

An Introduction to LAMP:

Language Acquisition through Motor
Planning

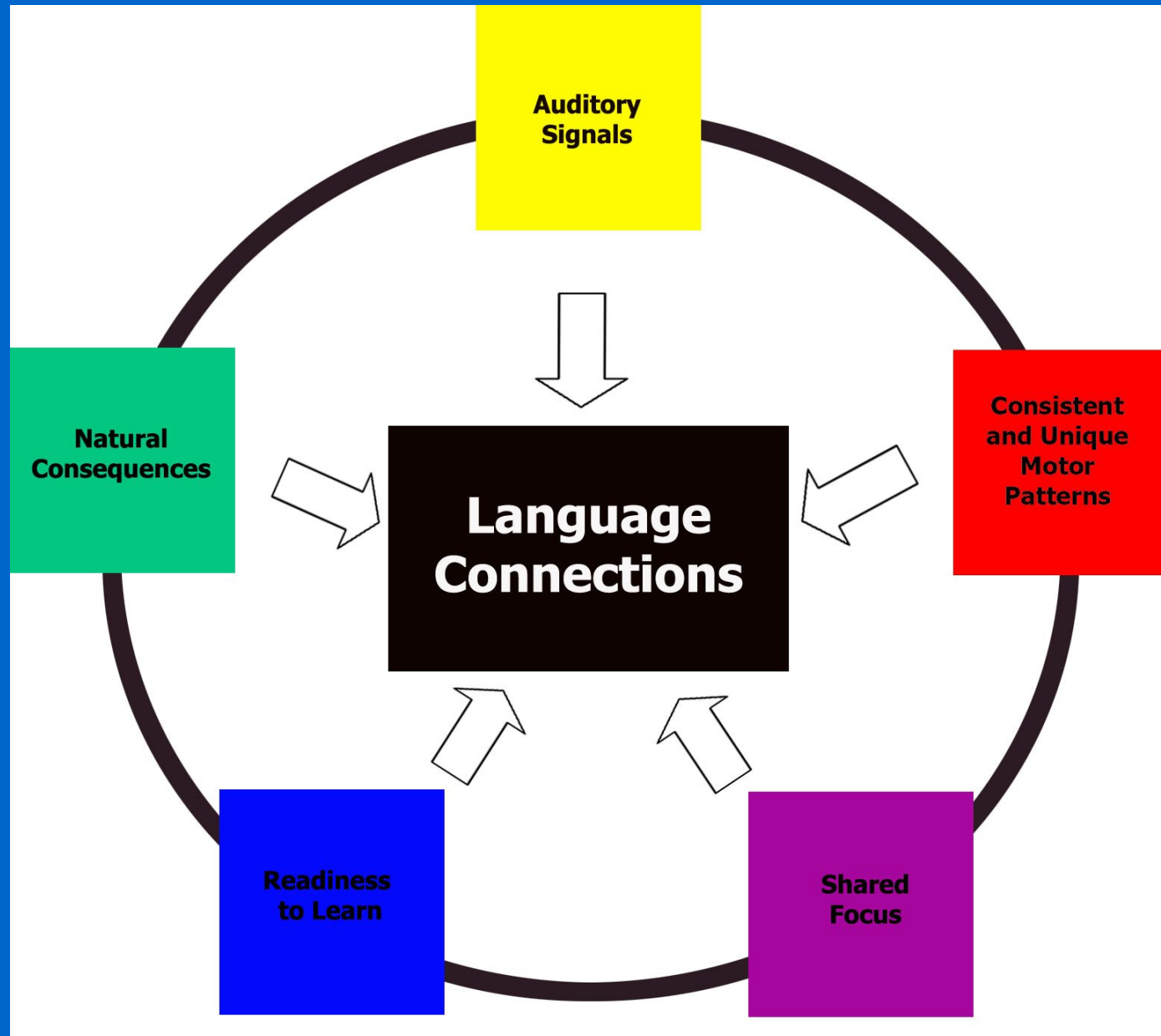
Ben Satterfield, Ed.D.

