Additional Forms

DIFFERENTIAL REINFORCEMENT OF VOCALIZATIONS DURING SIGN-MANDING

Learner: _____ Date:_____ Instructor: _____

Reinforcer	Prompt Level	What was said during signing	Echoic 1	Echoic 2	Echoic 3	Echoic 4	Echoic 5
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						
	FPP PPP GP V ITEM MO						

Developed by Dr. Vincent J. Carbone, BCBA and Associates

DIFFERENTIAL REINFORCEMENT OF VOCALIZATIONS AND TRANSFER TRIALS DURING MANDING

Learner: _____ Date:_____ Instructor: _____

Reinforcer	Prompt Level	Transfer Trial?	Echoic 1	Echoic 2	Echoic 3	Echoic 4	Echoic 5
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					
	FVP PVP ITEM MO	Y N					

Developed by Dr. Vincent J. Carbone, BCBA and Associates

DIRECTIONS FOR RECORDING & GRAPHING VOCALIZATIONS DURING SIGN or VOCAL MANDING

RECORDING:

For every mand the instructor will:

1. Record the reinforcer that the learner mands for ("reinforcer" column).
2. Record the prompt level necessary to evoke that response ("prompt level" column).
3. If the learner attempts to vocalize during sign-manding record what the learner actually says ("what was said during signing" column).
    a. If the vocalization during the sign-mand is the target, deliver the reinforcer.
    b. If the vocalization is not the target or no vocalization is produced, run up to 5 echoic attempts for better articulation, recording exactly what the learner said.
        i. If during the 5 echoic trials the learner's produces the target, the instructor will differentially reinforce.

GRAPHING:

At the end of the session the instructor will graph as designated below:

1. Spontaneous versus prompted mands
    a. Calculate the rate per minute for both mands that were prompted versus mands that where spontaneous (solely under the control of the MO) by dividing the frequency for each by the total number of minutes spent manding.

2. Overall prompt level needed to evoke all mands for that day
    a. After the session the instructor will calculate the most frequent prompt level needed for all of the mands for that day and graph this prompt level on the graph.

3. Percentage of vocalizations that were defined as adult form, intelligible, word approximation or vocalization
    a. After the session the instructor will calculate the percentage of vocalizations that were in the categories above by dividing the number of trials in that category by the total number of mands for that day.

4. Percentage of vocalizations that improve during the echoic procedure
    a. After the session the instructor will calculate the percentage of vocalizations that improved during the echoic procedure by dividing the number of trials where the learner's vocalization improved during any of the 5 echoic trials by the total number of trials (i.e., one trial is counted for all five, if necessary) when the procedure was implemented for that day.

Sound Simplification Changes

To assist children that have a limited phonetic inventory in producing more complex words, it may be helpful to simplify the words or supply the child with word shells or approximations to the target word. Nancy Kaufman pioneered procedures for this type of simplification training. Some of the typical sound substitutions, based on phonological processes research, are detailed below. Generally, these substitutions should only be used if the child does not have the target sound within his phonetic inventory. "Simple" Transcription was used to list potential substitutions below.

Target Sound	Sound to substitute	Example word
k	t	cow=tah-ō
g	d	good=dud
r initial	w	rabbit=wădĭt
er final	uh or ō	water=wahduh
l initial	y or w	lady= yādē or wādē
l final	ō or ō-oo	apple= ăpō
ch	t or sh	cheese=tēz/shēz
j	d or z	jump=dŭmp or zŭmp
f	p or b	finger=pĭnger
v	b	vince=bĭns
thh (voiceless)	f	thumb=fŭm
th (voiced)	d	this=dĭs
s	t	soda=tōduh
sh	t	shoe=too

Voicing substitutions (substituting a voiced sound for a voiceless sound) can also be used for children who have no voiceless consonants such as p, t, k, f, s.

