Appendix 1: sentence completion tasks.

**[ld] consonant cluster**

**1. Sealed**

She wrote her comments and suggestions, placed them in an envelope and then \_\_\_\_\_\_\_ it (20 syl)

[seal kneel work]

Mary put everything back in her room quickly, closed the door and \_\_\_\_\_\_\_ it with tape. (20 syl)

[call send seal]

**2. Filled**

Johnny had a terrible headache, so he \_\_\_\_\_\_\_ a glass with water and took two aspirins. (21 syl)

 [fill write type]

In 1950, all computers in existence were huge. Each one \_\_\_\_\_\_\_ a whole room! (21 syl)

[send fill smell]

**3. Killed**

Surprisingly, last year human diseases \_\_\_\_\_\_\_ an exceptional number of lions. (22 syl)

[lose yell kill]

Last summer in Colorado, the West Nile virus \_\_\_\_\_\_\_ more than 100 thousand birds (20 syl)

[call crash kill]

**4. Yelled**

Since they were losing the game, coach Jason was mad and \_\_\_\_\_\_\_ angrily at his team. (20 syl)

[mail write yell]

Dylan was desperately looking for his wife, so he opened the window and \_\_\_\_\_\_\_ “Anne!!” (22 syl)

[run sneeze yell]

**5. Rolled**

Well, his car slipped on the wet road, and then it \_\_\_\_\_\_\_ over and crashed into a ditch (20 syl)

[roll drive feel]

John is helpful but never listens. I asked him to clean the carpet, but he \_\_\_\_\_\_\_ it up instead. (24 syl)

[drive feed roll]

**Monomorphemes [ld]**

**1. build**

The city also plans to upgrade the aquarium and \_\_\_\_\_\_\_ a new park next year. (20 syl)

[build call field]

The property is owned by developers planning to \_\_\_\_\_\_\_ a casino resort (21 syl)

[touch build hear]

**2. Wild**

One-fourth of seafood harvested from the \_\_\_\_\_\_\_ is not used for human consumption (20 syl)

[wild book sleep ]

She is proud of herself for doing something that was on the \_\_\_\_\_\_\_ and crazy side. (20 syl)

 [book wild shirt]

**3. Field**

If student athletes don’t do well in their tests, they can’t go to their basketball court or football \_\_\_\_\_\_\_.

[field lab work] (24 syl)

Gender equality has long been an issue in the \_\_\_\_\_\_\_ of education (20 syl)

[man cup field]

**4. Mild**

Go to a hospital if you have severe symptoms, but stay home if your symptoms are \_\_\_\_\_\_\_ (22 syl)

[nice than mild]

Many economists thought that the impact from the US crisis would be globally \_\_\_\_\_\_\_ (23 syl)

[car mild fresh]

**5. Fold**

Usually when I'm done painting, I \_\_\_\_\_\_\_ a paper towel and wipe off the excess paint. (22 syl)

[fold call eat]

First, slice one onion and then \_\_\_\_\_\_\_ a sheet of foil in half to put the slices on it. (21 syl)

[buy fold smell]

**[nd] consonant cluster**

**1. Joined**

I wanted to get closer to her, so I even \_\_\_\_\_\_\_\_ a sculpture club to learn her craft (22 syl)

[eat see join]

We invited faculty to be a part of the spiritual life group and everyone \_\_\_\_\_\_\_\_. (22 syl)

[throw see join]

**2. Cleaned**

John was in charge of building administration. He checked the locks nightly and \_\_\_\_\_\_\_\_ everything.

[clean train cut] (23 syl)

When the factory found out about the water pollution, they \_\_\_\_\_\_\_\_ up the river. (20 syl)

[kill clean throw]

**3. Trained**

As many European basketball players, Ivan left his country and \_\_\_\_\_\_\_\_ in the USA. (23 syl)

[train buy catch]

John said that to prepare for his fight last September, he \_\_\_\_\_\_\_\_ everyday for months. (20 syl)

[fall train have]

**4. Ruined**

I had a beautiful restaurant but yesterday the police \_\_\_\_\_\_\_\_ it while chasing a suspect. (24 syl)

[buy eat ruin]

TheKansas team had a very bad coach, who actually \_\_\_\_\_\_\_\_ a whole season of games. (21 syl)

 [write ruin call]