John Halloran, CCC-SLP

David Kay, M.ED, OTR

What LAMP and AAC is NOT

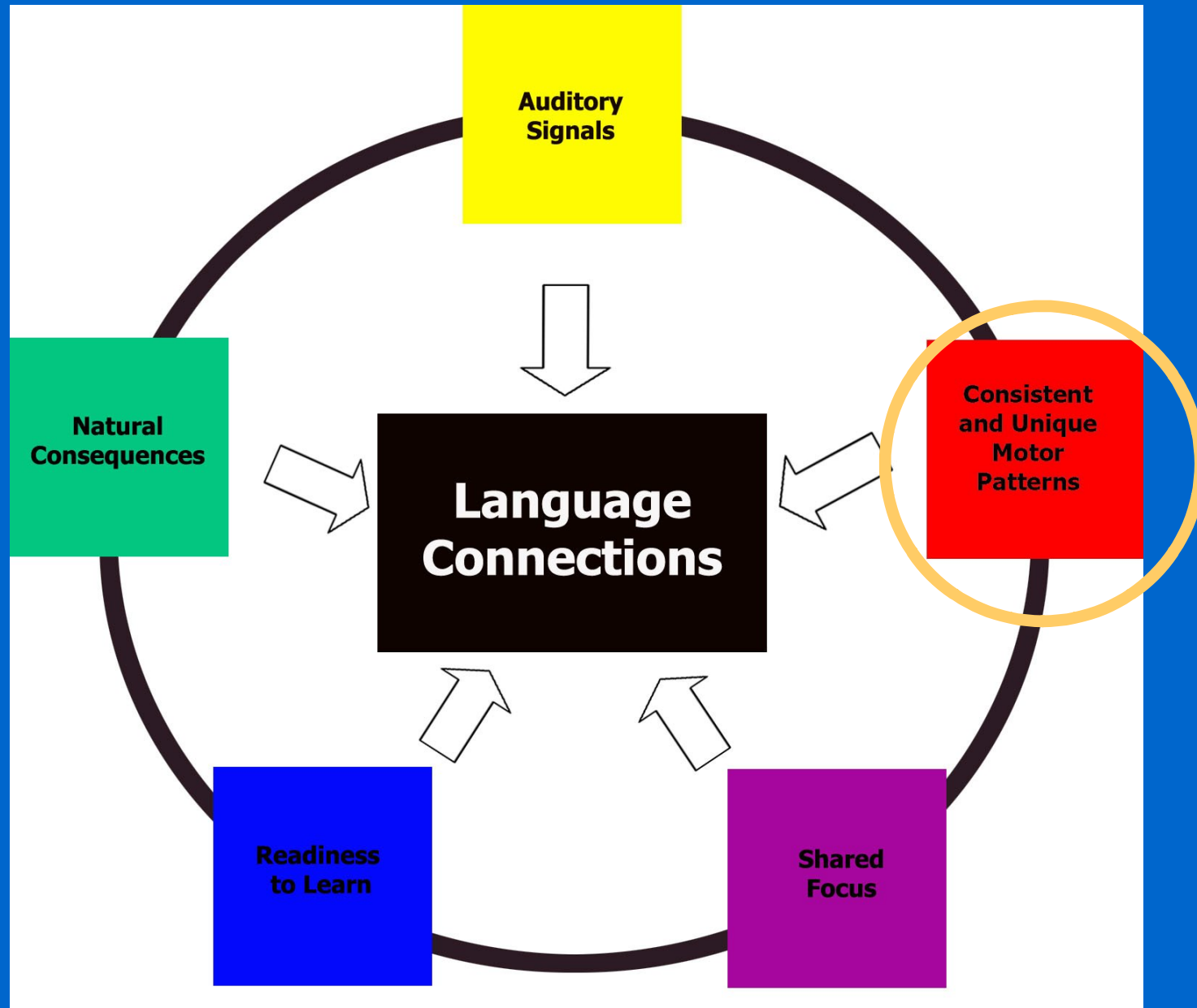
LAMP approach



Communication Goal

- S :
- N :
- U :
- G :

LAMP approach



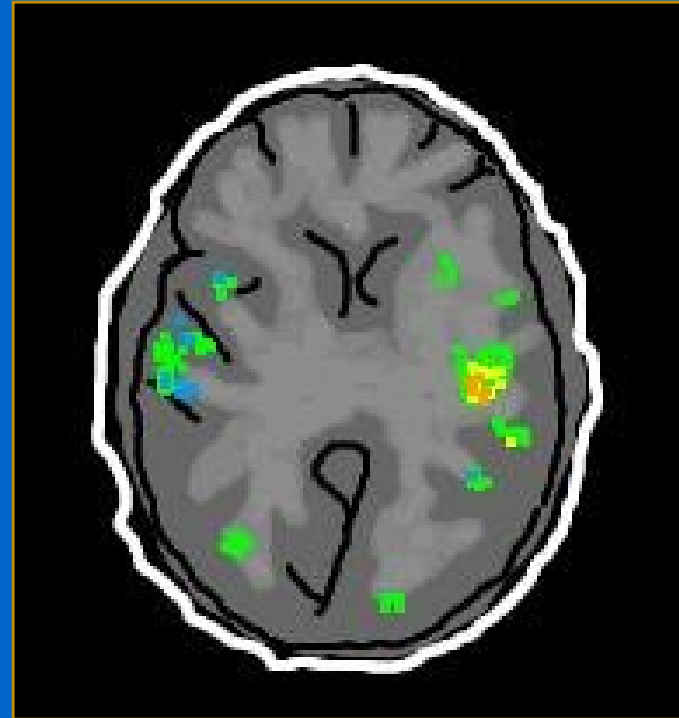
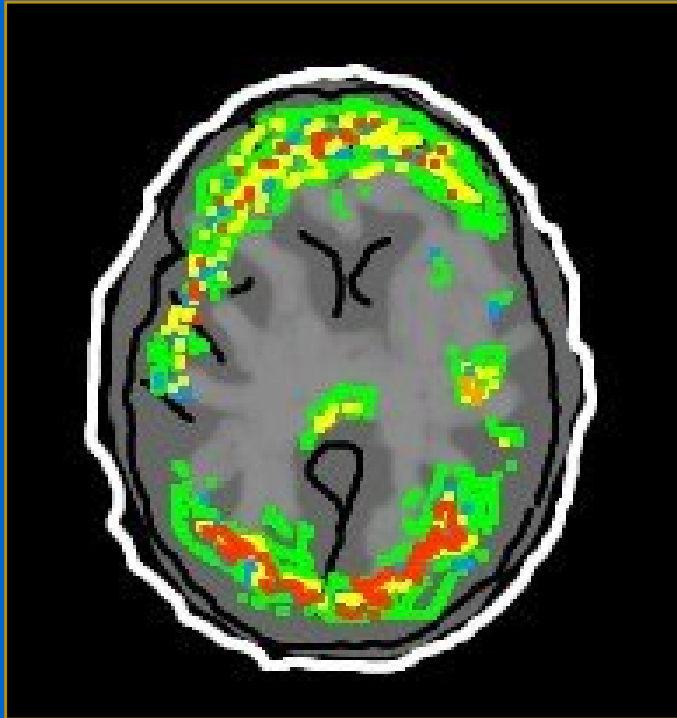
Consistent & Unique Motor Patterns

- Each Word has it's own:
- Language connections made through:

Motor Planning

- Hebb's Postulate - Law of Neural Habit (1890s)
- Synaptic strength is based on:
- Motor Learning

Motor Learning & Automaticity



Motor Planning and AAC

- We can take advantage of Motor Planning when:

Consistent & Unique Motor Patterns

- Focus on
- Location, Location, Location
- Facilitate

LAMP Language Consideration: Single Words

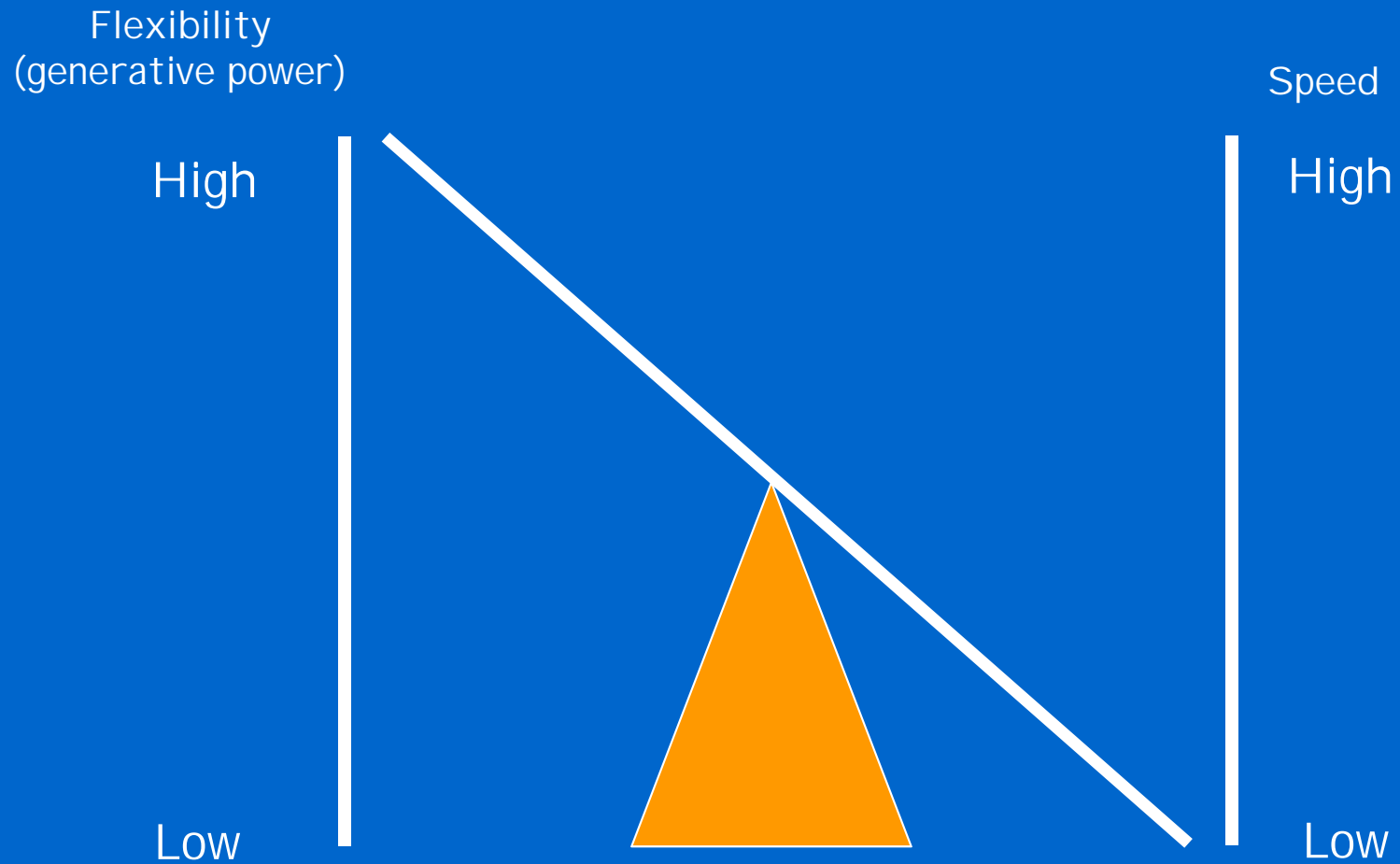
- *“Communication is based on the use of the individual words of our language. True communication is spontaneous and novel. Therefore, communication systems cannot be based significantly on pre-stored sentences. Communication requires access to a vocabulary of individual words suitable to our needs that are multiple and subject to change. These words must be selected to form the sentences that we wish to say.”*