p	b	pop=bahp
t	d	top=dahp
k	g	car=gahr

Vowel neutralization can also be used for children who have few vowels

ō	aw	boat=bawt
ă	ah	apple=ahpō
ē	ĭ	meat=mĭt
ā	ĕ	name=nĕm

Tamara Kasper MS/CCC-SLP, BCBA

Simple Transcription Guide/Pronunciation Guide

	Letter used	as in	Key Word	
Vowels:	ē		key	
	ĭ		pin	
	ā		bait	
	ĕ		red	
	ă		glad	
	oo		moon	
	u		wood	
	ō		okay	teach as ō-oo
	aw		law	
	ah		cod	
	ŭ, uh		bud, panda	
	er		butter, bird	
Diphthongs:	ah-u		how	teach as ah-oo
	ah-ĭ		tie	teach as ah-ē
	ō-ĭ		boy	teach as ō-ē
	ā-ĭ		bay	teach as ĕ-ē or ā-ē
Consonants:	p		pork	
	b		bug	
	t		to	
	d		dog	
	k		king, cap	
	g		go	
	m		mad	
	n		name	
	v		vote	
	ng		ring	
	f		for	
	thh		thing	
	th		them	
	s		say, fence	
	z		zoo	
	sh		ship	
	zh		beige	
	h		hen	
	ch		chew	
	j		join	
	w		win	
	y		yet	
	r		row	
	l		let	

T. Kasper 2010

Program Description

Child's Name: _____ Began On: _____

ABLLS Area: Vocal Imitation

Skill/ABLLS item: E4 Imitation of words containing "th".

Teaching Procedure:

The unvoiced "thh" 'as in "thin" or "thick" is produced with the tongue tip between the upper and lower front teeth with the tongue close the cutting edges of the teeth. The breath stream is directed through these contact points. The lower teeth are generally n contact with the under surface of the tongue. The voiced "th" as in "the" or "them" is produced in the same manner except that the vocal cords are vibrating. Identify the level at which the learner experiences some success. Begin training at this level

1. Imitation of oral placement for "thh" sound. If this is the target, determine a prompt which is effective in gaining imitation of this movement. Model the movement, use a mirror to provide feedback to the learner, use the receptive instruction stick out your tongue or bite your tongue, use a tongue blade or sucker to prompt the learner to stick out his tongue, etc. Once you have identified an appropriate prompt, train the position until your learner can produce the movement 40 times in a row (can be 4 sets of 10), then fade your prompt and move to the next level.
2. Imitation of voiceless "thh". Ask the learner to imitate the oral placement developed in 1. Model the sound, use the receptive instruction "bite your tongue and blow", use a tongue blade or sucker to prompt the learner to stick out his tongue while blowing, etc. Once the learner is able to produce the sound, practice, using a mirror and differential reinforcement until the learner is producing the sound with only a slight tongue protrusion and easy phonation 40 times in a row (can be 4 sets of 10) without error.
3. Imitation of voiceless "thh" in CV syllables. For some learners it will be necessary to teach nonsense syllables with "thh" such as thhĕ-ē, thhuh, thhē,thhah-ē, thhō, thhoo, thhĭ, thhĕ. Use your prompt from 2 and stretch the sound into a vowel. Continue training until the learner can imitate 40 alternating CV or VC consecutively. Some learners may be more successful with step 4 below.
4. Imitation of voiceless "thh" in VC syllable. For some learners it may be necessary to teach nonsense syllables with "thh" such as uhthh, ēthh, ĭthh, ĕthh,ĕ-ēthh , oothh, owthh, etc. Use your prompt from 2 if needed and stretch the vowel into the voiceless "thh" in VC syllables until the learner can successfully imitate 40 alternating CV or VC consecutively.
5. Imitation of voiceless "thh" in words. See word lists. Most learners learn "thh" initial, then final, then medial position. Continue until the learner can fluently imitate 40 alternating "th" words.

6. Imitation of voiced "th" in words. See word lists. Most learners master "th" initial, then final, then medial. Many learners require mass and alternating trials on frequently occurring words that they have produced in error for many years such as "the", "these", 'them", "that". Continue until the learner can echo 40 alternating "th" words.
7. Tacting of voiceless and voiced "th" words using an echoic to tact transfer.
8. Reading of voiceless and voiced "th" words using an echoic to text transfer.
9. Imitation of phrases containing the target words.
10. Production of phrases containing the target words. Use games and speech activities to practice using the words in sentences during structured and semi-structured activities.
11. Structured conversation/intraverbals. Alert the learner that you will be focusing on correct production of "th" words during the next game, activity or conversation. For advanced learners, tell them that they must use their "best voice" or some similar verbal instruction". Closely monitor and use error correction. Keep tally of correct and incorrect.
12. Begin use of self-monitor during structured activities and conversation in which you stop the learner and ask him to assess his own production.
13. Begin transfer to natural settings via one of two methods:
    a. Target words that parents and all others will monitor and error correct
    b. Target times (i.e. car time, lunch time, play time of 20 minutes in which parent will monitor and error correct production.
    c. Move to less direct prompting for error correction if the learner will correct with indirect prompting.

