

# Introduction to Language Acquisition

Linguistics Module



# Overview of this Linguistics Module

- Topic 1 Introduction to areas of linguistics and problem-solving
- Topic 2 Historical Linguistics
- Topic 3 Phonetics
- Topic 4 Sociolinguistics
- Topic 5 Writing systems
- **Topic 6 Language Acquisition**
- Topic 7 Morphology
- Topic 8 Syntax
- Topic 9 Psycholinguistics / Neurolinguistics
- Topic 10 Machine Translation

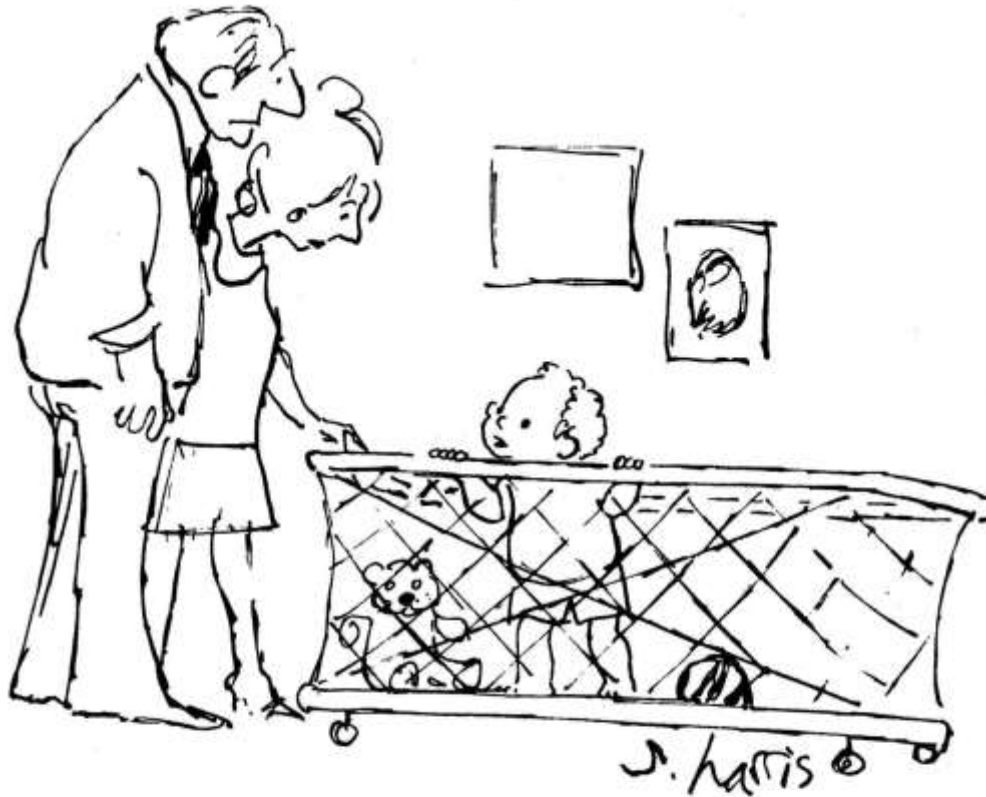
# Topic 6: Overview

In this topic, we look at:

- First Language Acquisition: How do babies and young children acquire their first language?
- Second Language Learning: How do teenagers and adults learn a foreign language?

# Task 6.1: First Language Acquisition





"WHAT'S THE BIG SURPRISE? ALL THE LATEST THEORIES OF LINGUISTICS SAY WE'RE BORN WITH THE INNATE CAPACITY FOR GENERATING SENTENCES."

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# Task 6.1 First Language Acquisition

- The acquisition of language by babies and young children is an astonishing process.
- Before they start school, typically developing children (i.e. children with no developmental difficulties) know most of the complex grammatical structures of their native language(s).
- First language acquisition is **spontaneous** and takes place **without explicit teaching** in a relatively short period of time.
- How do very young children master the complexities of language?
- We will see that children are far superior to any other creature or computer in their ability to learn their native language.