American
Speech-Language-
Hearing
Association

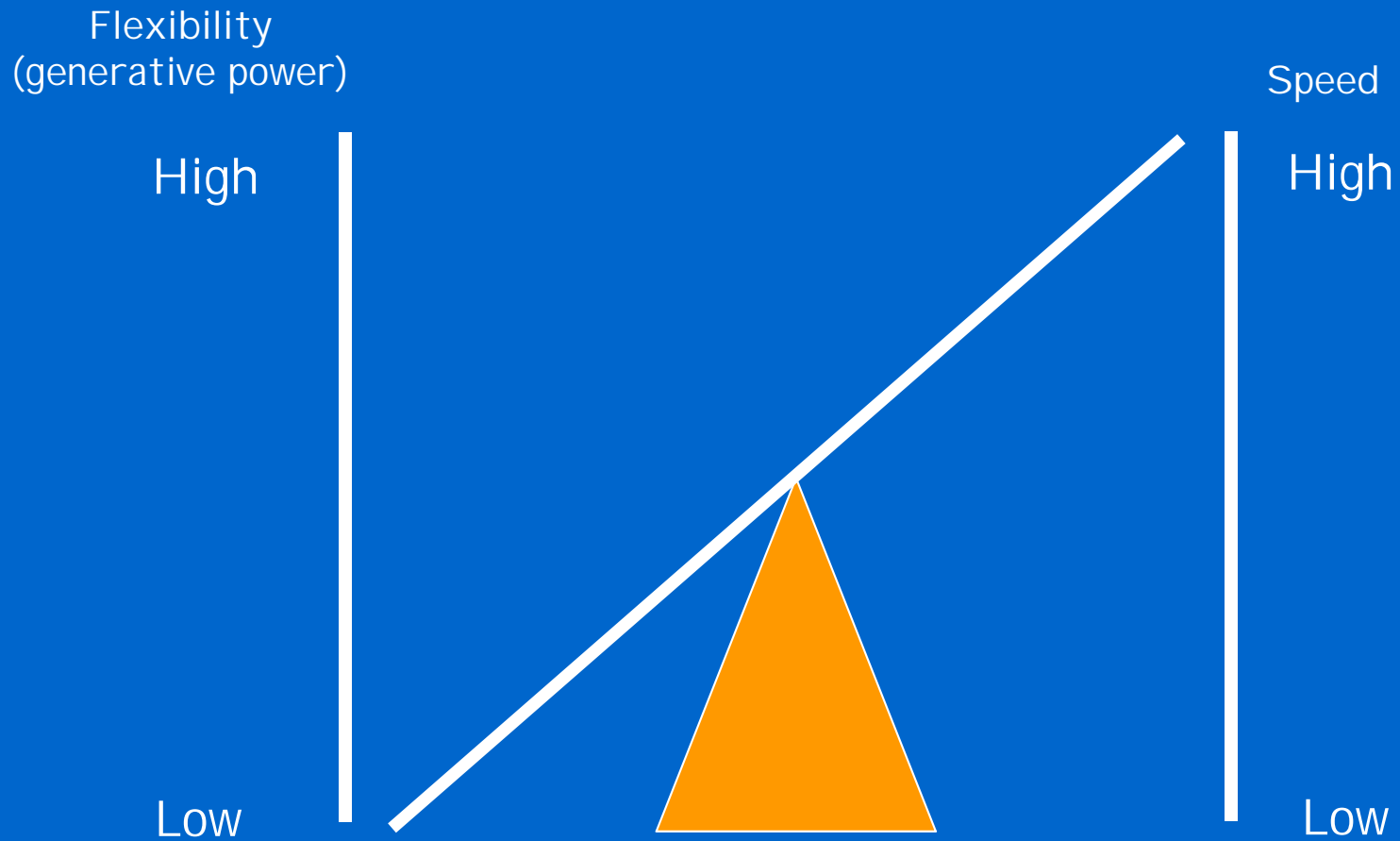
ASHA's AAC Glossary

Spelling



Goossens', C., & Crain, S. (1992). *Utilizing switch interfaces with children who are severely physically challenged*. Austin, TX: Pro-Ed.

PreStored Phrases/Sentences



Goossens', C., & Crain, S. (1992). *Utilizing switch interfaces with children who are severely physically challenged*. Austin, TX: Pro-Ed.