Additional strategies will be based on unique learner characteristics and may include: manding targets, word shells, reverse chain, hand cues, prompt, and use of the following differential reinforcement procedure. Present a promise reinforcer and hold the reinforcer near your mouth. Model the target sound or word. If the learner accurately imitates the target, reinforce abundantly. If the learner does not repeat the word accurately provide a second vocal model. If the learner accurately imitates, reinforce abundantly. Repeat this step a third time. If the learner echoes accurately, reinforce abundantly. If the learner does not echo accurately, model a sound or syllable that the learner can echo easily. When the learner imitates the sound or word, reinforce in small quantity or duration.

Setting: ITT (Intensive Teaching Sessions) and NE (Natural Environment)

Error Correction Procedure:
Errors should be corrected by reverting to the last successful prompt level and then transfer.

Targets:
Sounds, syllable shapes and words as selected by SLP or Program Supervisor. See attached target lists.

Criterion: Conduct daily probes using a Yes/No Probe Data Sheet. When criteria are met at one level, the next level of this program should be implemented. Use the Skill Tracking Sheets to record dates of introduction, acquisition, and retention of each level.

Graph: Graph weekly the cumulative number of targets retained on a cumulative graph

Probe Procedure:

Present the field of items, present the picture, and deliver the verbal instruction

Therapist Signature: _____ Date: _____

thh words

Initial	Medial	Final
theater	Filthy	Beneath
theme	Healthy	Teeth
thief	Wealthy	Wreath
thick	Toothache	Faith
thin	Method	Math
thing	Athlete	Birth
think	Bathroom	Earth
therapy	Bathtub	Booth
thank	Birthday	Tooth
third	Earthworm Panther	Both
thirsty	Nothing	Moth
thirty		Tablecloth
Thursday		Mouth
Thud		Month
Thumb		Fourth
Thunder		North
Thaw		South
Thong		
Thorn		
Though		
Thread		
Three		
Threw		
Throw		
Throne		

THE CENTER
FOR AUTISM TREATMENT

HAND CUES

"p" "b" "m"

"t" "d" "n"

"k" "g" "f"

"v"

"h"

"l'

"w"

"y"

"s"

"z"

"sh"

"ch"

"j"

"r"

Learner Variables and Reinforcement History as Indicators of Speech Development

Age	# of words	Typical Speech Patterns
0-6 months	Babbling begins	Double syllables (VCV) Puts lips together /m/ Babbling shows pitch and inflection changes
6-12 months	Babbling	Reduplicative babbling (bababa) Uses m, n, t, b, p, y in babbling multiple syllables Uses most sounds in vocal play
1-1.5 years	Uses 3 to 20 words	Uses most vowels and consonants in jargon Omits final consonants and some initial consonants Words produced with CV structure (bo/boat) emerge Accurately imitates some words
1.5-2 years	Uses 50 recognizable words	Words increasing, jargon almost gone Approximately 65% intelligible Appearance of words with CVC (hot) structure
2-2.5 years	Uses 200 intelligible words	Approximately 70% intelligible May omit final consonant, reduce consonant blends, substitute one consonant from another
2.5-3 years	Uses 500 intelligible words	Still some substitution and distortion of consonants Now 80% intelligible Consonants mastered: p, m, n, w, h
3-3.5 years	Uses 800 words	Uses final consonants most of the time Phonological processes disappearing by 3: consonant assimilation, diminutization, doubling, final consonant deletion, prevocalic voicing, reduplication, unstressed-syllable deletion, velar fronting.
3.5-4 years	Uses 1000-1500 words	Becoming very intelligible in connected speech Consonants mastered: b, d, k, g, f, y Continued phonological process after 3: cluster reduction, depalitalization, epenthesis, final devoicing, gliding, stopping, vocalization
4.5-7 years	Uses 1500+ words	Most consonant sounds used consistently More errors in difficult blends 5-6: t, ing, r, l mastered 6-7: voiceless th, sh, ch, j mastered 8: voiced th, v, s, zh mastered

Compiled from Speech and Language Development Chart (2nd edition) Pro-ed

Procedures for Shaping Successive Approximations to the Target Adult Word for Children with Autism

Tamara Kasper MS/CCC-SLP

Simultaneously with request training, verbal imitation training with the contents of this kit or with the *Kaufman Speech Praxis Treatment Kits for Children* (Kaufman,1998; 2001) may be initiated. To maintain high motivation and ensure that the child "looks forward" to vocal imitation training with the *K&K Sign and Say* kit, the following procedures are recommended:

1. Identify the items to be taught. Select items that the child frequently requests. It is often better to have fewer items on acquisition (10 or fewer).

