

APPENDIX 1

THE DATA OF LANGUAGE ACQUISITION BY THREE TWO-YEAR-OLD CHILDREN

1.1 THE FIRST SUBJECT (FAIZAH PUTRI KIRANA; 2.3)

No	Actual word	Actual Word (IPA)	Intended Word	English Translation
	1 st Subject	1 st Subject		
1	Tucing	/tu:tfiŋ/	/ku:tfiŋ/	cat
2	Odo?	/ɔdɔʔ/	/kɔdɔʔ/	frog
3	Aga	/ʌga/	/tʌŋga/	stairs
4	Abu?	/abuʔ/	/sʌbuʔ/	belt
5	Edung	/ənduŋ/	/mənduŋ/	cloud
6	Tulu	/tu:lu/	/tu:run/	go down
7	Dawung	/dʌwuŋ/	/dʌun/	leaf
8	Opi	/ɔpi/	/tɔpi/	hat
9	Saisa	/sai:sa/	/fai:za/	faizah
10	Tida	/ti:daʔ/	/bə:dak/	powder
11	Ika	/i:ka/	/i:kan/	fish
12	Pupu	[pu:pu]	/Ku:pu/	butterfly
13	Se?Eda	/seʔəda/	/sepæda/	bicycle
14	Abut	/ʌbut/	/rambut/	hair
15	Epa	/ɛpa:/	/kæpaŋ/	plait
16	Paja	/padʒa/	/pandʒaŋ/	long
17	Undu	/undu/	/gundul/	bald
18	Eici	/eitʃi/	/kəlindʒi/	rabbit
19	Nayis	/naji:s/	/naŋis/	cry
20	Oti	/ɔti/	/rɔti/	bread
21	Seangka	/sæŋka/	/səmaŋka/	watermelon
22	Otel	/otel/	/dɔkter/	doctor
23	Ajing	/adʒi:ŋ/	/andʒi:ŋ/	dog
24	Jiji	/dʒidʒi/	/gigi/	tooth
25	Angan	/aŋan/	/taŋan/	hand
26	Uping	/u:piŋ/	/ku:piŋ/	ear
27	Owa?	/ɔwaʔ/	/ketʃɔwaʔ/	cockroach
28	Uyung	/ujuŋ/	/bu:ruŋ/	bird
29	Umbang	/umbaŋ/	/kumbaŋ/	beetle

30	Bapung	/bapu:ŋ/	/Mbakuŋ/	grandfather
31	Empong	/empɔŋ/	/dʒempol/	tumb
32	Akit	/ʌkit/	/sʌkit/	sick
33	Ebong	/əboŋ/	/kəceboŋ/	tadpole
34	Pen	/pen/	/pel/	mop
35	Apa	/ʌpa/	/sʌmpah/	rubbish
36	Entas	/entʌs/	/tʌs/	bag
37	Iti	/iti/	/ini/	this
38	Ita	/ita/	/pita/	ribbon
39	Alang	/alaŋ/	/dʒalan/	street
40	Aplop	/ʌplop/	/ʌmplop/	envelope
41	Motong	/motoŋ/	/motor/	motor
42	Empong	/əmponŋ/	/telepon/	phone
43	Top	/top/	/stop/	stop
44	Oyang	/ɔjaŋ/	/koran/	newspaper
45	Eja	/edʒa/	/kərdʒa/	work
46	Ayi	/aji/	/lari/	run
47	Ola	/ɔ:la/	/bɔ:la/	ball
48	Unda	/undʌ/	/ku:dʌ/	horse
49	Eyu?	/ɜjuʔ/	/dʒeruʔ/	orange
50	Eyong	/ejɔŋ/	/təlur/	egg
51	Utang	/utaŋ/	/hutan/	jungle
52	Ucaci	/uʈʃatʃi:/	/kurtʃatʃi/	dwarf
53	Endo?	/endoʔ/	/sendoʔ/	spoon
54	Apeng	/apɔŋ/	/apəl/	apple
55	Teyus	/tɛjus/	/tərus/	continue
56	Uwa	/uwa/	/ku:ra/	turtle
57	Uwang	/uwaŋ/	/bu:lan/	moon
58	Eying	/ejɪŋ/	/kəriŋ/	dry
59	Esi	/æsi:/	/bərsih/	clean
60	Eput	/emptu/	/siputu/	snail
61	Onyet	/o:njet/	/mo:njet/	monkey
62	Ahsa	/ʌsa/	/aŋsa/	goose
63	Botong	/botɔŋ/	/botol/	bottle
64	Atu	/ʌtu/	/sʌtu/	one
65	Ua	/u:wa/	/du:wa/	two
66	Ema	/əma/	/li:ma/	five
67	Enan	/enan/	/ənam/	six
68	Apan	/ʌpan/	/dəlapan/	eight
69	Puwu	/puwu/	/səpuluh/	ten
70	Eya	/eja/	/merʌh/	red
71	Uning	/uniŋ/	/ku:niŋ/	yellow
72	Ilu	/i:lu/	/bi:ru/	blue
73	Unu	/unu:/	/uŋu/	purple