Words

Flexibility
(generative power)

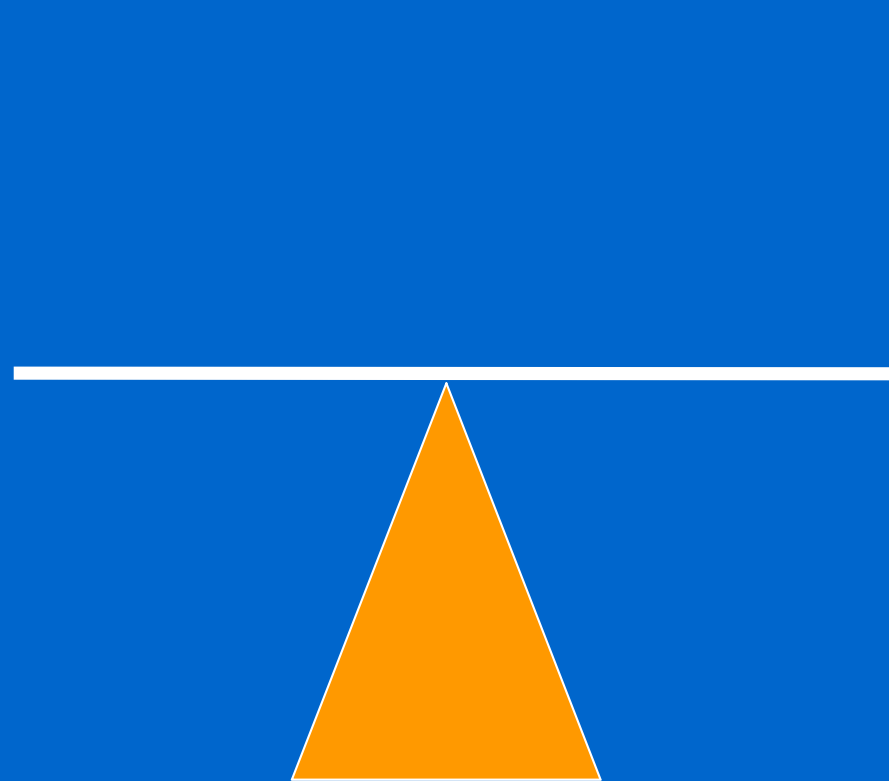
High

Low

Speed

High

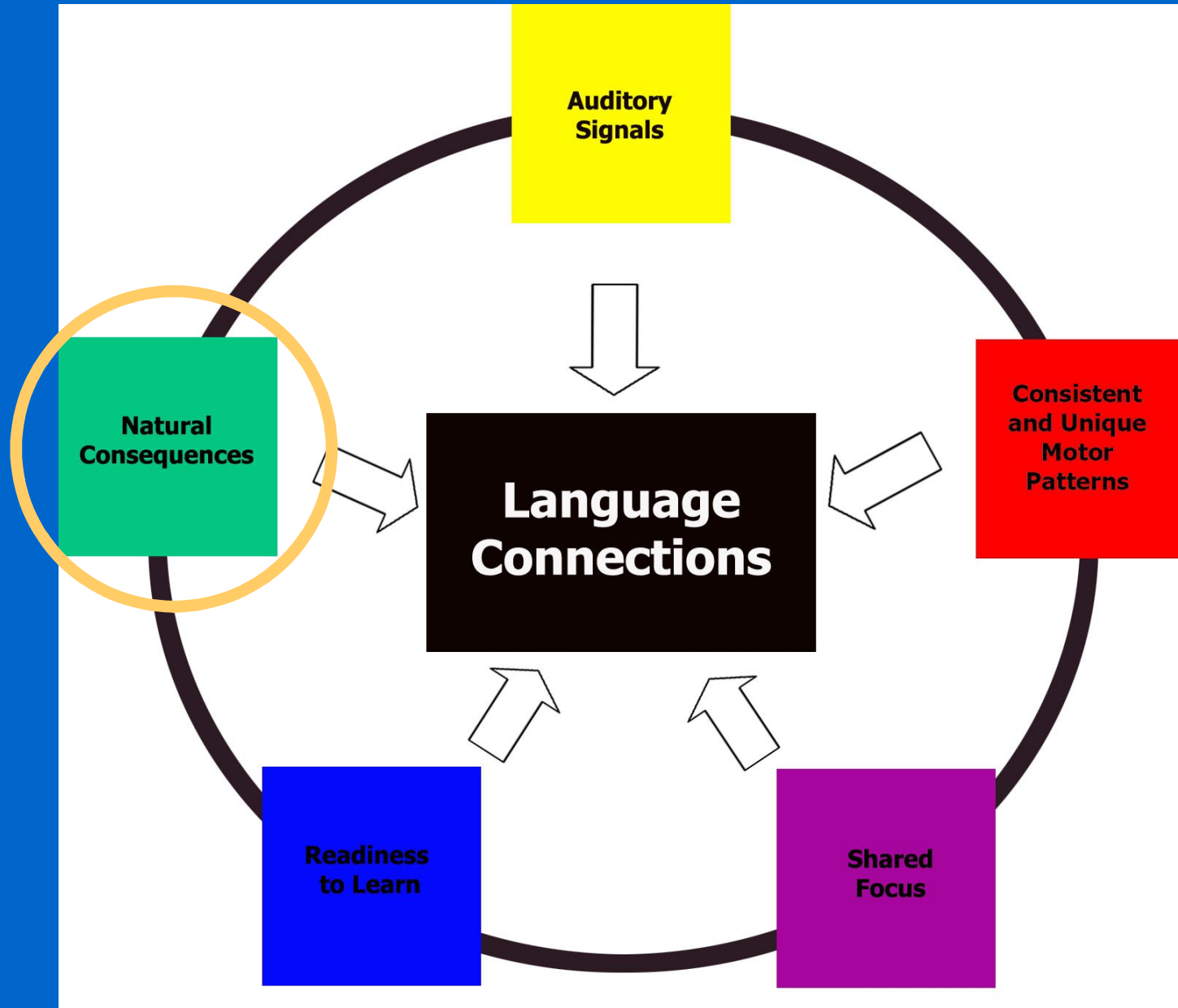
Low



Goossens', C., & Crain, S. (1992). *Utilizing switch interfaces with children who are severely physically challenged*. Austin, TX: Pro-Ed.

Danger of Phrases for children with ASD

LAMP approach



Natural Consequences

- No mistakes
- How to respond
- Natural responses

Natural Consequences

- Emphasize words with

LAMP Language Consideration: Core Words

- Makes up _____ % of what we say
- Words used
- Nouns?
- Applicable to?