2. Before initiating training, review the back of the card. Follow the suggestions regarding speech sound substitutions. That is, substitute a speech sound only if the child is unable to imitate the actual speech sound needed for the word. Identify the highest level of word shell that the child can imitate and mark it with a sticker. This word shell will be the starting point for training. Continue this procedure for each card selected for training.

3. Present a strong reinforcer. A reinforcer is an item that the child will accept that in the past has led to him learning something new. It is usually something that the child enjoys (video, food item, special toy, tickling). It should be shown to the child to ensure that he or she is motivated to respond to the imitation trials. It is best to limit the availability of this item so that the child only "earns" it when he or she is working on speech skills. This should increase motivation.

4. **Without showing the front of the card to the child**, model the word shell that he or she is able to imitate.

    a. If the child imitates correctly, provide praise and move up immediately to the next word shell.
    b. If the child imitates this word shell, move to the next one. Continue until he or she reaches the actual word or until he or she does not imitate the word correctly. **If the child imitates the actual word correctly, show the picture and also give the child the reinforcing item.**
    c. If the child does not imitate the word shell correctly, try 2-3 more times. If he or she still does not imitate the word shell correctly, model the first word shell originally used or the highest level word shell that was imitated accurately, praise the child when he or she vocally matches the word shell and move on to another word.
    d. For some children, reinforcement will need to be provided when the instructor's model of each word approximation on a card is accurately imitated. For other children, it will be possible to provide reinforcement only when the actual adult form of the word is produced and the card is shown. This will depend on the child's motivation, his or her history, and the difficulty of the task.

5. Some children may benefit from additional strategies to assist in producing words.

a. Use Vowels as the Initial word shell:

For children who have very limited vocal skills, the first word shell for a word may consist of a vowel for a single syllable word (i.e. "aw" for ball) or a vowel-vowel word shell (i.e. "ŭ-ā" for cupcake). This strategy can be used for any word that is being shaped. If a child is only able to produce vowels, an augmentative communication system, such as sign language, should also be taught, as the vowels alone will not be a functional communication system.

b. Use Consonant Vowel (CV) as the initial word shell:

For children who have very limited ability to produce and sequence syllables, the first word shell for a word may consist of the initial consonant and vowel of the word ("baw" for ball, "kuh" for cupcake). These easier word shells are supplied for some of the words in the kit, but this strategy can be used for any word that has been selected for treatment.

c. Replace difficult speech sounds with simpler speech sounds

Many of the word shells contain substitutions of easier speech sounds for more difficult speech sounds. These substitutions should be used only if the child is unable to produce the more complex speech sound. In most cases, a notation is made at the bottom of the card that indicates that the easier speech sound should be used only if the child is not able to imitate the more difficult speech sound.

d. Use Reverse or Backward Chaining

Reverse chaining refers to the strategy in which a word is divided into sounds or syllables and the last sound or syllable of a word is imitated by the child. When the child is able to imitate that portion of the word accurately, syllables are gradually increased from the back of the word to the beginning of the word. This strategy can be used for simple or complex words and is remarkably effective in preserving the production of the word in terms of articulation and maintaining smooth sequencing of syllables (rather than the pausing between syllables that can occur when forward chaining is used). Examples are detailed below and are presented in the same way as the word shells are presented on the back of the cards. The smallest unit of the word is at the bottom of the list with gradual increase in length to the top of the list. If you are using a reverse chain to teach a word, change the back of the card to resemble the examples below:

toy	**banana**	**video game**
tō-ē	năn**uh**	dē-ō găm
ō-ē	n**uh**	ō găm
ē		găm
		ăm

e. Use Dentalization

Dentalization refers to a strategy used to aid children in producing the sounds "n", "t", "d", "l". To use this strategy, the "n", "t", "d", or "l" is modeled by placing the tongue between the teeth rather than elevating the tongue to the ridge behind the upper teeth (alveolar ridge). This strategy is helpful in several ways. It makes it easier for the child to see how the speech sound is produced. In addition, it simplifies a very small movement of the tongue into an easier, larger movement of the tongue. Often, the instructor may be modeling the production of "n", "t", "d", or "l" using dentalization, but the child will produce the sound using a more natural tongue placement. If the child uses dentalization as he or she produces the sound, this should be included as a prompt or word shell level on the back of the card and the next higher word shell should inlcude modeling the word without dentalization. This strategy is most effective when used with words that do not have final consonants (toy) or words that begin and end with "n", "t", "d", or "l" (tōōt for parachute).

