Lexical Transfer Study 2 Procedure Overview

1. Participants read and sign the consent form

2. Participants complete background information questionnaire

3. Participants complete Computation Span Task (CST)

4. Participants complete Phase 1 – Noun Learning

5. Participants complete Phase 2 – Numeral Learning

6. Participants complete Phase 3 – Classifier Learning

7. Participants complete Phase 4 – Acceptability Judgment Task

8. Participants complete Phase 5 – Generalization Task

9. Participants complete a debriefing questionnaire

10. Debrief participants

Phase 1 – Noun Learning:

Participants are tasked with learning 13 nouns in LabPersian. Six of the forced-choice questions were presented with familiar items (target words as seen below) and seven of the forced-choice questions were presented with novel items as foils. The decision to use novel items for half of the foils was made during the study design phase in the Lexical Transfer Study 1 with the goal of increasing the difficulty of the task compared to previous studies using similar methodology.

Training Trials

- there are 13 training sentence-image pairs; 13 target nouns in total
- each noun is presented 1 time
- one sentence frame was used; all target items are presented in sentence-final position
- participants are asked to look at the screen while a picture is presented along with a sentence, auditorily, in LabPersian; the participants are told that their task is to try to learn the names of the items in the picture

- training stimuli are presented in a random order on each trial; once all 13 sentence-image pairs are presented, instructions for the test trials appear

Noun	Noun LabPersian	Classifier Type	Stimulus Sentence English	Stimulus Sentence LabPersian
ball	/gɛr.di/	round	This is **ball**.	/in æst **gɛr.di**/
bowl	/kɑ.sɛ/	round	This is **bowl**.	/in æst **kɑ.sɛ**/
plate	/dɔ.ri/	round	This is **plate**.	/in æst **dɔ.ri**/
door	/dær.puʃ/	wooden	This is **door**.	/in æst **dær.puʃ**/
bed	/bæs.tær/	wooden	This is **bed**.	/in æst **bæs.tær**/
chair	/sæn.dæl/	wooden	This is **chair.**	/in æst **sæn.dæl**/
scrub brush	/mɛs.vɑk/	graspable	This is **scrub brush**.	/in æst **mɛs.vɑk**/
bottle	/li.vɑn/	graspable	This is **bottle**.	/in æst **li.vɑn**/
spoon	/kɑ.ʃɔk/	graspable	This is **spoon**.	/in æst **kɑ.ʃɔk**/
fish	/mɑ.hi/	fish	This is **fish**.	/in æst **mɑ.hi**/
couch	/tɔ.ʃæk/	default	This is **couch**.	/in æst **tɔ.ʃæk**/
bag	/ku.lɛ/	default	This is **bag**.	/in æst **ku.lɛ**/
cactus	/gɔl.dɑn/	default	This is **cactus**.	/in æst **gɔl.dɑn**/

Test Trials

- there are 13 test items; as with the training trials, there are 13 target nouns; the same image stimuli from the training trials were used here
- participants are asked to look at the screen while an image is displayed and a sentence in LabPersian is presented auditorily. The LabPersian is made up a sentence frame in the form of *Is it X or Y*, where X and Y are LabPersian nouns. The order of target and foil was counterbalanced across stimuli items. Target nouns are the same as the nouns presented in the training trials. Six of the foil nouns are comprised of nouns they heard in the training trials, and seven of the nouns are comprised of items that were not in the training trials
- participants are asked to press the key corresponding to their choice

- test stimuli are presented in a random order on each trial.
- participants' scores are presented at the end of the task. If participants score less than 100%, the training trials (see above) will repeat. Participants are given 10 cycles to reach criterion. If the participant does not score 100% by the 10th cycle, they do not continue to Phase 2 of the study