333 Most Frequently Occurring Preschool Words: The Marvin Sampling

Compared with Banajee Sampling: all words present

a	bite	doesn't	goes	hum	maybe	or	still	today	we're
about	black	dog	going	I	me	our	some	together	well
after	blue	doing	gonna	I'll	mean	ours	somebody	too	went
again	both	don't	good	I'm	messy	out	someone	top	were
all	box	done	great	if	middle	over	something	toys	what
almost	boy	door	green	in	mine	paint	sometimes	trees	what's
already	bugs	down	guys	inside	mom	people	somewhere	try	when
also	but	drink	had	is	mommy	pet	stop	trying	where
an	buy	duck	hair	isn't	more	name	stuff	turn	where's
and	by	eat	hand	it	most	pick	swing	turtles	which
another	bye	eating	hands	it's	move	piece	tape	two	while
ant	call	else	has	juice	much	play	tell	um	who
any	came	even	have	jump	must	please	than	up	who
are	can	everybody	haven't	jumped	my	push	that	us	whole
aren't	can't	everything	he	jumping	myself	put	that's	use	why
around	candy	face	he's	just	Name	ready	the	used	with
as	car	fall	her	kind	name	really	their	very	won't
at	catch	find	head	know	named	red	them	wait	would
away	cause	finger	hear	last	need	remember	then	want	ya
baby	chair	fire	hello	leaves	never	ride	there	wanted	yes
back	come	first	help	let	new	right	there's	was	yet
bad	comes	five	here	let's	next	room	there's	wasn't	you
bad	cookie	fixed	here's	lift	nice	run	these	watch	you'll
ball	corn	fly	hi	like	no	said	they	water	you're
bathroom	could	foot	high	little	not	same	they'll	way	your
be	couldn't	for	hill	long	of	saw	they're	we	yours
bean	cup	from	him	look	off	say	thing	we'll	
because	cut	found	his	looking	oh	see	things		
before	day	get	hold	lot	other	she	this		
being	did	gets	home	lunch	ok	she's	those		
bet	didn't	getting	horse	made	old	show	three		
better	different	girl	hot	make	on	shut	threw		
big	do	girls	house	man	one	side	through		
bird	does	give	how	many	only	sit	time		
birds	doctor	go	huh	may	open	so	to		

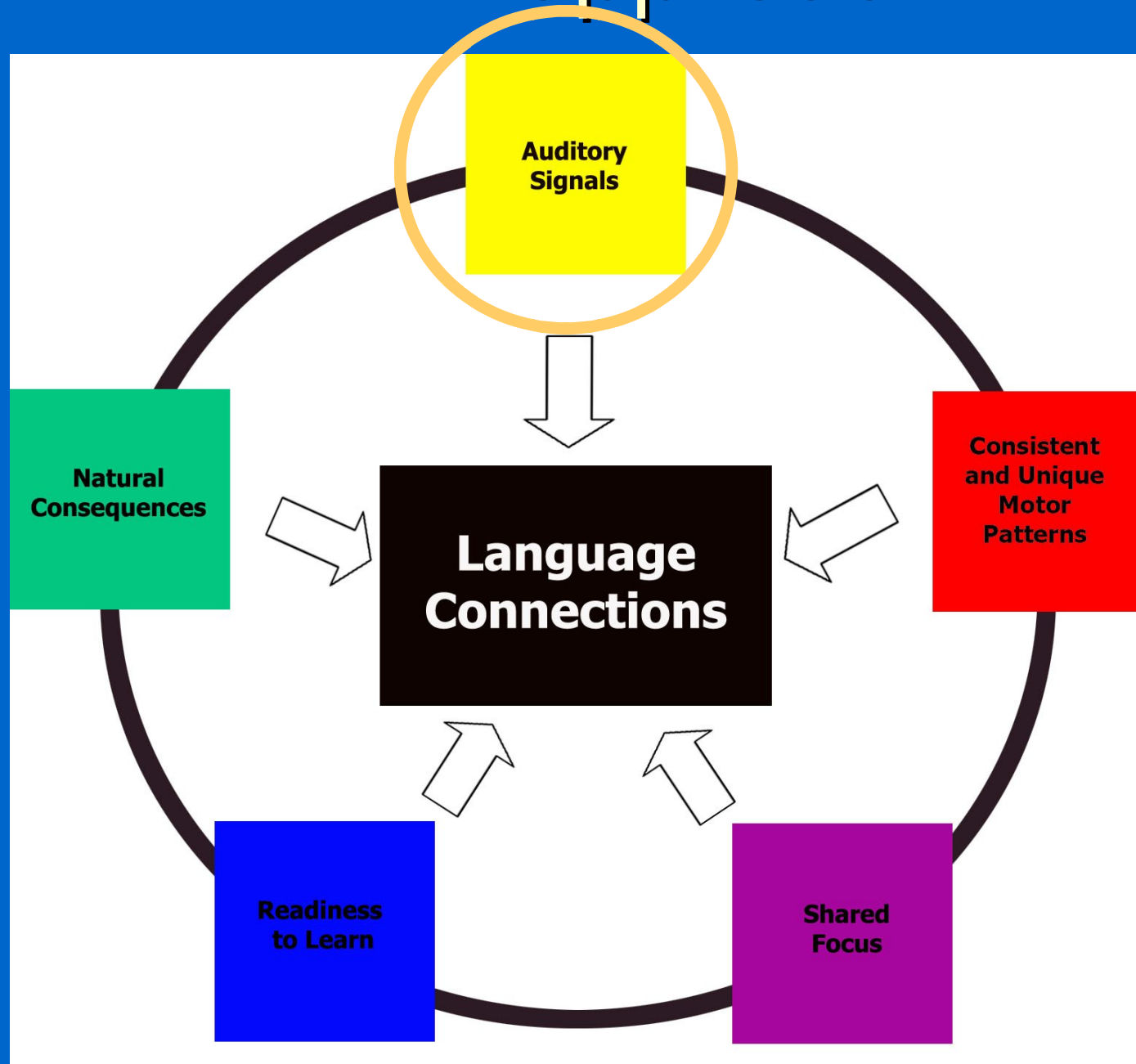
**Christine A. Marvin,
David R. Beukelman,
Denise Bilyeu
AAC, Vol. 10, Dec., 1994**