f. Double the final CV to improve two syllable words (Auditory Contrast Cue)

For children who are experiencing difficulty in producing two syllable words like "gummy", the final or stressed syllable can be doubled as one of the word shells. This "reduplicated" word shell is supplied for some of the words in the kit, but this strategy can be used for any two syllable word that is being shaped. For example, "gummy" or "pickle" could be shaped through this strategy as indicated below:

gummy	**pickle**
mē-mē	pĭ-kō
mē	kō-kō
	kō

g. Simplify two word items or teach separately.

Many multi-word or multi-syllable items are provided in this kit. These words were provided as options for instructors who wish to work on more advanced articulation targets. Each word, however; was designed as a separate word shell and can be taught independently. Thus, an instructor could choose to teach "snack", "chip", "juice", or "game" when teaching a learner with fewer speech sounds and word approximations and teach "fruit snack", "potato chip", "juice box" and "video game" to a learner with a greater number of speech sounds or word approximations. In addition, the two word shells on one line may not correspond to each other. The instructor is encouraged to combine the child's best level of word shell for each word to form his or her best two word approximation.

h. Change voiceless speech sounds to voiced at the beginning of words

For children who often omit the first sound of a word, "voicing" the initial sound of the word can aid in including that beginning sound. Voicing refers to activation of the vocal folds that result in a voiced sound. Speech sounds are organized in voiced and voiceless pairs. The pair of sounds (p,b) are produced with the same oral shape and are produced in the same way with the exception of the vocal folds being active (voiced-b) or inactive (voiceless-p). In using voicing for the

beginning sound of a word, a word like "pudding" can be shaped as "bu*-ding" (*u as in put). A voiced word shell is provided for a few of the words in this kit, but this strategy of voicing the speech sound at the beginning of a word can be used for any word that is being taught to a child who demonstrates initial consonant deletion.

Frequently Used Sound pairs:

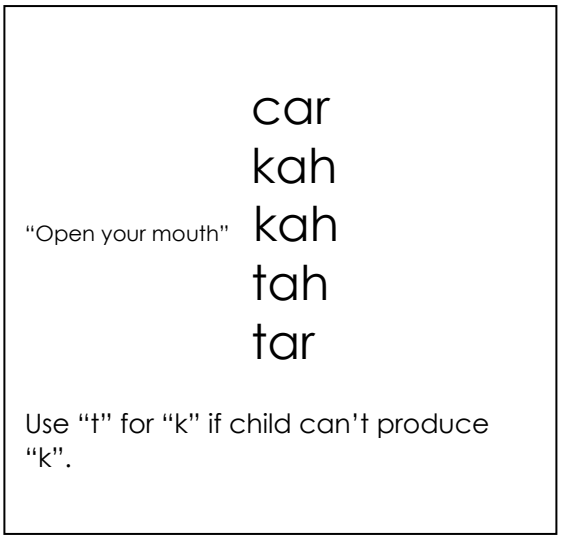
Voiceless	Voiced
p	b
t	d
k	g
f	v
s	z
"j" as in jump	ch
sh	zh as in pleasure

i. Change voiced speech sounds to voiceless at the end of words

For children who often omit the last sound of a word, "de-voicing" the final speech sound of the word can aid in including that final sound. De-voicing refers to producing a sound without activation of the vocal folds. As noted above, speech sounds are organized in voiced and voiceless pairs. For example, the pair of sounds (k,g) are produced with the same oral shape and are produced in the same way with the exception of the vocal folds being active (voiced-g) or inactive (voiceless-k). In using de-voicing for the final sound of a word, a word like "tube" can be shaped as "tōōp". A de-voiced word shell is provided for a few of the words in this kit, but this strategy of de-voicing the speech sound at the end of a word can be used for any word that is being taught to a child who demonstrates final consonant deletion.