Target	Target LabPersian	Foil	Foil LabPersian	Stimulus Question English	Stimulus Question LabPersian	Foil novel?
ball	/gɛr.di/	tools	/æb.zɑr/	Is this **ball** or tools?	aja in **gɛr.di** æst ja æb.zɑr? (whether this ball is or tools)	Y
bowl	/kɑ.sɛ/	milk	/ʃi.rɛ/	Is this milk or **bowl**?	aja in ʃi.rɛ æst ja **kɑ.sɛ**? (whether this milk is or bowl)	Y
plate	/dɔ.ri/	spoon	/kɑ.ʃok/	Is this **plate** or spoon?	aja in **dɔ.ri** æst ja kɑ.ʃok? (whether this plate is or spoon)	N
door	/dær.puʃ/	garbage	/aʃ.kal/	Is this garbage or **door**?	aja in aʃ.kal æst ja **dær.puʃ**? (whether this garbage is or door)	Y
bed	/bæs.tær/	bowl	/kɑ.sɛ/	Is this a **bed** or a bowl?	aja in **bæs.tær** æst ja kɑ.sɛ? (whether this bed is or bowl)	N
chair	/sæn.dæl/	cactus	/gɔl.dɑn/	Is this cactus or **chair**?	aja in gɔl.dɑn æst ja **sæn.dæl**? (whether this cactus is or chair)	N
brush	/mɛs.vɑk/	fish	/mɑ.hi/	Is this **scrub brush** or fish?	aja in **mɛs.vɑk** æst ja mɑ.hi? (whether this scrub brush is or fish)	N
bottle	/li.vɑn/	chair	/sæn.dæl/	Is this chair or **bottle**?	aja in sæn.dæl æst ja **li.vɑn**? (whether this chair is or bottle)	N
spoon	/kɑ.ʃok/	shirt	/pi.ræn/	Is this **spoon** or shirt?	aja in **kɑ.ʃok** æst ja pi.ræn ? (whether this spoon is or shirt)	Y
fish	/mɑ.hi/	ball	/gɛr.di/	Is this ball or **fish**?	aja in gɛr.di æst ja **mɑ.hi**? (whether this ball is or fish)	N
couch	/tɔ.ʃæk/	chef	/aʃ.pæz/	Is this **couch** or chef?	aja in **tɔ.ʃæk** æst ja aʃ.pæz? (whether this couch is or chef)	Y
bag	/ku.lɛ/	doctor	/tæ.bib/	Is this doctor or **bag**?	aja in tæ.bib æst ja **ku.lɛ**? (whether this doctor is or bag)	Y
cactus	/gɔl.dɑn/	car	/kɔd.rɔ/	Is this **cactus** or car?	aja in **gɔl.dɑn** æst ja kɔd.rɔ? (whether this cactus is or car)	Y

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Phase 2 – Numeral Learning:

Participants were tasked with learning 3 numerals in LabPersian.

Training Trials

- there are 9 training sentence-image pairs; 3 target numerals in total
- each numeral is presented 3 times; since presenting each item only once would mean there were only 3 trial sentences, the decision was made to present each item 3 times
- one sentence frame was used; all target items are presented in sentence-final position
- participants are asked to look at the screen while a picture is presented along with a sentence in LabPersian; the participant is told that their task is to try to learn the numerals
- the image contains a picture of the numeral itself (i.e. a '1', a '2', or a '3'); same image used each time the numeral is presented
- training stimuli are presented in a random order on each trial; once all 9 sentence-image pairs are presented, instructions for the test trials appear

Numeral	Numeral LabPersian	Sentence English	Sentence LabPersian
1	/jɛ/	This is **one**.	/in æst **jɛ**/
2	/dɔ/	This is **two**.	/in æst **dɔ**/
3	/sɛ/	This is **three**.	/in æst **sɛ**/
1	/jɛ/	This is **one**.	/in æst **jɛ**/
2	/dɔ/	This is **two**.	/in æst **dɔ**/
3	/sɛ/	This is **three**.	/in æst **sɛ**/
1	/jɛ/	This is **one**.	/in æst **jɛ**/
2	/dɔ/	This is **two**.	/in æst **dɔ**/
3	/sɛ/	This is **three**.	/in æst **sɛ**/

Test Trials

- there are 9 test items; as with the training trials, there are 3 target numerals
- a different image was used for the test trials as compared to the training trials. In the test trials, participants were required to do some minimal subitizing with the items on the screen, where items consist of Pingu, Pinga (Pingu's sibling), and Robby (Pingu's seal friend) presented on a white background. A different configuration was used in each image, meaning there are 9 unique images (3 with one item, 3 with two items, and 3 with three items)
- participants are asked to look at the screen while an image is displayed and a sentence in LabPersian is presented auditorily. The LabPersian is made up a sentence frame in the form of *Is it X or Y*, where X and Y are LabPersian numerals. The order of target and foil was counterbalanced across stimuli items
- participants are asked to press the key corresponding to their choice
- test stimuli are presented in a random order on each trial
- participants' scores are presented at the end of the task. If participants score less than 100%, the training trials (see above) will repeat. Participants are given 10 cycles to reach criterion. If the participant does not score 100% by the 10th cycle, they do not continue to Phase 3 of the study

