

Formal Approaches to Heritage Languages  
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# Differential Object Marking in Child and Adult Spanish Heritage Speakers

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ILLINOIS

# **Grammatical competence of adult heritage speakers**

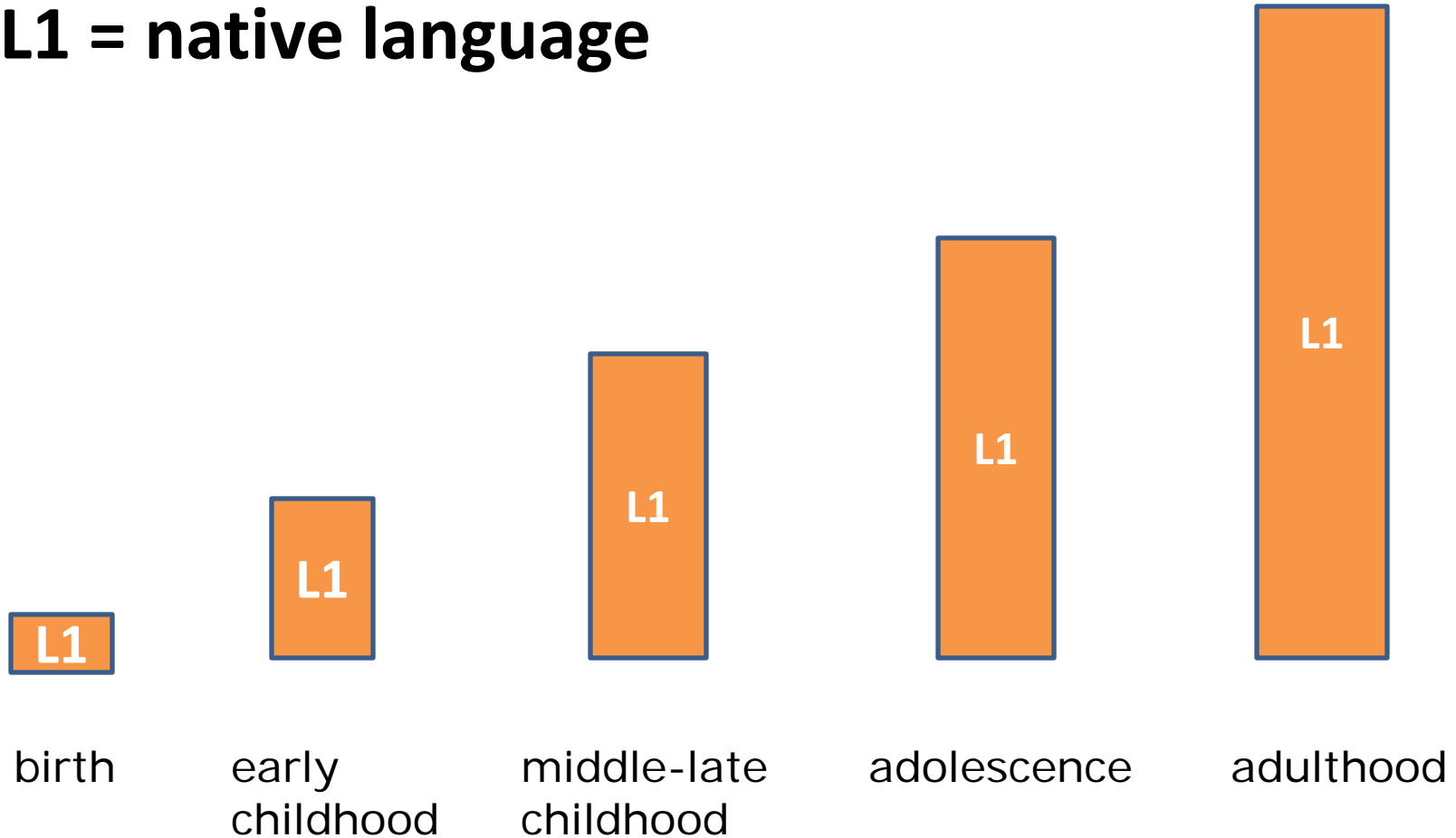
- The heritage language tends to be the weaker language
- Reduced input and use of the heritage language during the school age period
- Distinct gaps in syntax, morphology, semantics, interfaces, etc.
- Example: Differential Object Marking (DOM) in Spanish: Montrul (2004), Montrul & Bowles (2009)

# **Some potential reasons for non-native outcomes in adult Heritage Speakers**

- Attrition?
- Incomplete acquisition?
- Restructuring?
- Dominant language transfer?
- Exposure to a different, “attrited” variety?
- All of the above?