74	Wintam	/wintam/	/hi:tam/	black
75	Enti	/ænti:/	/putih/	white
76	Colat	/tʃo:lat/	/tʃoklat/	chocolate
77	Ewas	/ɛwas/	/əmas/	gold
78	Oyen	/ojen/	/ɔranje/	orange
79	Ata	/ʌta/	/mʌta/	eye
80	Entong	/entɔŋ/	/ekor/	tail
81	Aca	/ʌtʃa/	/mʌcan/	tiger
82	Inya	/inja/	/siŋa/	lion
83	Aja	/adʒa/	/gadʒa/	elephant
84	Uwang	/uwaŋ/	/u:lar/	snake
85	Enta	/ɛnta/	/ɔnta/	camel
86	Doiya	/doi:ja/	/gorila/	gorilla
87	Anda	/ʌnda/	/panda/	panda
88	Beyang	/bəjaŋ/	/bəruaŋ/	bear
89	Badat	/bʌdat/	/bʌdak/	rhinoceros
90	Tiyala	/ti:jala/	/srigala/	wolf
91	Weba	/wæba/	/zebra/	zebra
92	inya?	/injaʔ/	/minjaʔ/	oil
93	Uwing	/uwi:ŋ/	/guli:ŋ/	bolster
94	Antal	/ʌntal/	/bʌntal/	pillow

1.2 THE SECOND SUBJECT (ANNISA DZIKRO MUFIDAH; 2.0)

No	Actual word	Actual Word (IPA)	Intended Word	English Translation
	2 nd Subject	2 nd Subject		
1	Becal	/bətʃal/	/bəsar/	big
2	Ica?	/itʃaʔ/	/nisaʔ/	nisa
3	Koye?	/kojeʔ/	/koreʔ/	match
4	Doktel	/dɔktəl/	/dɔktər/	doctor
5	Dionte?	/diontæʔ/	/disuntik/	injected
6	Pacal	/patʃal/	/pasar/	market
7	Dambal	/dambal/	/gambar/	picture
8	Cucu	/tʃutʃu/	/susu/	milk
9	Oti	/ɔti/	/rɔti/	bread
10	Abulan	/ʌbulan/	/ambulan/	ambulance
11	Beka	/bæka/	/boneka/	doll
12	Ayangayang	/ʌjaŋ-ajaŋ/	/lajaŋ-lajaŋ/	kites
13	Balu	/balu/	/baru/	new
14	Pacang	/pʌtʃaŋ/	/pʌsaŋ/	install