j. Use Imitation or following of directions

Oral motor imitation and following directions (receptive instructions) can be helpful in prompting a child to assume the oral posture (mouth and tongue position) necessary to produce a sound. In order for these prompts to be effective, the child must first be taught to imitate or to follow the direction. These skills should be taught until the child can quickly and accurately respond before an attempt is made to use these prompts during word production. For example, the direction "open your mouth" could be used to help a child use the "k" sound in the word "car" if the child has previously said "tar". Initially, the child should be taught to respond to "open your mouth" by prompting (via imitation, use of a food item, etc.) and then fading the prompt. Next, the receptive instruction can be used as a prompt during vocal training (i.e. "open your mouth and say 'car'"). This prompt should be written on the back of the card and the next level closest to the target should include a prompt fade trial. See the example below:



Examples of mouth and tongue movements and their corresponding directions and sounds are detailed below:

Oral Motor Imitation	Direction (Receptive Instruction)	Corresponding Sounds
Lips together	"lips together"	p,b,m
Tongue against ridge behind teeth	"tongue up"	t,d,l,n
Open mouth	"open mouth"	ah, k, g
Smile	"smile"	ē, s
Upper teeth bite lower lip	"bite your lip"	f,v
Bite your tongue	"bite your tongue"	"th" voiced and voiceless

k. Hand cues

Hand cues corresponding to specific sounds can also serve as an excellent prompting strategy. Again, in treating children with ASD, it is important that the hand cue is pre-taught before implementation as a prompt to evoke the sound during word production. The child should be taught to use the hand cue so that he or she can produce the word correctly even when the instructor has faded the hand cue as a prompt. Examples of hand signal cues for vowels and simple consonants are available in the *Kaufman Speech Praxis Workout Book for Children (2005)*, *Easy Does it for Apraxia* (Strode and Chamberlain, 1993), and other many other cueing systems. All cues should be prompted systematically with an organized method of prompt fading so that the child does not become "dependent" on the hand signal cue.

l. Add plural endings if the articulation remains clear

Sometimes when a child is prompted to add a plural "s" or "z" or another grammatical ending to a target word, the child is unable to maintain the other sounds in the word. For this reason, the word shells are shaped in their singular form (which is often the form for requesting) and then the "s" or "z" plural forms are added (which is often the form for labeling). When attempting to shape plurals, it may be necessary to pull away or stretch the final consonant. For some children adding the plural ending may result in a significant reduction in intelligibility and may not be advisable or may be delayed until the child's speech production skills improve. Cards that are made plural contain a notation.

m. Teach until the child can respond quickly and accurately

For many children with ASD and speech production issues, it is essential that they be able to imitate the words or word approximations quickly and accurately. This type of training is called "fluency training". Continue training on a word until the child can imitate the word quickly and accurately. Details of using fluency training in conjunction with the *Kaufman Speech Praxis Treatment Kits* are provided in the Kasper workshops.

6. Often, as children learn the new approximations, they begin to use this improved articulation better word shells during requesting opportunities. If this does not occur, refer to the section on use of word shells during requesting or "cover and mand".

Program Description

Child's Name: _____ Began On: _____

ABLLS Area: Vocal Imitation

Skill/ABLLS item: E1 Modified: Imitation of sounds on request
Echoic trials with a promise

Teaching Procedure: Begin by teaching three very different pure vowel sounds concurrently such as ō, ē, and ah. Conduct a reinforcer assessment and show the promise reinforcer. Model the vowel with a slightly prolonged production. Model the sound up to 3 times. If the learner produces the sound at any time, immediately and abundantly reinforce. If the learner does not produce the sound after the third trial, shift to an easier sound and/or reinforce in small quantity or duration.

When the learner has produced the sound for three consecutive probes, begin adding additional vowel and CV combinations as detailed below. The type and order may vary based on the sounds produced during NE IV, ARP, or Sign Manding

Targets:

a. ah
b. ō
c. ē
d. buh
e. mm
f. huh
g. tuh
h. guh
i. duh
j. kuh
k. nih
l. Any sound or syllable that has been developed through ARP or manding with echoic trials.
m. Begin teaching Kaufman cards at CV or VC level

Setting: ITT (Intensive Teaching Sessions) and NE (Natural Environment)

Graph: Graph weekly the cumulative number of targets retained on a cumulative graph

Probe Procedure:
Present the sound and point to the learner and wait 3 seconds for an echoic response.