Target	Target LabPersian	Foil	Foil LabPersian	Question English	Question LabPersian
1	/jɛ/	2	/dɔ/	Is this **one** or two?	ɑjɑ in **jɛ** æst jɑ dɔ? (whether this one is or two)
2	/dɔ/	3	/sɛ/	Is this three or **two**?	ɑjɑ in sɛ æst jɑ **dɔ**? (whether this three is or two)
3	/sɛ/	1	/jɛ/	Is this **three** or one?	ɑjɑ in **sɛ** æst jɑ jɛ? (whether this three is or one)
1	/jɛ/	3	/sɛ/	Is this three or **one**?	ɑjɑ in sɛ æst jɑ **jɛ**? (whether this three is or one)
2	/dɔ/	1	/jɛ/	Is this a **two** or one?	ɑjɑ in **dɔ** æst jɑ jɛ? (whether this two is or one)
3	/sɛ/	2	/dɔ/	Is this two or **three**?	ɑjɑ in dɔ æst jɑ **sɛ**? (whether this two is or three)
1	/jɛ/	3	/sɛ/	Is this **one** or three?	ɑjɑ in **jɛ** æst jɑ sɛ? (whether this one is or three)
2	/dɔ/	1	/jɛ/	Is this one or **two**?	ɑjɑ in jɛ æst jɑ **dɔ**? (whether this one is or two)
3	/sɛ/	2	/dɔ/	Is this **three** or two?	ɑjɑ in **sɛ** æst jɑ dɔ? (whether this three is or two)

Phase 3 – Classifier Learning:

Participants were tasked with learning 5 classifiers in LabPersian; /tæn/ 'round' (= shape), /dʒɪn/ 'wooden' (= material), /ris/ 'graspable' (= size), /tup/ 'unique (fish)', /jær/ 'default'. Note that the default classifier shows up in two conditions, 1. with a set of words that have no obvious category information (i.e. cactus, couch, bag = *different*), and 2. with a set of words that are also presented with their other classifiers (i.e. spoon, chair, bowl = *repeated*). Essentially, the nouns that are repeated with the default classifier are presented twice.

Training Trials

- there are 18 training sentence-image pairs
  - 13 nouns, as per Phase 1; each noun is presented once, except **spoon**, **chair**, and **bowl** (presented twice, once with regular category classifier, and once with default classifier), and **fish** (presented three times, so that unique classifier can show up once with each numeral)
- one sentence frame was used; all target items are presented in sentence-final position
- participants are asked to look at the screen while a picture is presented along with a sentence in LabPersian; the participant is told that their task is to try to learn the new Persian form
- training stimuli are presented in a random order on each trial; once all 18 sentence-image pairs are presented, instructions for the test trials appear

Numeral	Numeral LabPersian	Classifier Type	Classifier LabPersian	Noun	Noun LabPersian	Target LabPersian	Sentence English	Sentence LabPersian
1	/jɛ/	round	/tæn/	ball	/gɛr.di/	/jɛ-tæn-gɛr.di/	This is **one-round-ball**.	/in æst **jɛ-tæn-gɛr.di**/
2	/dɔ/	round	/tæn/	bowl	/kɑ.sɛ/	/dɔ-tæn-kɑ.sɛ/	This is **two-round-bowl**.	/in æst **dɔ-tæn-kɑ.sɛ**/
3	/sɛ/	round	/tæn/	plate	/dɔ.ri/	/sɛ-tæn-dɔ.ri/	This is **three-round-plate**.	/in æst **sɛ-tæn-dɔ.ri**/
1	/jɛ/	wooden	/dʒɪn/	door	/dær.puʃ/	/jɛ-dʒɪn-dær.puʃ/	This is **one-wooden-door**.	/in æst **jɛ-dʒɪn-dær.puʃ**/
2	/dɔ/	wooden	/dʒɪn/	bed	/bæs.tær/	/dɔ-dʒɪn-bæs.tær/	This is **two-wooden-bed**.	/in æst **dɔ-dʒɪn-bæs.tær**/
3	/sɛ/	wooden	/dʒɪn/	chair	/sæn.dæl/	/sɛ-dʒɪn-sæn.dæl/	This is **three-wooden-chair**.	/in æst **sɛ-dʒɪn-sæn.dæl**/
1	/jɛ/	graspable	/ris/	scrub brush	/mɛs.vɑk/	/jɛ-ris-mɛs.vɑk/	This is **one-graspable-scrubbrush**.	/in æst **jɛ-ris-mɛs.vɑk**/