LAMP Language Consideration: Core Words

- Essential for

- Rapidly

LAMP approach



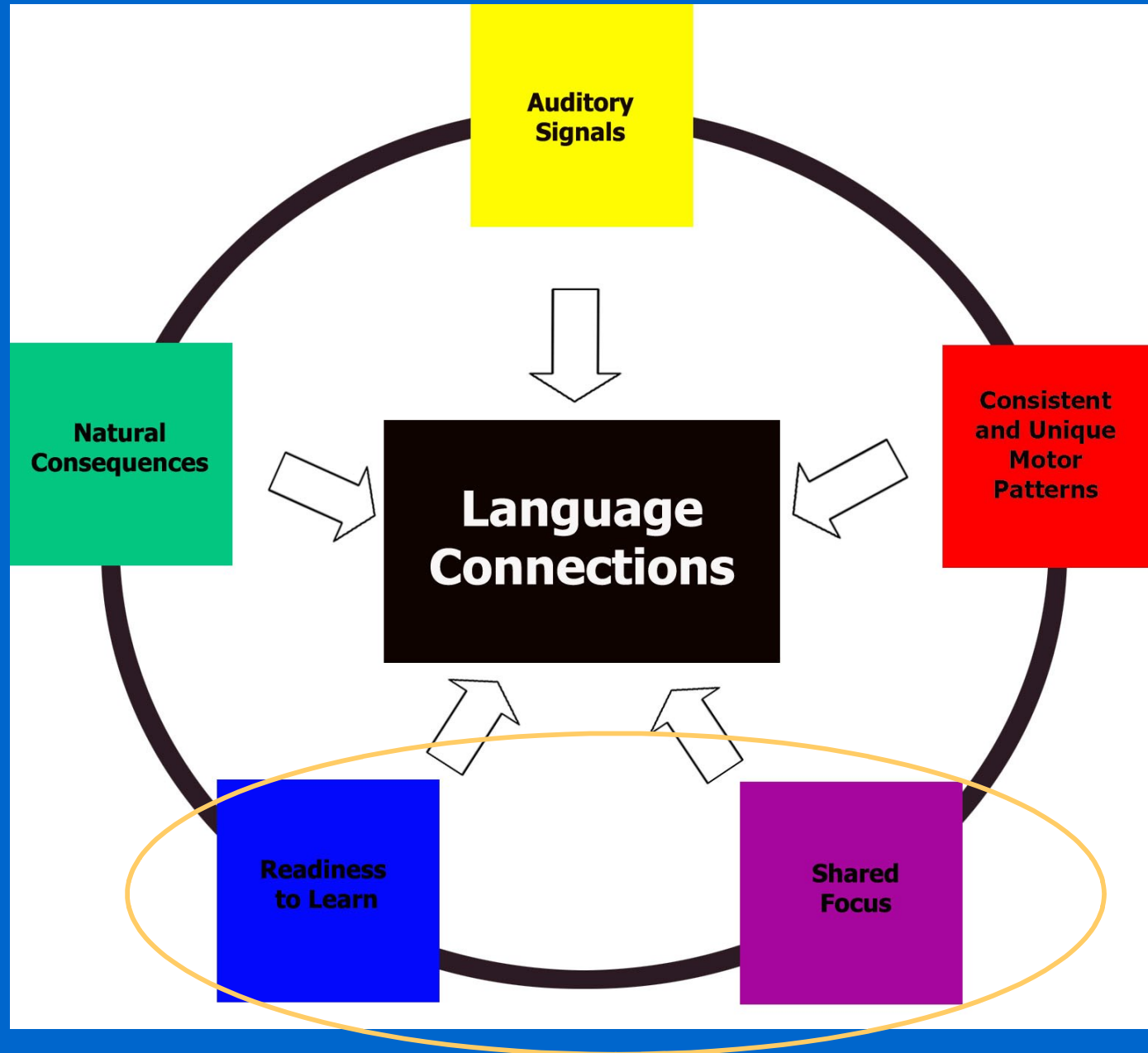
Auditory Signals

- *“Input from the vestibular, proprioceptive, and auditory systems is critical for the development of speech and language (1989, Windeck & Laurel)”*
- Children need to _____ words,
- Value of Speech Generating Device (SGD)

Auditory Signals

- Language models
- Focus on
- Verbal prompts?

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Readiness to Learn

- In preparation for learning child may need:
- Goal is always

Shared Focus

Taking advantage of Expected Behaviors

- Mis-hits
- Learning opportunities
- Device exploration
- Self stimulation

Random Selection/Perseveration

- Behavior → communicative?
- Hide keys temporarily

Why High Tech

- Auditory signals
- Value of Technology
- Dynamic display allows for:

LAMP Implementation

INTEREST INVENTORY

In order to initiate a child-centered intervention, the clinician should make available items or activities, which will interest the child. Individuals with ASD often have very limited interests. Additionally, they may use common objects in unusual or ritualistic ways. Consequently, it is often helpful to obtain information about the child's preferences prior to intervention. This information can also be used to expand the child's interests and play skills.

	Very motivating	Some Interest	No Interest	Aversive	Don't know
Manipulatives					
Stacking Blocks					
Beads					
Puzzles					
Marbles					
Light Bright					
Wikki Sticks					
Strings, yarn, etc					
Active Play					
Ball					
Beanbags					
Jump rope					
Hoppity Hop					
Swing					
Slide					
Sit and Spin					
Jumping					

LAMP Implementation

VOCABULARY SETS

The following vocabulary sets were developed to assist you in getting started. They should be used with caution. Please remember that your implementation should be focused on the child's interest, and if Set 1 vocabulary does not match what the child is doing, it should not be used at the first session. In that situation, read on down the list of vocabulary sets, and select a set that is a better match for the child on that day, or select vocabulary from the information in Appendix D. You should continue to develop additional vocabulary sets that are pertinent to the child, referencing the vocabulary lists in Appendix D.

<i>Set 1</i>	<i>Set 2</i>	<i>Set 3</i>	<i>Set 4</i>	<i>Set 5</i>
More	Eat	Help	Hi	Turn
Stop	Drink	Come	Good-bye	Get
Go	Don't/Not	Want		Need
		That		

For the beginning communicator, the vocabulary included in these sets provides powerful single word utterances. When the child is using some of these words as single word utterances, it is important for you to model expanded utterances. This can be done using speech, but it is also helpful to model the expanded utterances on the device.

LAMP Implementation

INTERVENTION GOALS

The following goals, which were developed for the sets of vocabulary, are provided as an example. You are encouraged to use them as a model for developing goals for your vocabulary set.

All goals written are based on the following conditions and measurement standards:

Condition: The child is engaged with the facilitator(s) in activities appropriate to the child's readiness to learn, are motivating, and are of interest to the child. The communication attempts of the child result in natural consequences.

Measurement Standard: The goal is considered met when the child consistently communicates the appropriate word without visual, verbal, or physical prompts during three intervention sessions.

Measurement Tools: The facilitators will measure the child's progress using observation checklists, videotapes, and data from the Language Activity Monitor (LAM).

Goals for Set 1 (More, Stop, Go)

The child will ...

1. Say "more" to request at least five favorite objects or activities (e.g., more swinging, more drink, more food).
2. Say "more" + OBJECT to request favorite objects.
3. Say "more" + ACTION to request favorite activities.
4. Say "stop" to cease at least five different activities being done with him (e.g. stop swinging).
5. Say "stop" to cease an activity being done by the communication partner, which did not involve a specific action being done to the child (e.g., stop the communication partner from pretending to sleep).
6. Say "stop" + ACTION to cease an activity.
7. Say "go" to cause at least five different actions (e.g., start the music, leave the room).

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OPPORTUNITIES FOR COMMUNICATION

Opportunities for communication can be created when the unexpected is introduced within an expected routine. Therefore, you must first establish a routine and model the target vocabulary before expecting the child to produce the new vocabulary.

Opportunities for communication can also occur when the child can see a desired object or activity, but needs your assistance to access it. Frequently, you will need to give a “taste” of the desired object before expecting the child to request the item.

Set 1: More, Stop, Go

1. Engage the child in physical activity in which you provide the “power.” For example, push the child in a swing, bounce him/her on a therapy ball, or push him/her in a wagon. Establish the routine of “stop” and either “go” or “more.” After the child understands the routine, interrupt the routine and wait for child to request action.
2. Manipulate a small vehicle around the child. Have the child direct the movement through the use of the target words, thus allowing him/her to cause the car to crash, drop off the table, or stop. Once the child has directed the car to stop, do not move it until the child directs you to do so.
3. Pair exaggerated physical activity with “go” or “more.” Cease the activity in response to “stop.” Do not resume the activity until the child says “go.” Feign exhaustion to encourage the child to say “stop.”