15	Jelapa	/dʒələpa/	/dʒərəpa/	giraffe
16	Buyung	/bu:jun/	/bu:run/	bird
17	Penggeng	pəŋgeŋ/	/piŋgir/	edge
18	Mobet	/məbet/	/məbil/	car
19	Pecawat	/pətʃawat/	/pəsawat/	plane
20	Motol	/motol/	/motor/	motor
21	Uwa	/uwa/	/dua/	two
22	Keleta	/kələta/	/kərəta/	train
23	Anjeng	/ʌndʒəŋ/	/ʌndʒiŋ/	dog
24	Kambeng	/kambəŋ/	/kambiŋ/	goat
25	Ulal	/u:lʌl/	/u:lʌr/	snake
26	Capi	/tʃapi/	/sapi/	cow
27	Cemot	/tʃəmot/	/səmut/	ant
28	Aket	/aket/	/raket/	racket
29	Dendo?	/dendoʔ/	/sendoʔ/	spoon
30	Tipi	/tipi/	/tivi/	television
31	Pelas	/pelas/	/pəras/	to press
32	Keltas	/keltas/	/kərtas/	paper
33	Kebakalan	/kəbakalan/	/kəbakaran/	fire
34	Kulsi	/kultʃi/	/kursi/	chair
35	Kunin	/kunin/	/kuniŋ/	yellow
36	Bilu	/bilu/	/biru/	blue
37	Mondol	/məndol/	/mundur/	go back
38	Lambot	/lʌmbot/	/rʌmbut/	hair
39	Cama	/tʃama/	/sama/	same
40	Olalaga	/olʌlaga/	/olʌhraga/	sport
41	Cedikit	/tʃədikit/	/sədikit/	little
42	Tidol	/tidul/	/tidur/	sleep
43	Belajal	/bələjal/	/bələjar/	study
44	Pintal	/pintʌl/	/pintʌr/	clever
45	Bobol	/bubul/	/bubur/	porridge
46	Pipi	/pipi/	/fifi/	one's name
47	Mat	/mʌt/	/mʌs/	brother
48	Pait	/pait/	/faiz/	one's name
49	Eman	/eman/	/teman/	friend

1.3 THE THIRD SUBJECT (ADINDA GITA ARAFAH; 2.2)

No	Actual Word	Actual Word (IPA)	Intended Word	English Translation
	3 rd Subject	3 rd Subject		
1	Olang	/ɔlan/	/ɔran/	people
2	Menyilam	/mənjilam/	/mənjiram/	to water
3	Doktel	/dɔktəl/	/dɔktər/	dokter
4	Maca?	/matʃaʔ/	/masaʔ/	cook
5	Pecawat	/pətʃawat/	/pəsawat/	plane
6	Keleta	/kələta/	/kərəta/	train
7	Cendo?	/tʃendoʔ/	/sendoʔ/	spoon
8	Kelepe?	/kələpeʔ/	/kri:pik/	crispy
9	Picang	/pitʃan/	/pisan/	banana
10	Cepeda	/tʃepeda/	/sepeda/	bicycle
11	Motol	/motol/	/motor/	motor
12	Celita	/tʃelita/	/cerita/	story
13	Ican	/itʃan/	/ikan/	fish
14	Balo	/balɔ/	/balɔn/	ball
15	Telol	/təlɔl/	/təlɔr/	egg
16	Jaja	/dzadzɔ/	/gadʒɔ/	elephant
17	Tula	/tula/	/kura/	turtle
18	Monye	/monje/	/monjet/	monyet
19	Bulung	/bulun/	/burun/	bird
20	Cucing	tʃutʃin/	/ku:cin/	kucing
21	Pelahu	/pələhu/	/perahu/	canoe
22	Tuwe	/tue/	/kue/	cake
23	Buwa?	/buwaʔ/	/buat/	to make
24	Cipa?	/tʃipaʔ/	/ʃifa/	sifa
25	Pacal	/pɔtʃal/	/pɔsar/	market
26	Tolan	/tolan/	/koran/	newspaper
27	Tidul	/tidul/	/tidur/	to sleep
28	Pana	/pana/	/pɔnas/	hot
29	Cakit	/tʃakit/	/sakit/	sick
30	Cini	/tʃini/	/sini/	here
31	Tencola?	/təntʃɔlaʔ/	/təŋkɔraʔ/	bone
32	Nole	/nole/	/nu:lis/	to write
33	Mala	/mala/	/marah/	angry
34	Anggol	/aŋgol/	/aŋgur/	grape
35	Tigi	/tigi/	/tiŋgi/	tall
36	Ayam	/ɔjam/	/ɔjam/	chicken
37	Kelopo?	/kelopoʔ/	/kerupuk/	cracker
38	Telbang	/telban/	/terban/	to fly