2	/dɔ/	graspable	/ris/	bottle	/li.vɑn/	/dɔ-ris-li.vɑn/	This is **two-graspable-bottle**.	/in æst **dɔ-ris-li.vɑn**/
3	/sɛ/	graspable	/ris/	spoon	/kɑ.ʃɔk/	/sɛ-ris-kɑ.ʃɔk/	This is **three-graspable-spoon**.	/in æst **sɛ-ris-kɑ.ʃɔk**/
1	/jɛ/	unique_fish	/tup/	fish	/mɑ.hi/	/jɛ-tup-mɑ.hi/	This is **one-unique_fish-fish**.	/in æst **jɛ-tup-mɑ.hi**/
2	/dɔ/	unique_fish	/tup/	fish	/mɑ.hi/	/dɔ-tup-mɑ.hi/	This is **two-unique_fish-fish**.	/in æst **dɔ-tup-mɑ.hi**/
3	/sɛ/	unique_fish	/tup/	fish	/mɑ.hi/	/sɛ-tup-mɑ.hi/	This is **three-unique_fish-fish**.	/in æst **sɛ-tup-mɑ.hi**/
1	/jɛ/	default (repeated)	/jær/	spoon	/kɑ.ʃɔk/	/jɛ-jær-kɑ.ʃɔk/	This is **one-default-spoon**.	/in æst **jɛ-jær-kɑ.ʃɔk**/
2	/dɔ/	default (repeated)	/jær/	chair	/sæn.dæl/	/dɔ-jær-sæn.dæl/	This is **two-default-chair**.	/in æst **dɔ-jær-sæn.dæl**/
3	/sɛ/	default (repeated)	/jær/	bowl	/kɑ.sɛ/	/sɛ-jær-kɑ.sɛ/	This is **three-default-bowl**.	/in æst **sɛ-jær-kɑ.sɛ**/
1	/jɛ/	default (different)	/jær/	couch	/tɔ.ʃæk/	/jɛ-jær-tɔ.ʃæk/	This is **one-default-couch**.	/in æst **jɛ-jær-tɔ.ʃæk**/
2	/dɔ/	default (different)	/jær/	bag	/ku.lɛ/	/dɔ-jær-ku.lɛ/	This is **two-default-bag**.	/in æst **dɔ-jær-ku.lɛ**/
3	/sɛ/	default (different)	/jær/	cactus	/gɔl.dɑn/	/sɛ-jær-gɔl.dɑn/	This is **three-default-cactus**.	/in æst **sɛ-jær-gɔl.dɑn**/

Test Trials

- there are 18 test items; the same image stimuli from the training trials were used here
- participants are asked to look at the screen while an image is displayed and a sentence in LabPersian is presented auditorily. The LabPersian is made up a sentence frame in the form of *Is it X or Y*, where X and Y are LabPersian phrases in the form *numeral-classifier-noun*. The order of target and foil was counterbalanced across stimuli items
- participants are asked to press the key corresponding to their choice
- test stimuli are presented in a random order on each trial
- participants' scores are presented at the end of the task. If participants score less than 100%, the training trials (see above) will repeat. Participants are given 10 cycles to reach criterion. If the participant does not score 100% by the 10th cycle, they do not continue to Phase 4 and 5 of the study