**5. Gained**

Last month, I stopped eating healthy food; I started eating doughnuts and \_\_\_\_\_\_\_\_ about ten pounds. (21 syl) [gain drink train]

Pakistan was created when India \_\_\_\_\_\_\_\_ its independence in 1947. (22 syl)

[house gain call]

**Monomorphemes [nd]**

**1. Pound**

Few people know that a distance runner needs more protein per \_\_\_\_\_\_\_\_ of body weight than a weight lifter. (24 syl) [pound fork work]

He was taken into custody after a search of his car showed half a \_\_\_\_\_\_\_\_ of drugs (22 syl)

[book pound field]

**2. Send**

“Well, everything is by phone, and I have no idea where to \_\_\_\_\_\_\_\_ a complaint letter” (22 syl)

[buy fry send]

If you want a paper version of this article, please \_\_\_\_\_\_\_\_ a self-addressed, stamped envelope. (22 syl).

 [blend catch send]

**3. Blend**

If you want a good sweater, only buy one made of wool or cashmere, or a \_\_\_\_\_\_\_\_ of both. (22 syl).

[team pound blend]

What makes for a good dessert? I believe, a \_\_\_\_\_\_\_\_ of anything chocolate and peanut butter (23 syl)

 [blend leaf cold]

**4. Pond**

My dad and I were driving, and suddenly he stopped the car and pointed at a nice frozen \_\_\_\_\_\_\_\_ (24 syl) [pond sky truck]

They installed a waterfall and also, they used pretty flowers to cover the \_\_\_\_\_\_\_\_ (21 syl)

[fall pond cry]

**5. Blind**

My sister always wanted to become a child psychologist for the deaf and \_\_\_\_\_\_\_\_. (21 syl)

[soon blind home]

A crisis exists in the US because of the shortage of teachers for students who are \_\_\_\_\_\_\_\_. (24 syl)

[more draft blind]

**Past forms st**

**1. Passed**

Sacred lands have been protected for 10 years now thanks to the law that the Supreme Court \_\_\_\_\_\_\_\_. (22 syl) [buy pass say]

The regulations in his basketball team are strict, and he \_\_\_\_\_\_\_\_ a drug test just yesterday. (23 syl)

 [pass sleep type]

**2. Pressed**

Paul refused to attend the meeting and \_\_\_\_\_\_\_\_ other people to stay away, too. (20 syl)

 [above press know]

Jim was in the hospital, and whenever he felt worse, he just \_\_\_\_\_\_\_\_ a button for help. (22 syl)

 [rent throw press]

**3. Kissed**

This very young student said that the first time she \_\_\_\_\_\_\_\_ a guy, she thought it was disgusting. (21 syl) [kiss write call]

I was driving through the town with my father and he showed me where he first \_\_\_\_\_\_\_\_ a girl. (21 syl)

 [fall kiss fly]

**4. Blessed**

She hugged everyone as if preparing for a long journey, and she \_\_\_\_\_\_\_\_ us over and over (24 syl).

 [buy bless close]

The nun prayed for all of us and \_\_\_\_\_\_\_\_ all of us, especially the sickly ones. (20 syl)

[bless see pass]

**5. Missed**

My dad was a wonderful father, he never \_\_\_\_\_\_\_\_ a soccer game or a hockey game. (22 syl).

 [eat write miss]

I ended up in the emergency room with salmonella, and \_\_\_\_\_\_\_\_ a whole week of work. (24 syl)

 [see clap miss]

**Monomorphemes [st]**

**1. Test**

She said that only one in three fourth graders here can pass the state's basic math \_\_\_\_\_\_\_\_ (20 syl)

 [room test card]

Based on the research, the student or team should plan, build, and \_\_\_\_\_\_\_\_ a working model of the system (24 syl) [fine cry test]

**2. List**

They told me to drink plenty of water and also gave me a \_\_\_\_\_\_\_\_ of healthful foods to eat. (24 syl)

 [list dirt help]

I never liked my high school teacher. Once, she gave us a \_\_\_\_\_\_\_\_ of a hundred words to memorize. (24 syl) [rug sea list]

**3. Dust**

Don’t apply solvent, just use a cloth moistened with water to clean off the \_\_\_\_\_\_\_\_ after sanding (23 syl) [hole dust air]

Most big cities are incredibly polluted because factories contribute to smog and \_\_\_\_\_\_\_\_. (24 syl)

 [car peace dust]

**4. Beast**

He is big, and his feet are huge. He is like a creature from mythology, like half man, half \_\_\_\_\_\_\_\_.