Task 6.1: Watch the following TED Talk by Professor Patricia Kuhl and complete Worksheet 6.1, Exercise 1



# Feedback Worksheet 6.1, Exercise 1

1. What is required to protect an endangered language from extinction?
<b>You need to speak to babies.</b> (Babies need to learn the endangered language as a native language so that they can pass it on to the next generation)
2. A language cannot be acquired with native competence beyond a certain age. What do we call the period in which the acquisition of certain aspects of language must take place?
<b>Critical Period</b>
3. <b>True or False:</b> The head-turn task is used as an experimental technique to examine the child's ability to comprehend language.
<b>True</b>
4. At what age is the child's linguistic ability restricted to discriminating only the sounds of their native language?
<b>10 – 12 months</b>

5. <b>True or False:</b> 'Culture-bound listeners' refers to children's ability to discriminate all phonemes in all languages.
<b>False:</b> Describing infants as 'citizens of the world' means that they have the ability to distinguish all sounds in all languages. Once the critical period has passed, children become 'culture-bound listeners' – this means that they can discriminate only the phonemes of the language they are surrounded to.
6. What are the two requirements for infants to learn the phonemes of their native language?
<ol style="list-style-type: none"> <li>1. Listen intently</li> <li>2. Taking statistics</li> </ol>
7. During the critical period, babies can absorb the phonemes of a new language (i.e. they take statistics on the language). How was this tested?
<b>American babies were exposed to a person interacting with them in Mandarin for 10 sessions.</b>
8. In what way is the social brain involved in the process of language acquisition?
<b>It takes a human being for babies to take statistics</b> (Babies need to interact with people. It is not sufficient to watch TV)



# Discussion/Project Topics (Optional)

- What are the implications of the critical period for the preservation of Irish?
- What are the implications of the critical period of phonology for foreign language learning?
- What are the implications of the critical period for the best time in the teaching cycles to introduce and teach a foreign language? How is that consistent with current government policy in Ireland?
- Think of examples of critical periods in other areas of child development!

# First Language Acquisition

- We have seen that babies are efficient language learners well before they are able to produce their first words.
- But how do you think children actually learn how to produce grammatically correct sentences? How do children learn the grammar of their first language?
- One possibility is that children **imitate** adult speech.
- Another possibility is that they receive **reinforcement** from adults. This means that parents provide **positive feedback** when children say grammatically correct sentences. In turn, they are corrected (**negative feedback**) when they make mistakes.

# Do children learn language by **imitating** adult speech?

CHILD: My teacher **holded** the baby rabbits and we patted them.

ADULT: Did you say your teacher held the baby rabbits?

CHILD : Yes.

ADULT : And what did you say she did?

CHILD : She **holded** the baby rabbits and we patted them.

ADULT : Did you say she held them tightly?

CHILD : No, she **holded** them loosely.

(C. Cazden, 1972)

# Do children learn language by **imitating** adult speech?

- Imitation may play some role in First Language Acquisition, but its role is limited.
- If children were merely imitating the adults, we would not expect babies to produce words and sentences that are ungrammatical in the adult language.
- The dialogue on the previous slide shows that the child produces forms such as *holded*. Children do not hear these forms in the input as parents don't usually make these errors (they say *held*).
- However, these types of errors are **common** and **systematic** in early child language.

# Do children learn language by being **reinforced**?

CHILD: Nobody don't like me.

MOTHER: No, say "nobody likes me."

CHILD : Nobody don't like me.

(eight repetitions of this dialogue)

MOTHER: No, listen carefully; say "nobody likes me".

CHILD : Oh! Nobody don't likes me.

(McNeill, 1966)

# Do children learn language by being **reinforced**?

CHILD: Want other one spoon, Daddy.

FATHER: You mean, you want the other spoon.

CHILD : Yes, I want other one spoon, please Daddy.

FATHER : Can you say “the other spoon”?

CHILD : Other ... one ... spoon.

FATHER : Say “other.”

CHILD : Other.

FATHER : “Spoon”.

CHILD : Spoon.

FATHER : “Other spoon.”

CHILD : Other ... spoon. Now give me other one spoon?

(Braine 1971)

# Do children learn language by being **reinforced**?

- The children generally resist corrections.
- If children learned language through reinforcement, they would take on board the adult corrections.
- However, children tend to be immune to parents' corrections.
- Furthermore, most parents don't bother correcting grammatical mistakes.

Reinforcement and imitation do not play a crucial role in First Language Acquisition.