Target	Target LabPersian	Foil English	Foil LabPersian	Question English	Question LabPersian
one-round-ball	**/jɛ-tæn-gɛr.di/**	one-default-ball	/jɛ-jær-gɛr.di/	Is this one-default-ball or **one-round-ball**?	aja in jɛ-jær-gɛr.di æst ja **jɛ-tæn-gɛr.di**? (whether this one-default-ball is or one-round-ball)
two-round-bowl	**/dɔ-tæn-ka.sɛ/**	two-unique_fish-bowl	/dɔ-tup-ka.sɛ/	Is this **two-round-bowl** or two-unique_fish-bowl?	aja in **dɔ-tæn-ka.sɛ** æst ja dɔ-tup-ka.sɛ? (whether this two-round-bowl is or two-unique_fish-bowl)
three-round-plate	**/sɛ-tæn-dɔ.ri/**	three-graspable-plate	/sɛ-ris-dɔ.ri/	Is this three-graspable-plate or **three-round-plate**?	aja in sɛ-ris-dɔ.ri æst ja **sɛ-tæn-dɔ.ri**? (whether this three-graspable-plate is or three-round-plate)
one-wooden-door	**/jɛ-dʒɪn-dær.puʃ/**	one-default-door	/jɛ-jær-dær.puʃ/	Is this **one-wooden-door** or one-default-door?	aja in **jɛ-dʒɪn-dær.puʃ** æst ja jɛ-jær-dær.puʃ? (whether this one-wooden-door is or one-default_overlap-door)
two-wooden-bed	**/dɔ-dʒɪn-bæs.tær/**	two-default-bed	/dɔ-jær-bæs.tær/	Is this two-default-bed or **two-wooden-bed**?	aja in dɔ-jær-bæs.tær æst ja **dɔ-dʒɪn-bæs.tær**? (whether this two-default-bed is or two-wooden-bed)
three-wooden-chair	**/sɛ-dʒɪn-sæn.dæl/**	three-unique_fish-chair	/sɛ-tup-sæn.dæl/	Is this **three-wooden-chair** or three-unique_fish-chair?	aja in **sɛ-dʒɪn-sæn.dæl** æst ja sɛ-tup-sæn.dæl? (whether this three-wooden-chair is or three-unique_fish-chair)
one-graspable-scrubbrush	**/jɛ-ris-mɛs.vak/**	one-default-scrubbrush	/jɛ-jær-mɛs.vak/	Is this one-default-brush or **one-graspable-scrubbrush**?	aja in jɛ-jær-mɛs.vak æst ja **jɛ-ris-mɛs.vak**? (whether this one-default-scrubbrush is or one-graspable-scrubbrush)
two-graspable-bottle	**/dɔ-ris-li.van/**	two-wooden-bottle	/dɔ-dʒɪn-li.van/	Is this **two-graspable-bottle** or two-wooden-bottle?	aja in **dɔ-ris-li.van** æst ja dɔ-dʒɪn-li.van? (whether this two-graspable-bottle is or two-wooden-bottle)
three-graspable-spoon	**/sɛ-ris-ka.ʃɔk/**	three-unique_fish-spoon	/sɛ-tup-ka.ʃɔk/	Is this three-unique_fish-spoon or **three-graspable-spoon**?	aja in sɛ-tup-ka.ʃɔk æst ja **sɛ-ris-ka.ʃɔk**? (whether this three-unique_fish-spoon is or three-graspable-spoon)
one-unique_fish-fish	**/jɛ-tup-ma.hi/**	one-graspable-fish	/jɛ-ris-ma.hi/	Is this **one-unique_fish-fish** or one-graspable-fish?	aja in **jɛ-tup-ma.hi** æst ja jɛ-ris-ma.hi? (whether this one-unique_fish-fish is or one-graspable-fish)
two-unique_fish-fish	**/dɔ-tup-ma.hi/**	two-wooden-fish	/dɔ-dʒɪn-ma.hi/	Is this two-wooden-fish or **two-unique_fish-fish**?	aja in dɔ-dʒɪn-ma.hi æst ja **dɔ-tup-ma.hi**? (whether this two-wooden-fish is or two-unique_fish-fish)
three-unique_fish-fish	**/sɛ-tup-ma.hi/**	three-round-fish	/sɛ-tæn-ma.hi/	Is this **three-unique_fish-fish** or three-round-fish?	aja in **sɛ-tup-ma.hi** æst ja sɛ-tæn-ma.hi? (whether this three-unique_fish-fish is or three-round-fish)
one-default-spoon	**/jɛ-jær-ka.ʃɔk/**	one-round-spoon	/jɛ-tæn-ka.ʃɔk/	Is this one-round-spoon or **one-default-spoon**?	aja in jɛ-tæn-ka.ʃɔk æst ja **jɛ-jær-ka.ʃɔk**? (whether this one-round-spoon is or one-default-spoon)
two-default-chair	**/dɔ-jær-sæn.dæl/**	two-graspable-chair	/dɔ-ris-sæn.dæl/	Is this **two-default-chair** or two-graspable-chair?	aja in **dɔ-jær-sæn.dæl** æst ja dɔ-ris-sæn.dæl? (whether this two-default-chair is or two-graspable-chair)
three-default-bowl	**/sɛ-jær-ka.sɛ/**	three-wooden-bowl	/sɛ-dʒɪn-ka.sɛ/	Is this three-wooden-bowl or **three-default-bowl**?	aja in sɛ-dʒɪn-ka.sɛ æst ja **sɛ-jær-ka.sɛ**? (whether this three-wooden-bowl is or three-default-bowl)

one-default-couch	**/jɛ-jær-tɔ.ʃæk/**	one-graspable-couch	/jɛ-ris-tɔ.ʃæk/	Is this **one-default-couch** or one-graspable-couch?	ɑjɑ in **jɛ-jær-tɔ.ʃæk** æst jɑ jɛ-ris-tɔ.ʃæk? (whether this one-default-couch is or one-graspable-couch)
two-default-bag	**/dɔ-jær-ku.lɛ/**	two-round-bag	/dɔ-tæn-ku.lɛ/	Is this two-round-bag or **two-default-bag**?	ɑjɑ in dɔ-tæn-ku.lɛ æst jɑ **dɔ-jær-ku.lɛ**? (whether this two-round-bag is or two-default-bag)
three-default-cactus	**/sɛ-jær-gɔl.dɑn/**	three-unique_fish-cactus	/sɛ-tup-gɔl.dɑn/	Is this **three-default-cactus** or three-unique_fish-cactus?	ɑjɑ in **sɛ-jær-gɔl.dɑn** æst jɑ sɛ-tup-gɔl.dɑn? (whether this three-default-cactus is or three-unique_fish-cactus)

Phase 4 – Acceptability Judgment Task:

Participants see an image and hear a LabPersian phrase in the form of *numeral-classifier-noun*, and are asked to rate the whether or not the phrase is an acceptable description of the image presented on screen. Participants are asked to rate items on a scale of 1 to 7, where 1 = not acceptable and 7 = acceptable, and are encouraged to use all points on the scale.