(24 syl) [house beast book]

The story makes no mention of the hero, though it suggests that someone killed the \_\_\_\_\_\_\_\_. (21 syl) [rock paint beast]

**5. Nest**

The old lady found several tiny slips of paper in a bird \_\_\_\_\_\_\_\_ in her backyard. (21 syl)

 [rust tribe nest]

Her heart was filled with joy. She loved looking at the baby bird in the artfully hidden \_\_\_\_\_\_\_\_ (23 syl) [nest old frame]

**SINGLE RIGHT-EDGE CONSONANT TOKENS IN PAST TENSE**

**1. Played**

On our soccer team, we like challenges, so last weekend we \_\_\_\_\_\_\_\_\_\_\_ against the best team in the city. (25 syl) [play want try]

Yesterday, we cleaned the playground, and today in the morning, my kids \_\_\_\_\_\_\_\_\_\_\_ in the sandbox for hours. (25 syl) [cook sell play]

**2. Fried**

My mom cooked all day long. For lunch, she made a salad, and then she \_\_\_\_\_\_\_\_\_\_\_ a chicken. (20 syl)

 [shift fry run]

I was very hungry this morning but didn’t have much time, so I just \_\_\_\_\_\_\_\_\_\_\_ an egg and ate it. (23 syl) [fry know cut]

**3. Tried**

At the picnic there were 5 types of pie but I couldn’t choose just one, so I \_\_\_\_\_\_\_\_\_\_\_ a piece of each. (23 syl) [scan try write]

After looking at the options at their health club, Camille and Kent \_\_\_\_\_\_\_\_\_\_\_ a fitness yoga class. (23 syl) [make try cut]

**4. Paid**

Last weekend, Allan was caught by the police driving while drunk. He \_\_\_\_\_\_\_\_\_\_\_ a $1,000 fine.

(23 syl) [write call pay]

John always cheats. Yesterday, for his math exam, he \_\_\_\_\_\_\_\_\_\_\_ a friend to take the exam for him.

(23 syl) [pull pay lift]

**5. Cried**

Mary was talking on the phone and was told that her father had died. She got off the phone and \_\_\_\_\_\_\_\_\_\_\_. (24 syl)

[cry write roll]

I'm not emotional at all, but I admit that when my brother got married, I \_\_\_\_\_\_\_\_\_\_\_. (22 syl)

 [mark cry run]

**6. Stayed**

Stan flew back from vacation in Mexico on Sunday, and he \_\_\_\_\_\_\_\_\_\_\_ at Rob's Sunday night. (20 syl) [drive stay cry]

Because of the snowstorm last week, schools were closed but only some of the children \_\_\_\_\_\_\_\_\_\_\_ at home. (22 syl) [stay buy go]

Appendix 2. Monomorphemes and simple past forms (numbers indicate natural logarithm)

|  |  |  |
| --- | --- | --- |
|  [ld] | [nd] | [st] |
| Past form | Monomorpheme | Past form | Monomorpheme | Past form | Monomorpheme |
| filled (10.28) | build (10.52) | joined (10.15) | send (10.42) | passed (10.65) | test (11) |
| killed (10.75) | field (11.2) | trained (9.6) | blind (9.48) | missed (9.74) | list (10.78) |
| rolled (9.43) | wild (10.21) | gained (9.3) | pound (9.03) | pressed (9.3) | dust (9.7) |
| yelled (8.6) | mild (8.78) | cleaned (8.41) | blend (8.7) | kissed (8.72) | priest (9.14) |
| sealed (8.4) | bald (8.14) | ruined (8.25) | pond (8.7) | blessed (8.47) | nest (8.56) |
| *p* = 0.6 | *p* = 0.74 | *p* = 0.36 |

Appendix 3. Individual data

From left to right, the information includes: participant ID, age of arrival in the US (AoA), length of residence (LoR), combined proficiency score, suppliance of past tense in oral responses (Past Oral), suppliance of consonant clusters in monomorphemes (Mono oral), and suppliance of simple past tense in written responses (Past Written), and monomorphemes in written responses (Mono written). Monomorpheme data are provided as a point of comparison with the simple past tense data. Participants are listed in order of highest proficiency score to lowest. Scores in shaded cells indicate that a given score falls within the score range obtained by the native speaker group and thus implies native-like performance.