39	Lali	/lali/	/lari/	to run
40	Campol	/tʃampol/	/tʃampur/	to mix
41	Solga	/solga/	/surga/	heaven
42	Kelbao	/kelbo/	/kerbau/	buffalo
43	Kulci	/kultʃi/	/kelinci/	rabbit
44	Andinal	/andinal/	/ardina/	ardina
45	Nelaka	/nelaka/	/neraka/	hell
46	Mecin	/metʃin/	/mesin/	machine
47	Calapan	/tʃalapan/	/sɔrapan/	to have breakfast
48	Telompet	/təlompɛt/	/terompɛt/	trumpet
49	Lame	/lame/	/ramai/	noisy
50	Atu	/atu/	/aku/	I

APPENDIX 2

CLASSIFICATION OF PHONOLOGICAL PROCESSES

2.1 THE FIRST SUBJECT

SUBSTITUTION PROCESS-FRONTING			
Actual Word (Subject Words)	Intended Word	English Translation	Explanation
/bʌdat/	/bʌdak/	rhinoceros	
/tu:tʃɪŋ/	/ku:tʃɪŋ/	cat	velar /k/ replaced by /t/
/unu:/	/uŋu/	purple	velar /ŋ/ replaced by /n/
/doi:jʌ/	/gorilla/	gorilla	velar /g/ replaced by /d/
SUBSTITUTION PROCESS-GLIDING			
/tɛjus/	/tərus/	continue	
/bəjaŋ/	/bəruaŋ/	bear	sound /j/ is replacing liquid /r/
/u:jʊŋ/	/bu:ruŋ/	bird	
/ɔjaŋ/	/koran/	newspaper	
/ejoŋ/	/təlur/	egg	sound /j/ is replacing liquid /l/
/doi:ja/	/gorila/	gorilla	
/uwi:ŋ/	/guli:ŋ/	pillow	sound /w/ is replacing liquid /l/
/u:waŋ/	/u:lar/	snake	
ASSIMILATORY PROCESS			
CONSONANT HARMONY-VELAR ASSIMILATION			
/apəŋ/	/apəl/	apple	velar /ŋ/ is replacing alveolar /l/
/botoŋ/	/botol/	bottle	
/alaŋ/	/dʒalan/	street	velar /ŋ/ is replacing alveolar /n/
/əmpoŋ/	/telepon/	phone	
/ɔjaŋ/	/koran/	newspaper	
/utaŋ/	/hutan/	jungle	
/motoŋ/	/motor/	motor	velar /ŋ/ is replacing alveolar /r/
/uwaŋ/	/u:lar/	snake	
ASSIMILATORY PROCESS			
CONSONANT HARMONY-DENASALIZATION			
/padʒa/	/pandʒaŋ /	long	nasal /n/ is denasalized
/adʒi:ŋ/	/andʒi:ŋ/	dog	
/ʌploʃ/	/ʌmploʃ/	envelope	nasal /m/ is denasalized
/sʌpa/	/sʌmpa/	rubbish	

/ʌbut/	/rambut/	hair	
SYLLABLE STRUCTURE PROCESS-CLUSTER REDUCTION			
/tɒp/	/stɒp/	stop	/st/ reduced into /t/
/wæba/	/zebra/	zebra	/br/ reduced into /r/
/tʃo:lat/	/tʃoklat/	chocolate	/kl/ reduced into /l/