Therapist Signature: _____ Date: _____

Program Description

Child's Name: _____ Began On: _____

ABLLS Area: Vocal Imitation

Skill/ABLLS item: E1 Modified: Imitation of sounds with hand cues

Teaching Procedure: Begin by teaching at least two sounds at a time with hand cues. Show the promise reinforcer. Present he verbal instruction "do this", "copy me", or "do what I'm doing". Model the sound with hand cue. If the learner produces sound plus the hand cue, reinforce abundantly. If the learner does not produce the sound, but produced the hand cue, repeat the procedure up to three times or until the learner produces the sound plus hand cue. If the learner does not produce the sound after the third and final trial, present another easy skill and reinforce in smaller quantity. If the learner produces the sound, but not the hand cue, use physical prompting to gain the hand cue plus vocalization.

Targets:

a. m
b. k
c. t
d. p
e. n
f. g
g. b
h. d
i. s
j. sh
k. h

Setting: ITT (Intensive Teaching Sessions) and NE (Natural Environment)

Criterion: Conduct daily probes using a Yes/No Probe Data Sheet. Once two hand cues have met acquisition criteria, move to E12. Use the Skill Tracking Sheets to record dates of introduction, acquisition, and retention.

Graph: Graph weekly the cumulative targets retained on a cumulative graph.

Probe Procedure:
Present the sound with hand cue and wait 3 seconds for an echoic or echoic + hand cue response.

Therapist Signature: _____ Date: _____

Program Description

Child's Name: _____ Began On: _____

ABLLS Area: Vocal Imitation

Skill/ABLLS item: E4 (E12) Modified: Imitation of words upon request with hand cues

Teaching Procedure: Begin by teaching hand cues for each of the sounds to be targeted for integration into the words (See E1 (E1) Modified with hand cues). Once the hand cues have been mastered, they should be used as prompt to teach the learner to use the sound in target words as follows: P1: Show the promise reinforcer. Model the target word while using the hand cue at the same moment that you produce the target sound. When the learner begins to produce the word, model the hand cue again at the exact moment that the learner should be producing the hand cue. If the learner produced the target word with the cued sound correctly without a break in the word or vowel addition, reinforce abundantly. If the learner does not produce the word correctly, run up to three additional trials as specified. If after the third trial, the learner is still unsuccessful, move to another mastered sound or word and reinforce, but in lesser quantity. Take probe data at P1 level by prompting the word while modeling the hand cue, but not producing the hand cue when the learner imitates. When acquisition criterion is met, move to P2.

P2: To teach at this level, use the procedure above to gain an accurate production of the word (no prompt while the learner imitates). On the very next trial, model the word without the hand cue. Take probe data on the learner's ability to produce the word without a hand cue.

Targets: Words from Kaufman hierarchy or as needed for programming

Setting: ITT (Intensive Teaching Sessions) and NE (Natural Environment)

Criterion: Conduct daily probes using a Yes/No Probe Data Sheet. Once a skill has met acquisition criteria in P1 move to P2. Once P2 criteria have been met, a probe of a novel word from the target list should be conducted. If the learner does not meet the application check the next targets will be taught until the learner is able to produce the sound in a novel word without the use of the hand cue. The skill will remain on acquisition until he does pass an application check but the item taught will be put into the mix. Use the Skill Tracking Sheets to record dates of introduction, acquisition, and retention.

Graph: Graph weekly the cumulative number of targets retained on a cumulative graph

Probe Procedure:

Specified above..

Therapist Signature: _____ Date: _____

Program Description

Child's Name: _____ Began On: _____

ABLLS Area: Vocal Imitation

Skill/ABLLS item: E1 Modified: N and L sound

Teaching Procedure:

Oral Placement for the l,n: Direct the learner to open his mouth. If he does not open his mouth, model opening mouth. Rub the alveolar ridge (the ridge immediately behind his teeth) with the tongue blade or sucker. Remove tongue blade or sucker. Direct the learner to place his "tongue up" and model this placement if needed. If he touches the alveolar ridge, differentially reinforce by delivering reinforcement immediately. If he does not, rub the ridge again and repeat procedure. Repeat up to 2 times, providing immediate reinforcement for correct placement. If the learner is unsuccessful after 3 trials, move on to the next task.

