammar system sound like?

Comprehension:

- Difficulty understanding sentences with embedded clauses

Use:

- Errors with:
  - Verb tenses (regular and irregular)
  - Tense agreement
  - Noun-verb agreement
  - Prepositions
  - Referents
  - Word order
  - Simple conjunction use

### Implications on Reading Comprehension

Difficulty ...

- Understanding complex grammar
- Producing complex sentences
  - Spoken and written

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**Reading is Language Too!**  
**Oral language is the foundation of literacy**

**Basic Linguistic Processes**

- Semantic Skills
- Syntactic Skills

**Higher Level Linguistic Processes**

- Language Processing and Comprehension
- Narrative & Conversation Skills
- Verbal Reasoning
- **Reading Comprehension**
- **Writing**

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**You can reach us (and please do) at...**

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