SYLLABLE STRUCTURE PROCESS					
DELETION OF UNSTRESSED SYLLABLES					
/puwu/	/səpuluh/	ten	/sə/ syllable is deleted		
/ʌpan/	/dələpan/	eight	/dəl/ syllable is deleted		
/undu/	/gundul/	bald	/g/ and /l/ syllable is deleted		
/sæŋka/	/sæmʌŋka/	watermelon	/mʌ/ syllable is deleted		
/ɛpa:/	/kəpaŋ/	plait	/k/ and /ŋ/ syllable is deleted		
/otel/	/dɔktər/	doctor	/r/ and /k/ syllable is deleted		
/əboŋ/	kəceboŋ/	tadpole	/kəc/ syllable is deleted		
/əpoŋ/	/telepoŋ/	phone	/tel/ syllable is deleted		
/æsi:/	/bərsih/	clean	/b/,/r/,/h/ syllable is deleted		
/ojen/	/ɔranje/	orange	/ran/ syllable is deleted		
SYLLABLE STRUCTURE PROCESS-DELETION OF REDUPLICATION					
[pu:pu]	/ku:pu/	butterfly	/pu/ syllable is repeated		
THE OTHER PHONOLOGICAL PROCESS					
SUBSTITUTION PROCESS OF STOP					
/dʒidʒi/	/gigi/	tooth	Stop consonant /g/ is substituted by affricative /dʒ/		
SYLLABLE STRUCTURE PROCESS					
DELETION OF INITIAL CONSONANT					
Actual Word	Intended Word	English	Actual Word	Intended Word	English
/abuʔ/	/sʌbuʔ/	belt	/ita/	/pita/	ribbon
/ənduŋ/	/mənduŋ/	cloud	/o:njet/	/mo:njet/	monkey
/ɔpi/	/tɔpi/	cap	/ʌtu/	/sʌtu/	one
/ɔti/	/rɔti/	bread	/u:wa/	/du:wa/	two
/u:piŋ/	/ku:piŋ/	ear	/u:niŋ/	/ku:niŋ/	yellow
/umban/	/kumban/	bettle	/adʒa/	/gadʒa/	elephant
/ʌkit/	/sʌkit/	sick	/ʌta/	/mʌta/	eye
/utan/	/hutan/	jungle	/edʒa/	/kedʒa/	work
/injaʔ/	/minjaʔ/	oil	/ʌntal/	/bʌntal/	pillow

2.2 THE SECOND SUBJECT

SUBSTITUTION PROCESS-STOPPING			
Actual Word (Subject Words)	Intended Word	English Translation	Explanation
/tʰipi/	/tʰivi/	television	/p/ sound substitutes /v/ sound
/pi:pi/	/ʔifi/	One's name	/p/ sound substitutes /f/ sound
/mat/	/mas/	brother	/t/ sound substitutes /s/ sound
/pait/	/ʔaiz/	One's name	/p/ sound substitutes /f/ sound /t/ sound substitutes /z/ sound
/dendoʔ/	/sendoʔ/	spoon	/d/ sound substitutes /s/ sound
SUBSTITUTION PROCESS-FRONTING			
/kuniŋ/	/kuniŋ/	yellow	velar /ŋ/ replaced by /n/
SUBSTITUTION PROCESS-GLIDING			
/kojeʔ/	/koreʔ/	match	sound /j/ is replacing liquid /r/
/bu:juŋ/	/bu:ruŋ/	bird	
SYLLABLE STRUCTURE PROCESS			
DELETION OF UNSTRESSED SYLLABLES			
Actual Word (Subject Words)	Intended Word	English Translation	Explanation
The 2 nd subject			
/bæka/	/boneka/	doll	/on/ syllable is deleted

THE OTHER PHONOLOGICAL PROCESS

SUBSTITUTION PROCESS OF ALVEOLAR			
Actual Word (Subject Words)	Intended Word	English Translation	Explanation
/bətʃal/	/bəsar/	big	velar /tʃ/ is replacing alveolar /s/
/itʃaʔ/	/nisaʔ/	Nisa'	
/pətʃal/	/pʌsar/	market	
/tʃutʃu/	/susu/	milk	
/patʃaŋ/	/pasəŋ/	install	
/pətʃawat/	/pəsawat/	plane	velar /tʃ/ is replacing alveolar /s/
/kultʃi/	/kursi/	chair	
/tʃama/	/sama/	same	
/tʃədikit/	/sədikit/	little	

