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The Locke speech perception task

Locke, J.L. (1980). The inference of speech perception in the phonologically disordered child. Part II: Some clinically novel procedures, their use, some findings. *Journal of Speech and Hearing Disorders*, 45, 445-468.


ERROR TYPES IN SSD*

Some children experience >one type of problem. Errors may have:

- a phonetic ('articulatory') basis
- a phonological (phonemic) basis
- a perceptual basis
- an anatomic/structural basis
- a motor planning basis
- a motor execution basis

* SPEECH SOUND DISORDER

Further Evaluation

- The results of the **CORE SPEECH ASSESSMENT BATTERY** may prompt more assessment to rule in/out:
 - Inconsistency
 - Perceptual difficulties 
 - Motor speech disorder:
 - One of the dysarthrias that occur in children
 - Childhood Apraxia of Speech (CAS)
 - Both CAS and a dysarthria

The Locke Speech Perception – Speech Production Task

Name _____ Age _____; Birthdate _____ Date _____ Examiner _____

Date: _____		Date: _____	
Production Task		Production Task	
/ / → / /		/ / → / /	
Target / / Error / / Control / /		Target / / Error / / Control / /	
Stimulus - Class	Response	Stimulus - Class	Response
1. / / - Control	yes - NO	1. / / - Target	YES - no
2. / / - Error	yes - NO	2. / / - Control	yes - NO
3. / / - Target	YES - no	3. / / - Target	YES - no
4. / / - Target	YES - no	4. / / - Control	yes - NO
5. / / - Error	yes - NO	5. / / - Error	yes - NO
6. / / - Control	yes - NO	6. / / - Error	yes - NO
7. / / - Control	yes - NO	7. / / - Target	YES - no
8. / / - Target	YES - no	8. / / - Error	yes - NO
9. / / - Error	yes - NO	9. / / - Target	YES - no
10. / / - Target	YES - no	10. / / - Control	yes - NO
11. / / - Error	yes - NO	11. / / - Control	yes - NO
12. / / - Control	yes - NO	12. / / - Error	yes - NO
13. / / - Error	yes - NO	13. / / - Target	YES - no
14. / / - Target	YES - no	14. / / - Control	yes - NO
15. / / - Control	yes - NO	15. / / - Error	yes - NO
16. / / - Error	yes - NO	16. / / - Target	YES - no
17. / / - Target	YES - no	17. / / - Error	yes - NO
18. / / - Control	yes - NO	18. / / - Control	yes - NO
Mistakes: Error _____ Control _____ Target _____		Mistakes: Error _____ Control _____ Target _____	

Bowen (2009); Locke (1980)

Test Form
use to test-retest
or to test 2 targets

This form is available at
www.speech-language-therapy.com
on the RESOURCES tab

How to create a Locke Task for a client. This page is available at www.speech-language-therapy.com on the RESOURCES tab

Instructions for the Locke Speech Perception – Speech Production Task



1. Under 'production task', enter the target word and the substitution. For example, if the child said 'sip' for 'ship', enter ship → /sɪp/ or enter /ʃɪp / → /sɪp/.
2. Indicate the target sound in the space marked Target (/ʃ/ in the above example), the substituted sound in the space marked Error (/s/ in the above example), and a related sound as a control in the space marked Control (/f/ might be chosen for this example with the nonsense word "Fip").
3. In each of the 18 spots under 'Stimulus - Class' fill in the appropriate sounds from #2 above depending on which item is listed. For example if the item says Target, write /ʃ/, if it says Error write /s/, and if it says Control write /f/. This creates the stimuli for the test.
4. Using the target picture (of 'ship' in this example) as a visual cue, ask the speaker to judge whether or not you said the right word. For example:

- 1) Is this 'Fip'?
- 2) Is this 'sip'?
- 3) Is this 'ship'?
- 4) Is this 'ship'?
- 5) Is this 'sip'? ...etc



If the speaker says 'yes', circle yes next to the item. If the speaker says 'no' circle no. **'YES'** and **'NO'** indicate correct answers; **'yes'** and **'no'** indicate incorrect responses.

5. Count the mistakes ('yes' and 'no') in each category (Target, Error, Control).
6. The speaker is said to have a problem with perception if 3 or more mistakes in perception are noted in response to the Error stimuli (out of 6 Error stimuli). 3/6 indicates that at least half the child's responses are incorrect indicating that the child may have trouble distinguishing their customary production from the adult target.
7. Repeat the process for each erred sound suspected to have a perceptual basis.