- there are 25 test items; 5 blocks, each with one item from each of the 5 conditions
- conditions are as follows:
  - condition 1 = numeral incorrect, classifier incorrect, and noun incorrect based on relevant information in visual stimulus
  - condition 2 = numeral incorrect, classifier correct, and noun correct based on relevant information in visual stimulus
  - condition 3 = numeral correct, classifier incorrect, and noun correct based on relevant information in visual stimulus
  - condition 4 = numeral correct, classifier correct, and noun incorrect based on relevant information in visual stimulus
  - condition 5 = numeral correct, classifier correct, and noun correct based on relevant information in visual stimulus
- the rationale for the 5 conditions is that we will have some information on whether more than just associative learning is taking place with Phases 1-3, e.g. whether or not participants understand that classifiers are required when a noun pairs with a numeral in LabPersian. It will also give us an idea of whether or not participants are performing differently on the nouns, numerals, and classifiers

Block	Condition	Condition Phrase Type	Target English	Target LabPersian
1	1	NUM + CL + NOUN	two-graspable-chair	/dɔ-ris-sæn.dæl/
1	2	NUM + CL + NOUN	one-wooden-chair	/jɛ-dʒɪn-sæn.dæl/
1	3	NUM + CL + NOUN	one-round-fish	/jɛ-tæn-mɑ.hi/
1	4	NUM + CL + NOUN	three-round-cactus	/sɛ-tæn-gɔl.dɑn/
1	5	NUM + CL + NOUN	two-graspable-spoon	/dɔ-ris-kɑ.ʃok/
2	1	NUM + CL + NOUN	three-unique_fish-chair	/sɛ-tup-sæn.dæl/

2	2	NUM + CL + NOUN	two-default-bag	/dɔ-jær-ku.lɛ/
2	3	NUM + CL + NOUN	two-default-bed	/dɔ-jær-bæs.tær/
2	4	NUM + CL + NOUN	one-graspable-bag	/jɛ-ris-ku.lɛ/
2	5	NUM + CL + NOUN	one-round-ball	/jɛ-tæn-gɛr.di/
3	1	NUM + CL + NOUN	three-wooden-spoon	/sɛ-dʒɪn-kɑ.ʃɔk/
3	2	NUM + CL + NOUN	two-default-couch	/dɔ-jær-tɔ.ʃæk/
3	3	NUM + CL + NOUN	one-wooden-cactus	/jɛ-dʒɪn-gɔl.dɑn/
3	4	NUM + CL + NOUN	one-round-bottle	/jɛ-tæn-li.van/
3	5	NUM + CL + NOUN	two-wooden-chair	/dɔ-dʒɪn-sæn.dæl/
4	1	NUM + CL + NOUN	one-wooden-ball	/jɛ-dʒɪn-gɛr.di/
4	2	NUM + CL + NOUN	three-graspable-spoon	/sɛ-ris-kɑ.ʃɔk/
4	3	NUM + CL + NOUN	one-default-ball	/jɛ-jær-gɛr.di/
4	4	NUM + CL + NOUN	one-graspable-bed	/jɛ-ris-bæs.tær/
4	5	NUM + CL + NOUN	one-unique_fish-fish	/jɛ-tup-mɑ.hi/
5	1	NUM + CL + NOUN	three-wooden-plate	/sɛ-dʒɪn-dɔ.ri/
5	2	NUM + CL + NOUN	two-unique_fish-fish	/dɔ-tup-mɑ.hi/
5	3	NUM + CL + NOUN	one-unique_fish-bottle	/jɛ-tup-li.van/
5	4	NUM + CL + NOUN	one-default-bowl	/jɛ-jær-kɑ.sɛ/
5	5	NUM + CL + NOUN	one-default-cactus	/jɛ-jær-gɔl.dɑn/

Phase 5 – Generalization Task:

Participants were tasked with determining the correct classifier for novel set of nouns that they were not trained on.