# Typical L1 acquisition

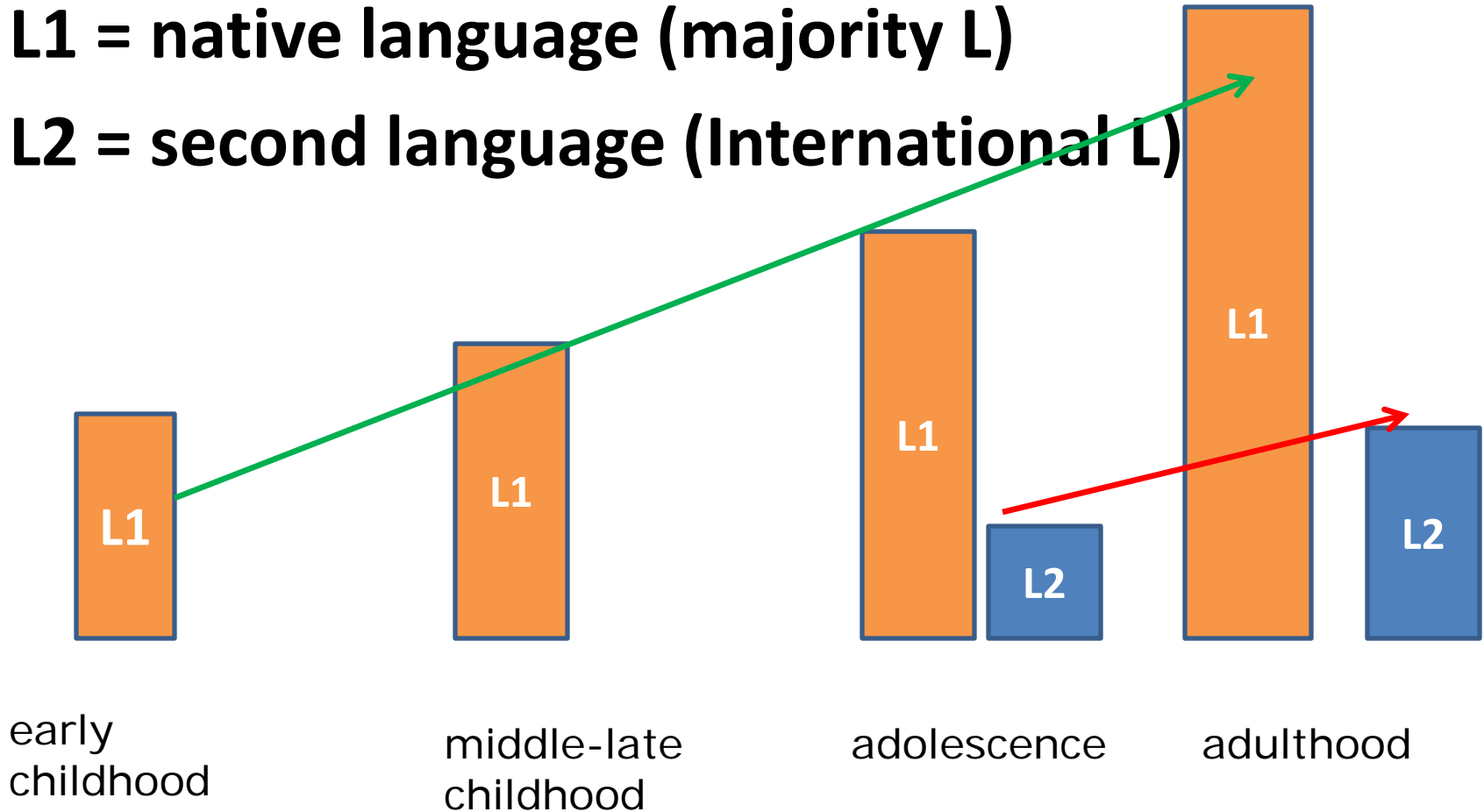
**L1 = native language**