Example for a child suspected to have difficulty perceiving the difference between /s/ and /ʃ/ in words

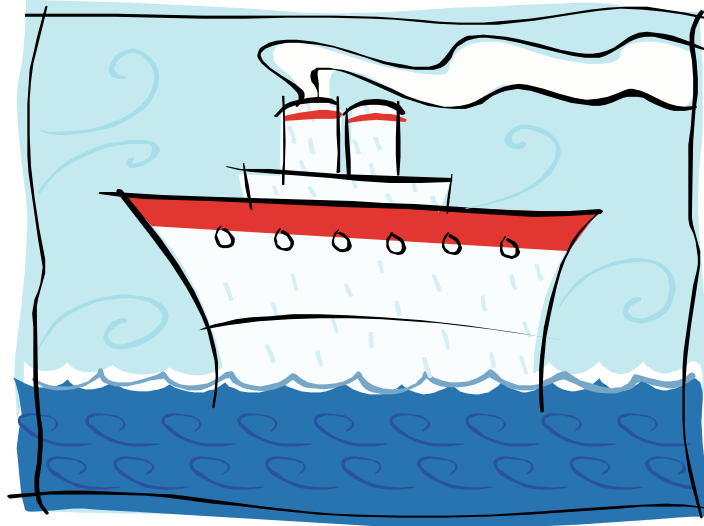
Is this /ʃip/ is this /sip/ is this /fip/	
Target /ʃ/ Error /s/ Control /f/	
Stimulus - Class	Response
1. / f / - Control	yes - NO
2. / s / - Error	yes - NO
3. / ʃ / - Target	YES - no
4. / ʃ / - Target	YES - no
5. / s / - Error	yes - NO
6. / f / - Control	yes - NO
7. / f / - Control	yes - NO
8. / ʃ / - Target	YES - no
9. / s / - Error	yes - NO
10. /ʃ / - Target	YES - no
11. / s / - Error	yes - NO
12. / f / - Control	yes - NO
13. / s / - Error	yes - NO
14. / ʃ / - Target	YES - no
15. / f / - Control	yes - NO
16. /s / - Error	yes - NO
17. / ʃ / - Target	YES - no
18. / f / - Control	yes - NO
Mistakes: Error Control Target	

CORRECT ANSWERS ARE IN UPPER CASE

Sample Test Form
Stimuli for a child with apparent difficulty discriminating /s/ from /ʃ/.

Test Procedure

1. Familiarise the child with “ship”, “sip” and “Fip”.
2. Show the child the picture of the target only.
3. “Is this Fip?” “Is this sip?” “Is this ship?” etc.



3 or more errors with the error stimulus, **sip**, indicate difficulty with perception.

Is this Fip? **Control**

Is this **sip**? **Error**

Is this ship? **Target**

Is this ship? **Target**

Is this **sip**? **Error**

Is this Fip? **Control**

CORRECT ANSWERS ARE IN UPPER CASE



3 or more errors with the error stimulus, **weed**, indicate difficulty with perception.

Is this lead? **Control**

Is this **weed**? **Error**

Is this read? **Target**

Is this read? **Target**

Is this **weed**? **Error**

Is this lead? **Control**

CORRECT ANSWERS ARE IN UPPER CASE

Suggested test stimuli for common production errors

error/target	Target	Error	Control
f/θ	thin	fin	shin
	thaw	fore	saw
s/f	ship	sip	Fip
	shoe	Sue	zoo
θ/s	sigh	thigh	shy
	sort	thought	fort
z/ʒ	rouge	roos	roof
	beige	bays	base
n/ŋ	rung	run	rum
	rang	ran	ram
ʃ/tʃ	chip	ship	sip
	chin	shin	tin
dʒ/dʒ	jeep	dzeep	deep
	jam	dzam	dam
tʃ/tʃ	chip	tsip	ship
	cheap	tseep	sheep
tʃ/dʒ	jeep	cheep	sheep
	Jock	chock	shock
m/n	knee	me	bee
	nice	mice	dice
t/k	key	tea	D
	corn	torn	dawn
d/g	go	dough	toe
	gate	date	Kate
w/r	read	weed	lead
	rot	what	yacht
j/l	lei	yay	way
	lawn	yawn	warn
w/l	lay	way	yay
	lamb	wham	jam



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