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You will find that you can model two word utterances by combining words included in the vocabulary sets. Examples include “Need help,” “more eat,” and “Not stop” or “Don’t stop.”

VOCABULARY FOR EXPANSION

Vocabulary for Expansion consists of suggested words that work well with the sets of vocabulary to expand to additional two word utterances.

The following words are suggested for expansion:

Pronouns: I, you, it
Colors
Foods
Toys
Drinks

Look to vocab lists to
expand word sets

- Brandon – simple expansion: ‘eat’ with foods and unwanted choice

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- Danger:

- Solution:

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- “My child has been using these other symbols for years”
- Importance of symbols/icons is overly analyzed
 - Focus is on location, not symbol
 - Children are more flexible than adults when it comes to icons
 - All depends upon the natural consequences
- But what's with *THOSE* icons?


Sample Vocabulary Layout


The image shows a screenshot of a software interface with a white search bar at the top. Below the search bar is a system tray containing a calendar icon, a battery level indicator, the date and time '7/23/07 12:47PM', and keyboard status indicators for 'Caps Lock', 'Shift', 'Ctrl', and 'Speech'. A 'more' button with a hand icon is located in the bottom right corner of the interface.





Sample Vocabulary Layout


7/23/07 12:48PM Caps Lock
Shift
Ctrl
Speech



I


play


more


go


don't


drink

Sample Vocabulary Layout

The screenshot displays a software interface with a blue background. At the top, there is a white rectangular input field. Below it is a grey toolbar containing a calendar icon, a volume slider, a status bar showing '8/27/07 3:17PM', and indicators for 'Caps Lock', 'Shift', 'Ctrl', and 'Speech'. Below the toolbar is a row of nine empty white buttons. The main area is a light grey rectangle containing six vocabulary cards, each with a word and an illustration: 'I' (a person), 'play' (dice), 'more' (hands), 'go' (a frog), 'don't' (a red 'no' symbol), and 'drink' (a cup of juice).