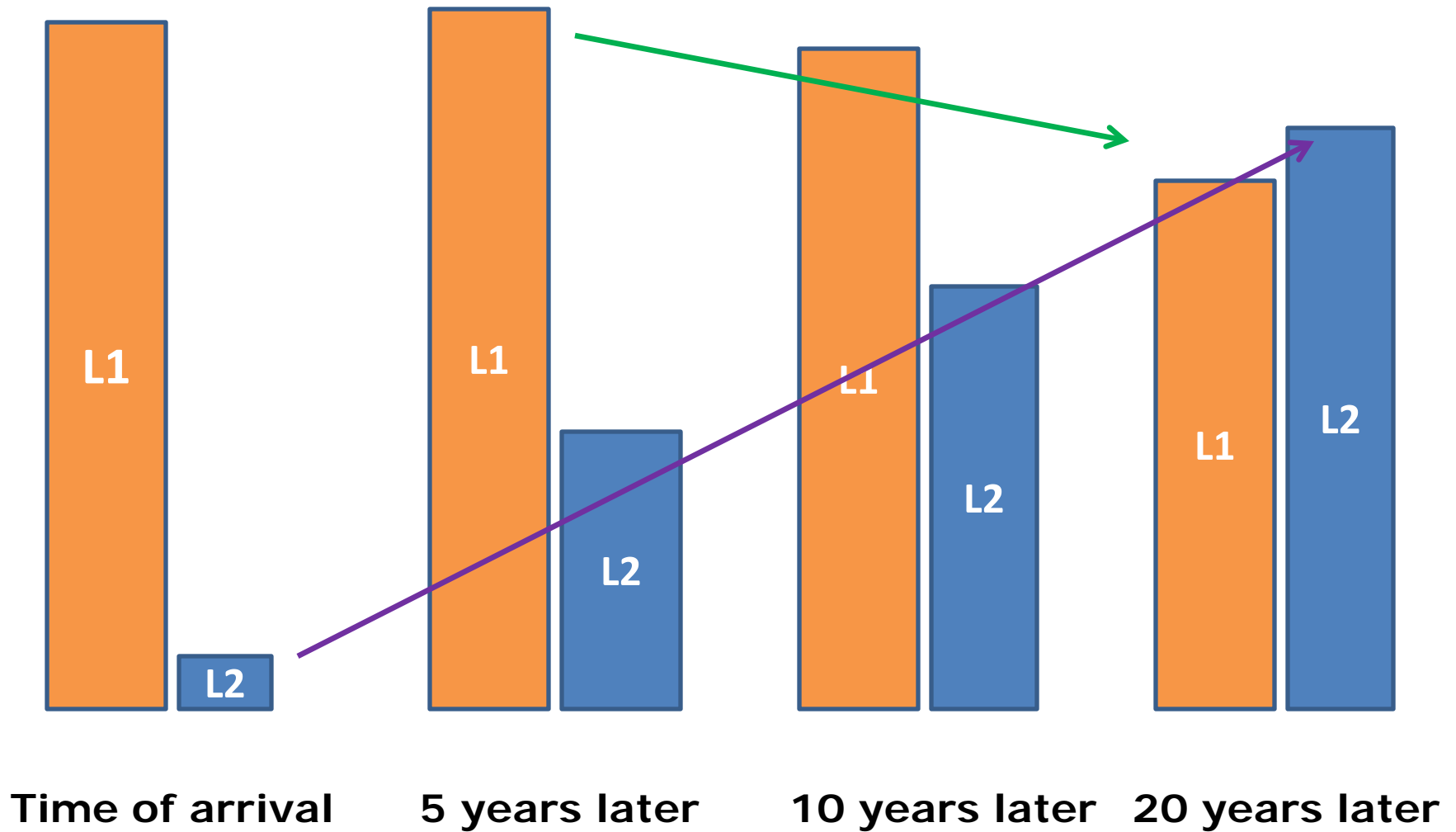
# Typical L2 acquisition situation (US)