*L1 Japanese Group Data*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Participant number | AoA | LoR | Proficiency | Past Oral | Mono oral | Past Written | Mono Written |
| 596 | 26 | 24 | 98 | 36 | 100 | 93 | 100 |
| 777 | 28 | 21 | 90 | 100 | 100 | 100 | 100 |
| 729 | 27 | 13 | 92 | 93 | 100 | 100 | 100 |
| 1708 | 27 | 11 | 85 | 85 | 100 | 100 | 100 |
| 761 | 19 | 11 | 84 | 100 | 100 | 100 | 100 |
| 1756 | 21 | 13 | 80 | 92 | 67 | 100 | 100 |
| 205 | 28 | 1;4 | 78 | 100 | 100 | 100 | 100 |
| 494 | 29 | 5 | 77 | 90 | 100 | 100 | 100 |
| 798 | 19 | 9 | 77 | 92 | 89 | 79 | 100 |
| 785 | 19 | 9 | 76 | 38 | 100 | 71 | 100 |
| 891 | 27 | 1;4 | 76 | 92 | 100 | 79 | 100 |

*L1 Spanish Group Data*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Participant number | Dialect | AoA | LoR | Prof | Past Oral | Mono oral | Past Written | Mono Written |
| 747 | Colombia | 27 | 5;4 | 98 | 64 | 50 | 93 | 100 |
| 962 | Mexico | 24 | 17 | 93 | 93 | 60 | 100 | 100 |
| 1182 | Colombia | 24 | 4;9 | 93 | 86 | 40 | 100 | 100 |
| 293 | Chile | 25 | 8 | 91 | 100 | 80 | 100 | 100 |
| 862 | Spain | 32 | 10 | 91 | 100 | 78 | 100 | 100 |
| 265 | Chile | 26 | 1;6 | 89 | 46 | 100 | 100 | 100 |
| 612 | Chile | 28 | 8 | 88 | 50 | 80 | 100 | 100 |
| 782 | Spain | 27 | 14 | 84 | 100 | 100 | 100 | 100 |
| 595 | Chile | 32 | 2;4 | 84 | 57 | 100 | 100 | 100 |
| 1785 | Colombia | 36 | 4 | 82 | 86 | 90 | 93 | 100 |
| 1007 | Colombia | 30 | 4;6 | 79 | 50 | 40 | 86 | 100 |
| 1966 | Chile | 42 | 8;4 | 79 | 100 | 90 | 92 | 100 |
| 1351 | Spain | 25 | 6 | 77 | 71 | 40 | 100 | 100 |

*L1 Mandarin Group Data*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Participant number | AoA | LoR | Prof | Past Oral | Mono oral | Past Written | Mono Written |
| 688 | 25 | 1;4 | 87 | 86 | 78 | 100 | 100 |
| 731 | 22 | 1;6 | 86 | 86 | 100 | 100 | 100 |
| 247 | 24 | 1;4 | 85 | 86 | 100 | 86 | 100 |
| 464 | 22 | 3;4 | 82 | 62 | 80 | 100 | 100 |
| 869 | 26 | 6;6 | 81 | 85 | 70 | 93 | 100 |
| 1045 | 17 | 7 | 81 | 79 | 100 | 100 | 100 |
| 689 | 23 | 1;4 | 80 | 93 | 100 | 100 | 100 |
| 1777 | 23 | 1;6 | 79 | 57 | 100 | 100 | 100 |
| 986 | 20 | 3;4 | 77 | 64 | 100 | 93 | 100 |
| 863 | 22 | 2;6 | 77 | 38 | 60 | 100 | 100 |
| 865 | 23 | 1;4 | 76 | 86 | 80 | 93 | 100 |
| 1792 | 29 | 1;7 | 76 | 57 | 70 | 100 | 100 |
| 1846 | 23 | 2;6 | 75 | 71 | 50 | 93 | 100 |
| 1666 | 25 | 9 | 75 | 64 | 67 | 100 | 100 |
| 715 | 26 | 1;4 | 74 | 57 | 78 | 86 | 100 |