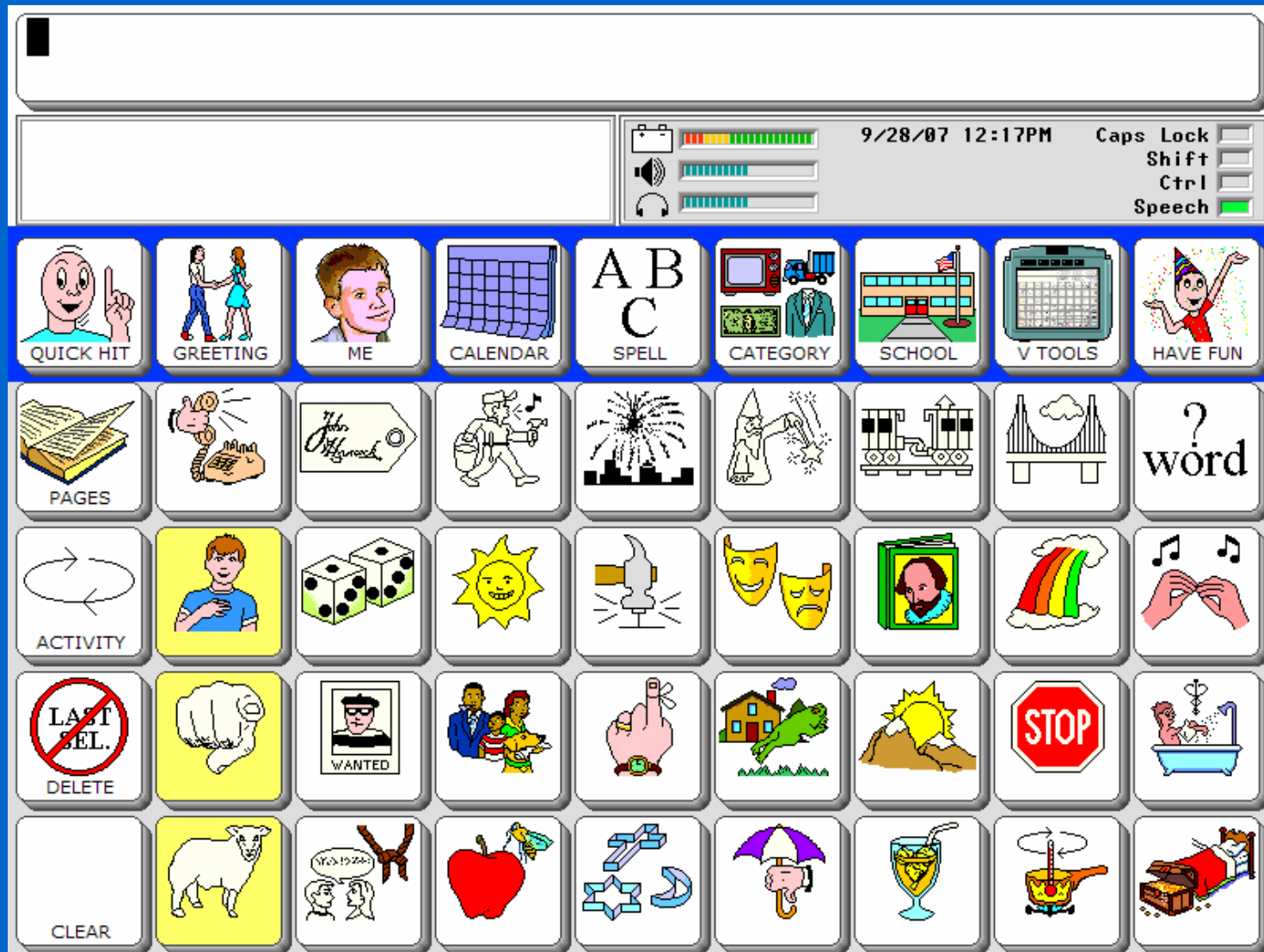
Sample Vocabulary Layout

go

8/27/07 3:19PM Caps Lock Shift Ctrl Speech

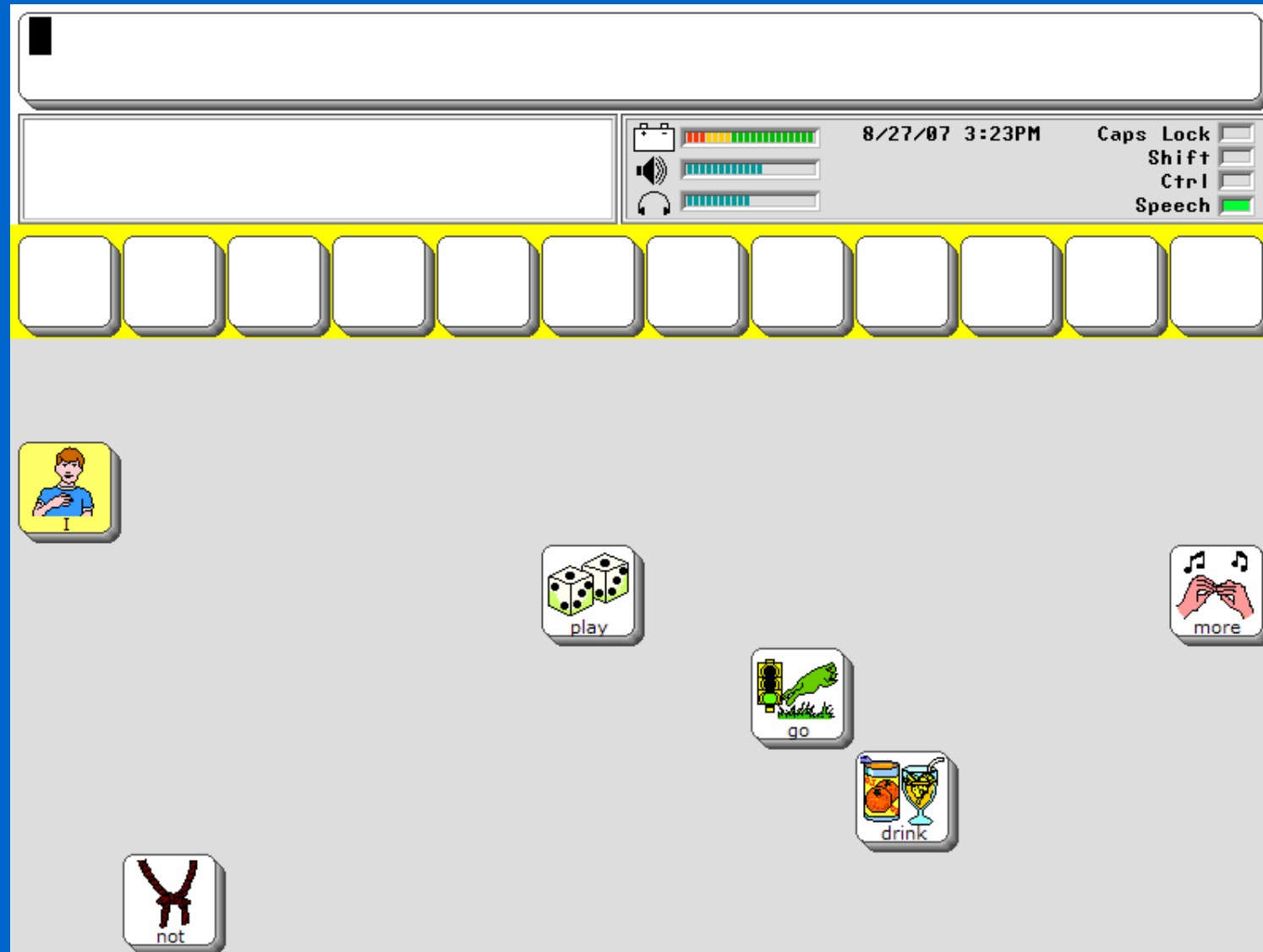
.	home	a walk	out eat	outside	shopping		GO BACK	MORE
names	call	my	is	please	that	and	to	what
NAME							word	
	I	play	like	work	feel	read	color	more
	you	want	come	do	go	get	stop	help
CLEAR	it	don't	eat	make	need	drink	turn	sleep

Sample Vocabulary Layout



Joey – learning fringe vocab

Sample Vocabulary Layout



Sample Vocabulary Layout

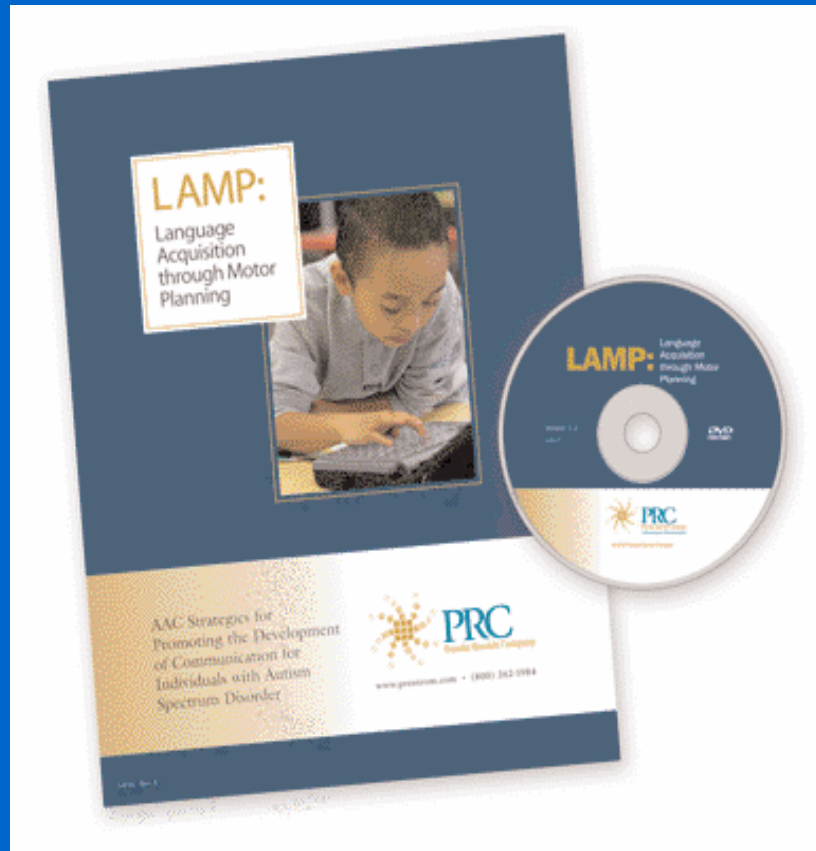
want

WANTED 8/27/07 3:25PM Caps Lock Shift Ctrl Speech

DEL LAST	.	some somethin	some someone	some somebod	my mom	my dad	to play a	a toy		About WANTED	
me	THIS BELONGS TO: mine	A B C	please	that	and	in	? word what	there	a	+s	look
I	we	are	+s is	+ing were	+ed was	+en on	to+	NUMS	+er an	+est the	color
you	they	know	like	work	play	dress	EXIT right	fast	wet	read	more
he	ACTIVIT	want	hear	do	think	follow	go	call	need	end	drive
she	it	eat	slow	come	FAMILY	help	live	drink	big	new	put
CLEAR	not	old	sit	get	make	have	feel	stop	ask	turn	sleep



LAMP Seminars & Training



LAMP Seminar

- ❑ In-depth study of 5 components of LAMP
- ❑ Critique of video clips of therapy sessions

LAMP Team Training

- ❑ Focus on specific consumer
- ❑ Prep team to apply LAMP

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CREATE

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