**L1 = native language (majority L)**

**L2 = second language (International L)**



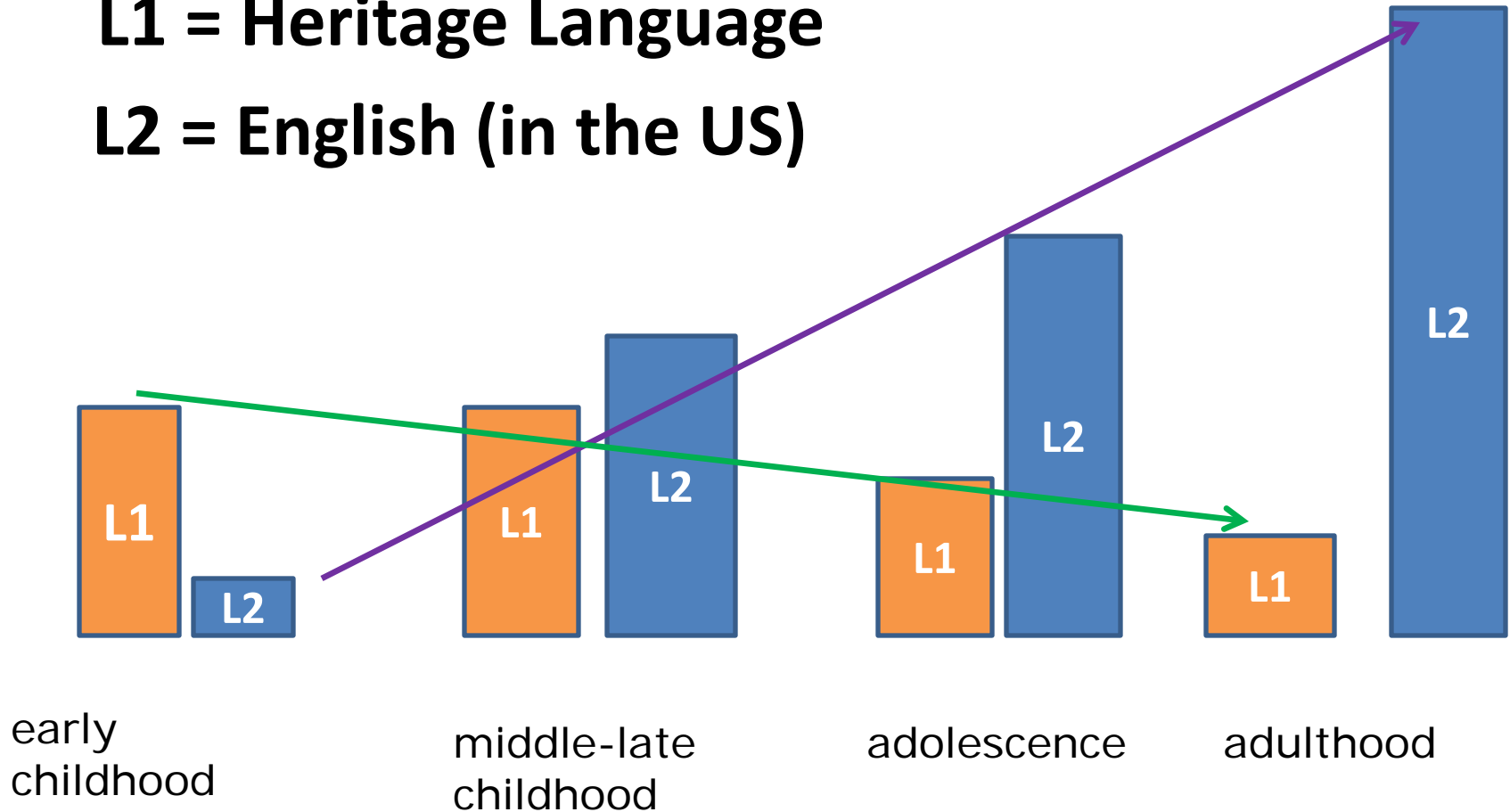
# Language Attrition in Adults



# Language shift and incomplete acquisition in heritage