# How do children acquire their first language?

- The Linguist Noam Chomsky suggested that children are born with a **Language Acquisition Device** (LAD):





# How do children acquire their first language?

- Humans have a genetic predisposition for language.
- The **Language Acquisition Device** (LAD) enables children to acquire their first language.
- Children know more about language that they can ever extract from the input (i.e. the language they are surrounded by). This argument for the innateness hypothesis is called the **poverty of the stimulus**.
- However, the mere genetic predisposition for language alone does not ensure successful language development.
- In her TED Talk, Patricia Kuhl mentioned another crucial factor that is necessary for language development to take place:
- For successful language development, children need to be exposed to language **input**: they need to listen to language and interact with native speakers.

# How do children acquire their first language?

- Remember from Patricia Kuhl's presentation that the exact timing of input is crucial for sound development.
- This is the **Critical Period** of phonological development.
- Just as with phonological development, there is also a **Critical Period** for grammatical development.
- That means that grammatical development of the first language has to take place in a certain time window. If this window is missed, children are no longer able to acquire important aspects of the language properly.

# Critical Period of grammatical development

- The timing of input is crucial for normal first language development.
- Children who are not exposed to language during their early years cannot acquire a fully developed grammar.
- Evidence comes from children who grow up in isolation and who have not been exposed to human language during their isolation.
- These are sometimes referred to as **feral children**.
- The two most famous cases of input-deprived children are **Genie** and **Victor**.

# Genie

- Genie was discovered on the 4<sup>th</sup> November 1970.
- She had spent almost all her childhood locked in a small room, mostly tied to a potty chair, isolated and abused.
- When she was discovered, Genie had no language.
- Genie's case was the first to put the Critical Period to the test: **Could a child who had been deprived of any human contact and without exposure to language develop language?**

# Genie's language development

- Genie managed to develop some language.
- She learned many content words (including colours, shapes, objects, abstract and concrete nouns)
- Her syntax (sentence structure) and morphology (word structure) never fully developed.
- The Linguist Susan Curtiss, who worked with Genie for a few years, described Genie's language as **“the stringing together of content words, often with rich and clear meaning, but with little grammatical structure”**.
- Genie's utterances often resembled those of two-year old children and of patients who suffer from Broca's Aphasia (we will learn more about that in Topic 9):

# Genie's language development

What is missing in Genie's language?

- Auxiliary verbs (e.g. *I **am** playing the piano.*)
- The third-person singular agreement marker (e.g. *The man **drives** a motorcycle.*)
- The past-tense marker (e.g. *The man **played** tennis.*)
- Most pronouns (e.g. *I, you, he, she*).

• Genie's sentences:

- Man motorcycle have.
- Genie full stomach.
- Genie bad cold live father house.
- Want Curtiss play piano.
- Open door key.

Learning vocabulary (lexicon) has no age limit, but grammar (forming words into sentences) can only be acquired within a **Critical Period**

# Task 6.1: Worksheet 6.1

- Complete **Exercise 2** on Worksheet 6.1.

## Feedback Exercise 2:

	True	False
Children learn a language by storing all the words and all the sentences in memory.		✓
Children's language is creative which means they can produce sentences they never heard before.	✓	
Children learn language by imitating the speech they hear.		✓
Imitation is involved to some degree in First Language Acquisition.	✓	
Children always pay attention to parents' corrections.		✓
Children <u>have to</u> be taught the grammatical rules of their first language.		✓
Grammar <u>has to</u> be acquired within a critical period in order to reach native-like fluency.	✓	
Young children know more about language than they can hear from the input ( <u>i.e.</u> the language that surrounds them). This argument for the innateness of language is called the poverty of the stimulus.	✓	
Because language is innate, you learn it automatically, even if you are not exposed to it during childhood.		✓
Language acquisition takes place along a predetermined path.	✓	





## Task 6.2: The *Wug* Test

# The *Wug Test*



- The psycholinguist Jean Berko Gleason created the *Wug Test* in 1958.
- It was designed to investigate the acquisition of nominal and verbal inflectional morphemes in children learning English.
- The *Wug Test* provided evidence that children recognise patterns in the language they acquire rather than simply imitating the speech around them.
- They implicitly know the patterns for noun plurals and verb tenses.
- The *Wug Test* provides evidence that language acquisition is **rule-based**: Children are able to attach the appropriate endings to nonsense words that they could not have heard before.

