Rapid Motor Imitation Antecedent
RMIA

Candidate for this Procedure: **Learner has a generalized non-vocal motor imitation repertoire, but does not readily attempt to vocally imitate the teacher when asked. Learner typically does NOT emit any vocal-verbal behavior (mands, tacts, or echoics), but may emit varied spontaneous vocalizations.**

Step 1: Assessment and Target Development

1. Take at least 2 vocalization baselines in order to gather a sound inventory.
2. Develop word shells based on the learner's sound inventory and a large pool of future mands.
3. Select at least 10 targets based on the lowest levels of the word shells that are not mastered as echoics.

Step 2: Behavioral Momentum

RMIA is based on the principle of behavioral momentum. Research shows that high probability behaviors can evoke low probability behaviors.

Prior to running this procedure, the instructor should:

- Gather a set of valuable reinforcers that are currently not being targeted for signed mands.
- Prepare a set of (at least 10) target echoic cards. *Specific targets should be related to the reinforcers that are used during the RMIA session.*
- Prepare a large set (at least 30) <u>easy</u> motor imitation 3x5 cards. These should contain both fine motor and gross motor imitations, but should not involve objects (to keep a rapid pace.
- Hold least 3 sessions per day and run at least 50 trials.

Procedure:

1. Check for motivation for a reinforcer. Keep the reinforcer visible, but not accessible by the learner. For each trial, target echoic should be related to the reinforcer presented.
2. Present 3-6 <u>non-vocal</u> motor imitation models.
3. If the student correctly imitates, immediately hold up the reinforcer and present the target vocal model. Deliver the reinforcer if the student echoes.
4. Kinds of errors:
   - Does not emit the target echoic (or errors on a motor imitation):
     Stop sequence when the learner errors and immediately present the same sequence again.
   - Errors on the same sequence 2 times:
      Do not reinforce. Begin a new trial sequence. (Potentially use a different reinforcer and target; or add more non-vocal motor imitations to the sequence.
5. Graph the percentage (%) of total correct echoics per day. *One trial=entire imitation sequence (motor imitation + vocal imitation).*

After 3-5 consecutive correct trial sequences, try fading the non-vocal motor imitations. In other words, test the learner's echoic abilities.

Ross, D. E., & Greer, R. W. (2003). Generalized imitation and the mand: Inducing first instances of speech in young children with autism. *Research in Developmental Disabilities, 24*, 58-74.

Tsiouri, I., & Greer, R. W. (2003). Inducing vocal verbal behavior in children with severe language delays through rapid motor imitation responding. *Journal of Behavioral Education, 12*(3), 185-206.

Example RMIA Trial

"Do this" --------------> Motor Imitation

"Do this" --------------> Motor Imitation

"Do this" --------------> Motor Imitation

"Do this" --------------> Motor Imitation

"Do this" --------------> Motor Imitation

Say "kee" ----------> **Vocal** Imitation

RMIA Data

Student:_____   **Date:**_____

1. Present 3-6 non-vocal imitation trials.
2. If the student correctly imitates, immediately hold up the reinforcer and present the target vocal model. Deliver the reinforcer if the student echoes.
3. <u>If the student does not emit the target echoic (or errors on a motor imitation)</u>: Stop sequence when the learner errors and immediately present the same sequence again. (Counts as an incorrect trial.)
4. <u>If the student errors a second time</u>: Do not deliver the reinforcer. Present a new trial sequence. (Counts as an incorrect trial.)

After 3-5 consecutive correct trial sequences, try fading the <u>non-vocal</u> motor imitations.

One trial= whole sequence (non-vocal motor imitation+echoic)

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

KEY:

+ = correct echoic   -- = no response or incorrect motor imitation   O=other vocal response
(or specify sounds emitted)