SAM:
Symbols and Meaning

Sensory Foundations for Concept Development and Receptive Vocabulary

Who uses SAM?

- Learners who are just starting to use symbols
  - Cognitively, about a year and a half to three years
- Learners who can say words, but do not understand the meaning of words said or heard

What does SAM do?

- Introduces first symbols
- Establishes meaning for symbols based on sensory experiences
- Builds concepts and schemes

What first symbols are introduced in SAM?

- Words- spoken or signed
- Objects- identical or similar
- Mimicked actions

What about other kinds of symbols?

- Pictures, parts of objects, written words, and complex language are higher level symbols
- They are often used too soon
- SAM lays the foundation for use of these higher level symbols

What do symbols do?

- They stand for the thing they represent
- They allow us to think in our own minds about things not present
- They allow us to talk to other people about things not present
- They allow us to think and talk about the past and the future

Answer these questions about your learner

1. How does she let you know she wants something not present?
2. Does he look at, touch, or do things named by you?

How is meaning related to symbols?

- A symbol is meaningful if it calls to mind the thing to which it refers
- The symbol develops meaning by being paired with the actual thing to which it refers in here and now experiences

Concrete referent

- An object, person, action, or place
- Given the symbol for it, the learner can touch it, point to it, do it, or go to it (direct sensory experience)

SAM concept categories

- People: the self and others
- Objects: tangible things
- Actions: body movement of the self and others
- Places: where things are, contexts for groups of things

How does meaning develop?

- A symbol is a label that opens a mental file
- Meaning is determined by the file contents
- These contents are called a “concept”
- Concepts are thoughts about things that develop over time as a result of direct experiences
- Files organized into patterns get put into folders called “schemes”

Scheme development

- Combining the old and new: assimilation and accommodation
  - New information rearranges and organizes old information
  - Noticing similarities and differences leads to knowledge of categories
- Autobiographical point of view: it’s all about me at this stage

How is meaning affected by sensory and motor impairment?

- "delays in active exploration or variations in concrete experiences" result in
  - Absent and incomplete concepts
  - Objects experienced out of context and without intended function
  - Words without meaning
    - **Concrete referents are missing**

Help is needed to

- Make sense out of random experiences
- Provide the breadth of experiences required for good concept and scheme development
- Expand from a self-referential point of view to an "other-oriented" point of view

Connect the related words in each column

- Concept
- Symbol
- Scheme
- Label
- Folder
- File

Connect the word and its definition

- Symbol
- Concept
- Scheme
- Concrete referent
- An organized pattern of knowledge about related things
- Thoughts about a thing based on direct sensory experience
- The person, object, action, or place referred to
- A word, object, or mimicked action that stands for a thing

Using the Gap Inventory

- Identifies basic concepts that are not part of the learner's experience and need to be added
- Gaps are a result of lack of sensory access to information- usually touch

How do we teach concepts and schemes

- First, direct sensory experiences in regularly occurring activities in natural environments
  - Provides meaning
- SAM games
  - Provide repetitions necessary for long term memory storage of symbols used to label things that are part of experiences in natural contexts

Direct sensory experiences

- These can be function level SLK routines
  - A hand washing routine develops concepts about sinks, etc.
  - A massage routine develops concepts about parts of the body, partner's actions

The games

- Non-threatening and fun
- Abiding structure from context to context
- Maximize active learning
- Appropriate at any age
- Facilitate sibling and peer cooperative learning

What are we teaching

- In direct sensory experiences
  - Files/Concepts: thoughts about things
  - Folders/Schemes: accumulated experiences with related things organized into a pattern
- In games
  - Labels/Symbols: spoken or signed words, identical or similar objects, mimicked actions

Sensory information builds concepts and schemes

- Near senses
  - Touch
  - Taste
- Distance senses
  - Vision
  - Hearing
  - Smell

Sensory foundation for concepts: Touch

- Active touch
  - Independent exploratory and manipulative use of the skin, tendons, and joints
- Passive touch
  - Being touched by a person or an object; things being done to or with the child rather than the child doing the doing
- Social touch

Information about things BtB

- Available distance senses: vision, hearing and smell
- Problems with overdependence on auditory input
  - Hearing sounds gives no information about the source of the sound without associated vision and touch
  - Hearing voices helps learner recognize people and determine their location, but words used may not be meaningful

Information beyond the body and impaired vision

- Use to maximum extent possible
- Provide appropriate accommodations
- Pair with touch experiences

Information BtB: Three step bridging strategy

- Pair near and distance sensory input
- Distance sensory input used alone to bring to mind paired experience (Sensory bridging)
- Word and object symbols practiced during pairing and then used alone to bring to mind paired experience (Symbolic bridging)

Steps in building word symbol bridges

- Say word while learner is exploring, using, doing
- Real objects only, no replicas
- Make sure sensory bridges are in place, touch paired with sounds, sights, smells
- Use word when referent is heard, seen, smelled at distance

Steps in building object symbol bridges

1. Touch object to discriminate tactile characteristics in natural context
2. Use object in natural context
3. Form associations with other things related to the object as they are touched in the natural context
4. Use object as a symbol in a communication context to call to mind all of the above and to send or receive a message

Which is it: natural context or communication context?

- Bath tub
- Fire station
- Calendar box
- Craft table
- Experience story
- Refrigerator
- Sam game

Guidelines for partners' use of language when teaching

- Two categories
  - Chatter: social language
  - Instruction: goal directed language
- Both good used intentionally at different times
  - Chatter gives social information, encodes language structure and patterns
  - Instruction builds specific word meaning, confidence, and success

Chatter

- Free flowing streams of words containing comments, questions, and commands in no particular order and with changes in topic occurring randomly

Instruction

- Consciously chosen words that convey a command or a comment, but not both, and are related to one topic
- The few words chosen stand out because they are surrounded by silence
- Chosen words are telegraphic and when repetition is needed, they are repeated the same way each time
- Comment phrases are spoken as behaviors occur

Guidelines for partners' use of questions

- Questions are used much more frequently with learners with visual impairments
- Problems
  - Questions are difficult for early language users
  - Promotes use of question form by learner when other forms would be more appropriate
- Use comments and commands instead of questions

Chatter or instruction?

- Sample one
  - "Let's put your shoes on so we can go outside for a while."
- Sample two
  - "Shoe on."

Turn questions into comments or commands

- Can you come here now?
- Did you pull your sock?
- Can you sit down for me?

Getting ready for the games: terms used in SAM

- Single-referent concept: thoughts about one thing in one category (person, object, action)
- Cluster concept: a small group of things in one category typically experienced in close proximity in both time and space (adds place category)
- Scheme knowledge of the relationship of things from several categories (all categories combined in an event)

SAM levels: the help hierarchy

- Concepts about the learner's own body
- Concepts about people, objects, and actions touching the learner's body
- Concepts about people, objects, actions, and places beyond the learner's body
- Schemes about people-object-action-place relationships in events beyond the learner's body

Levels and games: Own body

- Body Buzz
- Whoopee Clothes
- Finger Tag

People, objects, actions touching the body

- Hot potato
- Slap
- Simon Says
- Yours and Mine
- Do It Again
- Go Fish
- Show Me

People, objects, actions, places beyond the body

- Sounds Like
- Mystery Voice
- What Do
- Scavenger Hunt

People-object-action-place relationships in events BtB

- Build a book games
  - Bag stories
  - Box stories
  - Binder stories
- Clue

Reference

- Smith, M. (2012). SAM: *Symbols and meaning*. Louisville, KY: American Printing House for the Blind.