# The *Wug Test*



- Plural of nouns:
- English has three allomorphs (which means variations) of the plural morpheme:
  - voiced /z/ as in dogs**s**
  - voiceless /s/ as in cats**s**
  - /iz/ as in horses**es**
- The *Wug Test* tests the child's understanding of these allomorphs at various stages in their development.

# The *Wug Test*: This is how it works

- The child was shown a picture of a drawing with an unfamiliar creature and told 'This is a wug'.



# The *Wug Test*: This is how it works

- Then two creatures are shown, and the investigator says ‘Now there is another one. There are two of them. There are two ...’.



- Children who have acquired the allomorph /z/ respond ‘wugs’.

# Watch this historical footage of the Wug Test



# Jean Berko Gleason's Brief But Spectacular take on language



# Task 6.2: Worksheet 6.2

- Complete both exercises on Worksheet 6.2



# Feedback Worksheet 6.2

## A Verbs

swam	<i>swimmed</i>	sang	<i>singed</i>
drove	<i>drived</i>	was	<i>be(e)d</i>
caught	<i>catched</i>	had	<i>haved</i>
built	<i>builded</i>	began	<i>beginned</i>
ran	<i>runned</i>	fought	<i>fighted</i>
put	<i>putted</i>	held	<i>holded</i>
brought	<i>bringaed</i>	rang	<i>ringed</i>
gave	<i>gived</i>	took	<i>taked</i>
made	<i>maked</i>	taught	<i>teached</i>
grew	<i>growed</i>	did	<i>doed</i>
has	<i>haves</i>	is	<i>bes</i>

# Feedback Worksheet 6.2

## B Nouns and Adjectives

Nouns		Adjectives	
sheep	<del>sheeps</del>	better	<del>gooder</del>
mice	mouses	further	farer
feet	foots	worst	<del>baddest</del>
children	<del>childs</del>	worse	<del>badder</del>
women	<del>womans</del>	best	<del>goodest</del>
geese	gooses	least	litlest
teeth	tooths	less	littler
fish	fishes	more	<del>manyer</del>
lice	louses	most	<del>manvest</del>
oxen	<del>oxes</del>		

# Task 6.2: Puzzle

Complete the AILO Puzzle: We are all molistic in a way.

There is a video that talks you through ‘We are all molistic in a way’:

<https://www.youtube.com/watch?v=O6Cel0m73MY>

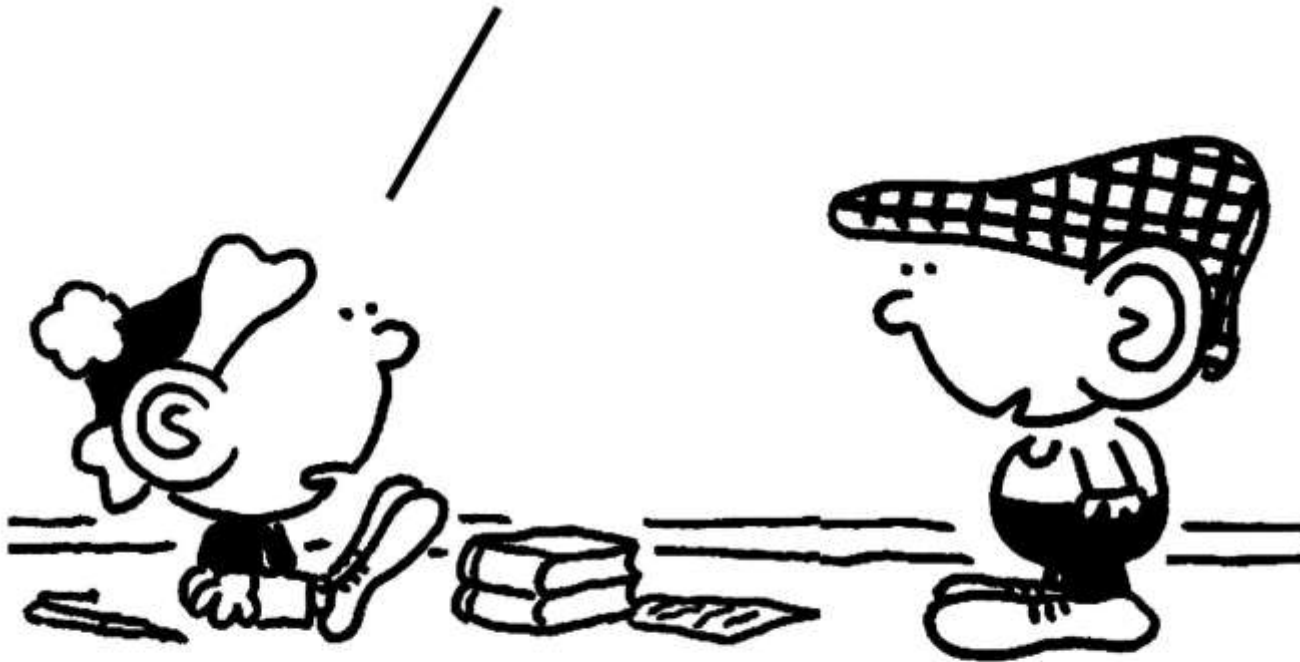
# The *Wug Test*

- The *Wug Test* has been recreated in different forms. Check out the following:
- <https://sites.psu.edu/linguisticexperiments/files/2021/07/Wug-Test-Nouns.pdf>
- <https://sites.psu.edu/linguisticexperiments/files/2020/07/Wug-Test-Verbs.pdf>
- Suggestion for a project/optional task: Create your own *Wug Test*. You can either do it with verbs or with nouns.

# Task 6.3: Second Language Acquisition



I'M GLAD I WASN'T  
BORN IN FRANCE.  
MY FRENCH IS TERRIBLE.



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# Worksheet 6.3: Exercise 1

## Why is it more difficult to learn a foreign language than acquiring your first language?

- **Exercise 1:** Reflect on your own language learning. Take some time to consider the following questions:
  1. Do you learn a foreign language other than your native language(s)?
  2. Are you able to learn the foreign language as perfectly and with little conscious effort as your native language(s)?
  3. Which aspects of second language learning are easy?
  4. Which aspects of second language learning are more difficult?
  5. Why do you think certain aspects of the language are easier to learn than others?
  6. Do you think you are a 'good' or 'poor' L2 learner? Why do you think so? Is your level of achievement/success due to linguistic (e.g. similarities between the languages you learn), psychological (do you have difficulty with language such as dyslexia), educational (the way you were taught) or social reasons (for example does the language you learn have a high social status)?

# Task 6.3: Distinction between ‘language acquisition’ and ‘language learning’.

## Language acquisition

- Often associated with first language development.
- Largely a subconscious process
- First Language Acquisition takes place without formal instruction (i.e. without a teacher).
- Gradual development of ability by communicating with others who know the language.
- Usually associated with critical periods.
- Learners achieve native fluency.

## Language learning

- Often associated with foreign language learning.
- A conscious and active process to learn the pronunciation, grammar and vocabulary of a language.
- Second Language Learning is often associated with formal instruction (e.g. with the help of a teacher).
- Second language learning usually takes place during teenage or adult years.
- Often difficult to achieve near-native fluency.



Task 6.3, Exercise 1: Which of the following skills are acquired and which are learned? Discuss in pairs and share with the class.

- Walking
- Maths
- The ability to read
- Tying shoelaces
- Crawling
- Picking up blocks
- The ability to write
- Learning a second language

# What affects foreign language learning?

- Your **first language (L1)**: You already know your native language which might interfere with the second language (L2) (**Transfer**).
- Your **age**: We have seen that the younger the child, the easier it is to ‘pick up’ a language. After the age of 7, our ability to acquire a language declines.
- **Motivation**: If you want to learn the L2 in order to achieve some goal (such as for travelling, job, university), you are more likely to be successful.
- **Personality**: If you have an outgoing personality, it might be easier for you to communicate with others in the L2. In turn, if you are shy, it might be more difficult to chat to others.
- **Exposure to L2**: If you learn the L2 in the country where it is spoken with frequent exposure, you are likely to make much faster progress than if you study the language two to three hours a week in school.

# Worksheet 6.3: Exercise 2

- Translate the five sentences on the worksheet into a language you study.
- Identify differences between your L1 and L2.
- Evaluate your efforts in the light of what you have learned about first and second language acquisition

# Further resources

- Feral children/Genie
- <http://web.archive.org/web/20101008200326/http://www.feralchildren.com/en/index.php>
- <https://www.theguardian.com/society/2016/jul/14/genie-feral-child-los-angeles-researchers>

# References

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- Guasti, M.T. 2002. *Language Acquisition: The Growth of Grammar*. MIT Press.

# Thank you



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