- there are 18 test items
  - 13 nouns; each noun is presented once, except **sled**, **clothes pin**, and **balloon** (presented twice, once with regular category classifier, and once with default classifier), and **fish** (presented three times, so that unique classifier can show up once with each numeral). Note that fish is not a novel stimulus, but since it is the only noun that appears with the unique classifier, it is also included in the generalization phase
- participants are asked to look at the screen while an image is displayed and a sentence in LabPersian is presented auditorily. The LabPersian is made up a sentence frame in the form of *Is it X or Y*, where X and Y are LabPersian nouns. The order of target and foil was counterbalanced across stimuli items
- target and foil items different only in terms of the classifier
- participants are asked to press the key corresponding to their choice
- test stimuli are presented in a random order
- since the goal is to see if participants can generalize, their scores are based on a single trial

Numeral	Classifier	Noun	Target English	Target LabPersian	Foil English	Foil LabPersian	Question English	Question LabPersian
/jɛ/ '1'	/tæn/ 'round'	/næ.vɑr/ 'record'	one-round-record	/jɛ-tæn-næ.vɑr/	one-default-record	/jɛ-jær-næ.vɑr/	Is this **one-round-record** or one-default-record?	ɑjɑ in **jɛ-tæn-næ.vɑr** æst jɑ jɛ-jær-næ.vɑr? (whether this one-round-record is or one-default-record)
/dɔ/ '2'	/tæn/ 'round'	/hæl.kɛ/ 'swimming tube'	two-round-swimmingtube	/dɔ-tæn-hæl.kɛ/	two-graspable-tube	/dɔ-ris-hæl.kɛ/	Is this two-graspable-swimmingtube or **two-round-swimmingtube**?	ɑjɑ in dɔ-ris-hæl.kɛ æst jɑ **dɔ-tæn-hæl.kɛ**? (whether this two-graspable-swimmingtube is or two-round-swimmingtube)
/sɛ/ '3'	/tæn/ 'round'	/bɑ.dæk/ 'balloon'	three-round-balloon	/sɛ-tæn-bɑ.dæk/	three-unique_fish-balloon	/sɛ-tup-bɑ.dæk/	Is this **three-round-balloon** or three-unique_fish-balloon?	ɑjɑ in **sɛ-tæn-bɑ.dæk** æst jɑ sɛ-tup-bɑ.dæk? (whether this three-round-balloon is or three-unique_fish-balloon)
/jɛ/ '1'	/dʒɪn/ 'wooden'	/gæn.dʒɛ/ 'cabinet'	one-wooden-cabinet	/jɛ-dʒɪn-gæn.dʒɛ/	one-graspable-cabinet	/jɛ-ris-gæn.dʒɛ/	Is this one-graspable-cabinet or **one-wooden-cabinet**?	ɑjɑ in jɛ-ris-gæn.dʒɛ æst jɑ **jɛ-dʒɪn-gæn.dʒɛ**? (whether this one-graspable-cabinet is or one-wooden-cabinet)
/dɔ/ '2'	/dʒɪn/ 'wooden'	/mi.lɛ/ 'knitting needles'	two-wooden-knittingneedles	/dɔ-dʒɪn-mi.lɛ/	two-default-knittingneedles	/dɔ-jær-mi.lɛ/	Is this a **two-wooden-knittingneedles** or a two-default-knittingneedles?	ɑjɑ in **dɔ-dʒɪn-mi.lɛ** æst jɑ dɔ-jær-mi.lɛ? (whether this two-wooden-knittingneedle is or two-default-knittingneedle)
/sɛ/ '3'	/dʒɪn/ 'wooden'	/gɑ.ri/ 'sled'	three-wooden-sled	/sɛ-dʒɪn-gɑ.ri/	three-round-sled	/sɛ-tæn-gɑ.ri/	Is this three-round-sled or **three-wooden-sled**?	ɑjɑ in sɛ-tæn-gɑ.ri æst jɑ **sɛ-dʒɪn-gɑ.ri**? (whether this three-round-sled is or three-wooden-sled)