/tʃapi/ /tʃəmot/	/sapi/ /səmut/	cow ant	
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SUBSTITUTION PROCESS OF RETROFLEX					
Actual word	Intended word	English	Actual word	Intended word	English
/motol/	/motor/	motor	/bətʃal/	/bəsar/	big
/balu/	/baru/	new	/kələta/	/kəreta/	train
/dʒələpa/	/dʒərəpa/	giraffe	/u:lɒl/	/ular/	snake
/dambal/	/gambar/	picture	/pelas/	/pəras/	to press
/pʌtʃal/	/pasar/	market	/keltas/	/kərtas/	paper
/dəktəl/	/dəktər/	doctor	/bilu/	/biru/	blue
/kəbakalan/	/kəbakaran/	fire	/kultʃi/	/kursi/	chair
/lambot/	/rambut/	hair	/tidul/	/tidur/	to sleep
/mondol/	/mundur/	go back	/pintal/	/pintar/	clever
/bəlʌjal/	/bəlʌjar/	to study	/bubul/	/bubur/	porridge
/olalaga	/olahraga/	sport			

SYLLABLE STRUCTURE PROCESS DELETION OF INITIAL CONSONANT			
Actual Word	Intended Word	English	Explanation
/əti/	/rəti/	bread	the initial consonants of /r/, /l/, /d/ syllables are omitted
/ʌjaŋ-ajaŋ/	/lʌjaŋ-lajaŋ/	kite	
/u:wa/	/du:wa/	two	
/əman/	/teman/	friend	

2.3 THE THIRD SUBJECT

SUBSTITUTION PROCESS-FRONTING			
Actual Word (Subject Words)	Intended Word	English Translation	Explanation
/tolan/	/koran/	newspaper	velar /k/ replaced by /t/
/tula/	/kura/	turtle	
/tue/	/kue/	cake	
/ʌtu/	/ʌku/	I	

SYLLABLE STRUCTURE PROCESS DELETION OF FINAL CONSONANT			
/balɔ/	/balɔn/	ball	deletion of final consonant /n/
/monje/	/monjet/	monkey	deletion of final consonant /t/
/pʌna/	/pʌnas/	hot	deletion of final consonant /s/
/nole/	/nu:lis/	write	deletion of final consonant /s/
SYLLABLE STRUCTURE PROCESS-DELETION OF REDUPLICATION			
/dʒadʒa/	/gadʒa/	elephant	/dʒa/ syllable is repeated

THE OTHER PHONOLOGICAL PROCESS SUBSTITUTION PROCESS OF ALVEOLAR			
/matʃaʔ/	/masaʔ/	to cook	velar /tʃ/ is replacing alveolar /s/
/pətʃawat/	/pəsawat/	plane	
/tʃendoʔ/	/sendoʔ/	spoon	
/pitʃaŋ/	/pisaŋ/	banana	
/tʃepeda/	/sepeda/	bicycle	
/pʌtʃal/	/pʌsar/	market	
/metʃin/	/mesin/	machine	
/tʃalapan/	/sarapan/	breakfast	
/tʃakit/	/sa:kit/	sick	
/tʃini/	/sini/	here	
SUBSTITUTION PROCESS OF STOP			
/təntʃolaʔ/	/təŋkoraʔ/	skull	Stop consonant /k/ is substituted by affricative /tʃ/

SUBSTITUTION PROCESS OF RETROFLEX					
Actual Word	Intended Word	English	Actual Word	Intended Word	English
/təlɔmpet/	/terɔmpet/	market	/patʃal/	/pasar/	market
/nelaka/	/neraka/	doctor	/dɔktəl/	/dɔktər/	doctor
/kelbu/	/kerbau/	buffalo	/lame/	/ramai/	noisy
/solga/	/surga/	heaven	/tʃelita/	/cerita/	story
/telbʌŋ/	/terbʌŋ/	to fly	/bətʃal/	/bəsar/	big
/kelopoʔ/	/kerupuk/	crackers	/lali/	/lari/	to run
/tʃalapan/	/sarapan/	breakfast	/mala/	/marah/	angry
/pəlahu/	/perahu/	canoe	/buluŋ/	/buruŋ/	bird