Gaining nasality for /n/:

Direct the learner to "do this" and model an /m/ sound. Slowly move from /m/ (hand cue) to /n/ and say "tongue up". If he touches the alveolar ridge and produces an /n/, differentially reinforce by delivering reinforcement immediately. If he does not assume the correct placement, rub the alveolar ridge with the tongue blade and repeat procedure. Repeat up to 2 times, providing immediate reinforcement for correct placement and production. If The learner is unsuccessful after 3 trials, move on to the next task.

Once the learner is successful producing the sound with the prompt, transfer to imitation of sound only. Next, teach with hand cue until fluent before moving to /l/. This is recommended to prevent conditional discrimination issues between the two sounds.

Gaining production of /l/:

Direct the learner to "do this" and model "ah". Slowly move from ah to /l/ and say "tongue up". If he touches the alveolar ridge and produces an /l/, differentially reinforce by delivering reinforcement immediately. If he does not assume the correct placement, rub the alveolar ridge with the tongue blade and repeat procedure. Repeat up to 2 times, providing immediate reinforcement for correct placement and production. If the learner is unsuccessful after 3 trials, move on to the next task.

Once The learner is successful producing the sound with the prompt, transfer to imitation of sound only. Next, teach with hand cue until fluent before moving to /l/. This is recommended to prevent conditional discrimination issues between the two sounds.

Targets:
Placement for /n,l/
Production of /n/
Production of /l/

Setting: ITT (Intensive Teaching Sessions) and NE (Natural Environment)

Criterion: Conduct daily probes using a Yes/No Probe Data Sheet at the following levels

1. Oral placement for /l,n/ once per week when told tongue up.
2. Oral motor imitation of placement.
3. Production of /n/ using slow chain as above
4. Production of /n/ in imitation in isolation then transfer to hand cue.
5. Production of /l/ in imitation in isolation then transfer to hand cue.
   Use the Skill Tracking Sheets to record dates of introduction, acquisition, and retention.

Graph: Graph weekly the cumulative number of targets retained on a cumulative graph

Probe Procedure:
Senior therapist will probe when with the client once per week at each level.

Therapist Signature: _____ Date: _____

Program Description

Child's Name: Kyle Began On: _____

ABLLS Area: Vocal Imitation

Skill/ABLLS item: E4 Imitation of phrases on request hand cues

Prerequisites: Single word echoics, spontaneously producing some two word chains or two word combinations, appropriate level or MO for two word combinations in other areas of programming.

Teaching Procedure: Before teaching, probe the two word combination and circle sounds that require hand cues. Ensure that reinforcement is visually available. Model the two word phrase using a hand cue for any sounds missed on the probe. If the learner accurately imitates the two words with the hand cue(s), fade the hand cue(s) on the next trial and reinforce abundantly. If he does not echo the phrase accurately on the first trail, provide up to 3 opportunities for the learner to produce the two words with hand cues. If he is still incorrect, move to another item and reinforce. If the learner echos correctly with the hand cue on the second or third trial, reinforce. ITT-If the learner does not echo accurately, model a sound or syllable that the learner can echo easily. When the learner imitates the sound or word, reinforce in small quantity or duration. NE-Reinforcer following third trial, but in lesser magnitude.

Setting: ITT (Intensive Teaching Sessions) and NE (Natural Environment)

Error Correction Procedure:
Errors should be corrected using hand cues as possible.

Targets: Select targets based on phrases needed in the natural environment or for programming. When teaching two word phrases, ensure that you are pairing at least 3 phrases that share a word (pivots) when appropriate.

For Kyle:

1. Write on index cards varied combinations of two word echoics. Probe the two word combination and circle letters that require hand cues on the teaching trial.
2. Two word combinations from Natural Environment with variety "no + noun", "byebye + name", "name" + look", "watch + Noun/verb". "name" + home, "where + noun", What time + name", "what time + activity", "what time+ name+ home".

Criterion: Conduct daily probes using a Yes/No Probe Data Sheet. Once a skill has met acquisition criteria, a skills application check should be done. If the learner does not meet the application check the target skill will remain on acquisition until he does pass an application check but the item taught will be put into retention. Use the Skill Tracking Sheets to record dates of introduction, acquisition, and retention.

Graph: Graph weekly the cumulative number of targets retained on a cumulative graph

Probe Procedure:
Present the phrase and the learner should echo the phrase

Therapist Signature: _____ Date: _____