/jɛ/ '1'	/ris/ 'graspable'	/fɑ.nus/ 'flashlight'	one-graspable-flashlight	/jɛ-ris-fɑ.nus/	one-wooden-flashlight	/jɛ-dʒɪn-fɑ.nus/	Is this **one-graspable-flashlight** or one-wooden-flashlight?	aja in **jɛ-ris-fɑ.nus** æst ja jɛ-dʒɪn-fɑ.nus? (whether this one-graspable-flashlight is or one-wooden-flashlight)
/dɔ/ '2'	/ris/ 'graspable'	/næ.mæk/ 'salt/pepper shaker'	two-graspable-saltshaker	/dɔ-ris-næ.mæk/	two-unique_fish-saltshaker	/dɔ-tup-næ.mæk/	Is this two-unique_fish-saltshaker or **two-graspable-saltshaker**?	aja in dɔ-tup-næ.mæk æst ja **dɔ-ris-næ.mæk**? (whether this two-unique_fish-saltshaker is or two-graspable-saltshaker)
/sɛ/ '3'	/ris/ 'graspable'	clothes pin /gi.rɛ/	three-graspable-clothespin	/sɛ-ris-gi.rɛ/	three-default-clothespin	/sɛ-jær-gi.rɛ/	Is this **three-graspable-clothespin** or three-default-clothespin?	aja in **sɛ-ris-gi.rɛ** æst ja sɛ-jær-gi.rɛ? (whether this three-graspable-clothespin is or three-default-clothespin)
/jɛ/ '1'	/tup/ 'unique_fish'	/mɑ.hi/ 'fish'	one-unique_fish-fish	/jɛ-tup-mɑ.hi/	one-round-fish	/jɛ-tæn-mɑ.hi/	Is this one-round-fish or **one-unique_fish-fish**?	aja in jɛ-tæn-mɑ.hi æst ja **jɛ-tup-mɑ.hi**? (whether this one-round-fish is or one-unique_fish-fish)
/dɔ/ '2'	/tup/ 'unique_fish'	/mɑ.hi/ 'fish'	two-unique_fish-fish	/dɔ-tup-mɑ.hi/	two-wooden-fish	/dɔ-dʒɪn-mɑ.hi/	Is this **two-unique_fish-fish** or two-wooden-fish?	aja in **dɔ-tup-mɑ.hi** æst ja dɔ-dʒɪn-mɑ.hi? (whether this two-unique_fish-fish is or two-wooden-fish)
/sɛ/ '3'	/tup/ 'unique_fish'	/mɑ.hi/ 'fish'	three-unique_fish-fish	/sɛ-tup-mɑ.hi/	three-default-fish	/sɛ-jær-mɑ.hi/	Is this three-default-fish or **three-unique_fish-fish**?	aja in sɛ-jær-mɑ.hi ja **sɛ-tup-mɑ.hi**? (whether this three-default-fish is or three-unique_fish-fish)
/jɛ/ '1'	/jær/ 'default' (repeated)	/gɑ.ri/ 'sled'	one-default-sled	/jɛ-jær-gɑ.ri/	one-graspable-sled	/jɛ-ris-gɑ.ri/	Is this **one-default-sled** or one-graspable-sled?	aja in **jɛ-jær-gɑ.ri** æst ja jɛ-ris-gɑ.ri? (whether this one-default-sled is or one-graspable-sled)
/dɔ/ '2'	/jær/ 'default' (repeated)	/gi.rɛ/ 'clothes pin'	two-default-clothespin	/dɔ-jær-gi.rɛ/	two-round-clothespin	/dɔ-tæn-gi.rɛ/	Is this two-round-clothespin or **two-default-clothespin**?	aja in dɔ-tæn-gi.rɛ æst ja **dɔ-jær-gi.rɛ**? (whether this two-round-clothespin is or two-default-clothespin)
/sɛ/ '3'	/jær/ 'default' (repeated)	/bɑ.dæk/ 'balloon'	three-default-balloon	/sɛ-jær-bɑ.dæk/	three-wooden-balloon	/sɛ-dʒɪn-bɑ.dæk/	Is this **three-default-balloon** or three-wooden-balloon?	aja in **sɛ-jær-bɑ.dæk** æst ja sɛ-dʒɪn-bɑ.dæk? (whether this three-default-balloon is or three-wooden-balloon)
/jɛ/ '1'	/jær/ 'default'	/tæ.nur/ 'stove'	one-default-stove	/jɛ-jær-tæ.nur/	one-round-stove	/jɛ-tæn-tæ.nur/	Is this one-graspable-stove or **one-default-stove**?	aja in jɛ-ris-tæ.nur æst ja **jɛ-jær-tæ.nur**? (whether this one-graspable-stove is or one-default-stove)
/dɔ/ '2'	/jær/ 'default'	/tæk.tɛ/ 'snowboard'	two-default-snowboard	/dɔ-jær-tæk.tɛ/	two-unique_fish-snowboard	/dɔ-ris-tæk.tɛ/	Is this **two-default-snowboard** or two-unique_fish-snowboard?	aja in **dɔ-jær-tæk.tɛ** æst ja dɔ-tup-tæk.tɛ? (whether this two-default-fish is two-unique_fish-snowboard)
/sɛ/ '3'	/jær/ 'default'	/bɑ.lɛʃ/ 'pillow'	three-default-pillow	/sɛ-jær-bɑ.lɛʃ/	three-round-pillow	/sɛ-tup-bɑ.lɛʃ/	Is this three-round-pillow or **three-default-pillow**?	aja in sɛ-tæn-bɑ.lɛʃ æst ja **sɛ-jær-bɑ.lɛʃ**? (whether this three-round-pillow is or three-default-pillow)