speakers

**L1 = Heritage Language**

**L2 = English (in the US)**

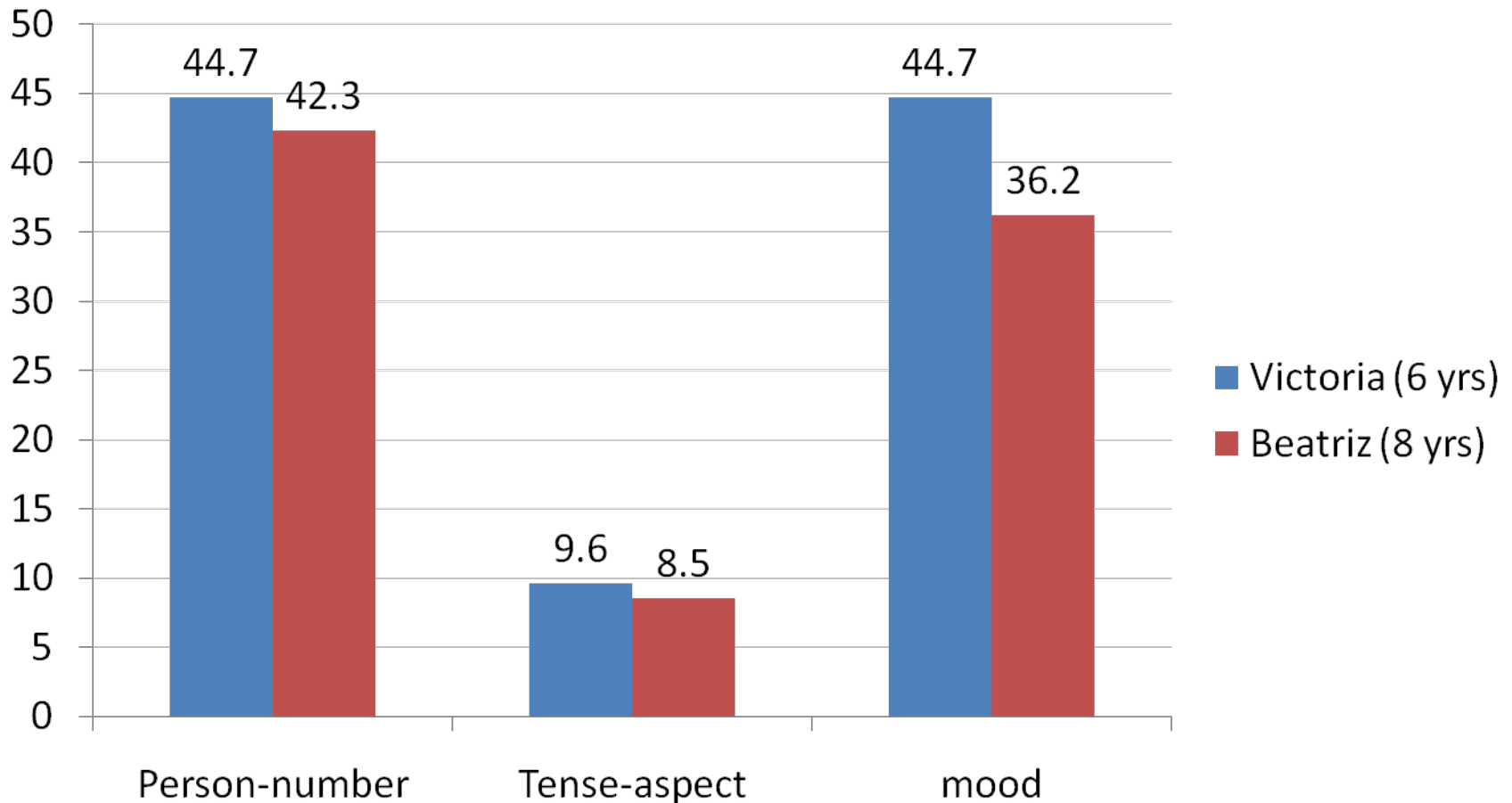


# Attrition/Incomplete Acquisition

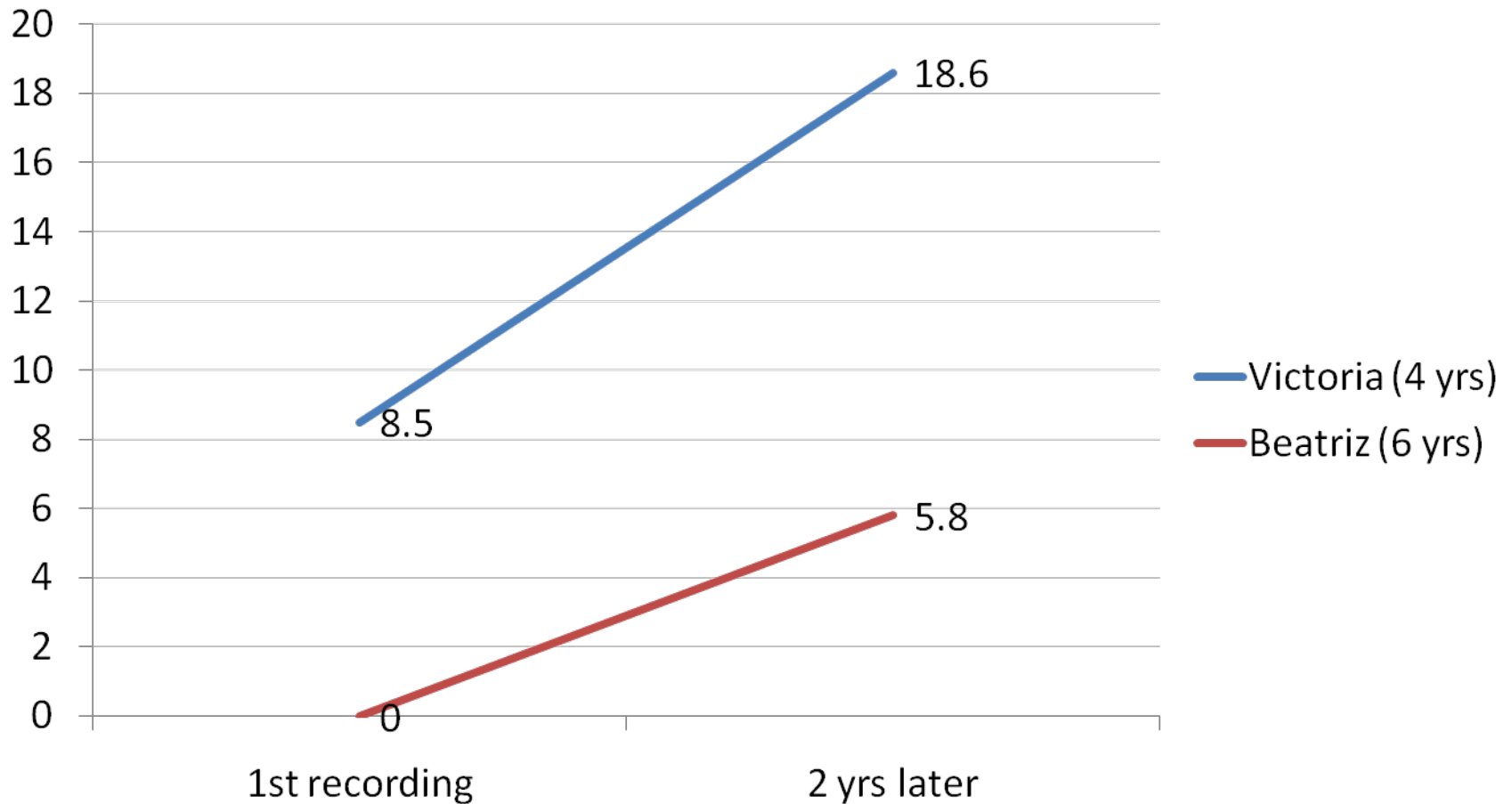
**Anderson (1999, 2002):** Longitudinal study of two Puerto-Rican children who moved to the United States when they were 2 and 4 years old-respectively.

- Started daycare and pre-school in English
- Tested two years after arrival, and then two years later.

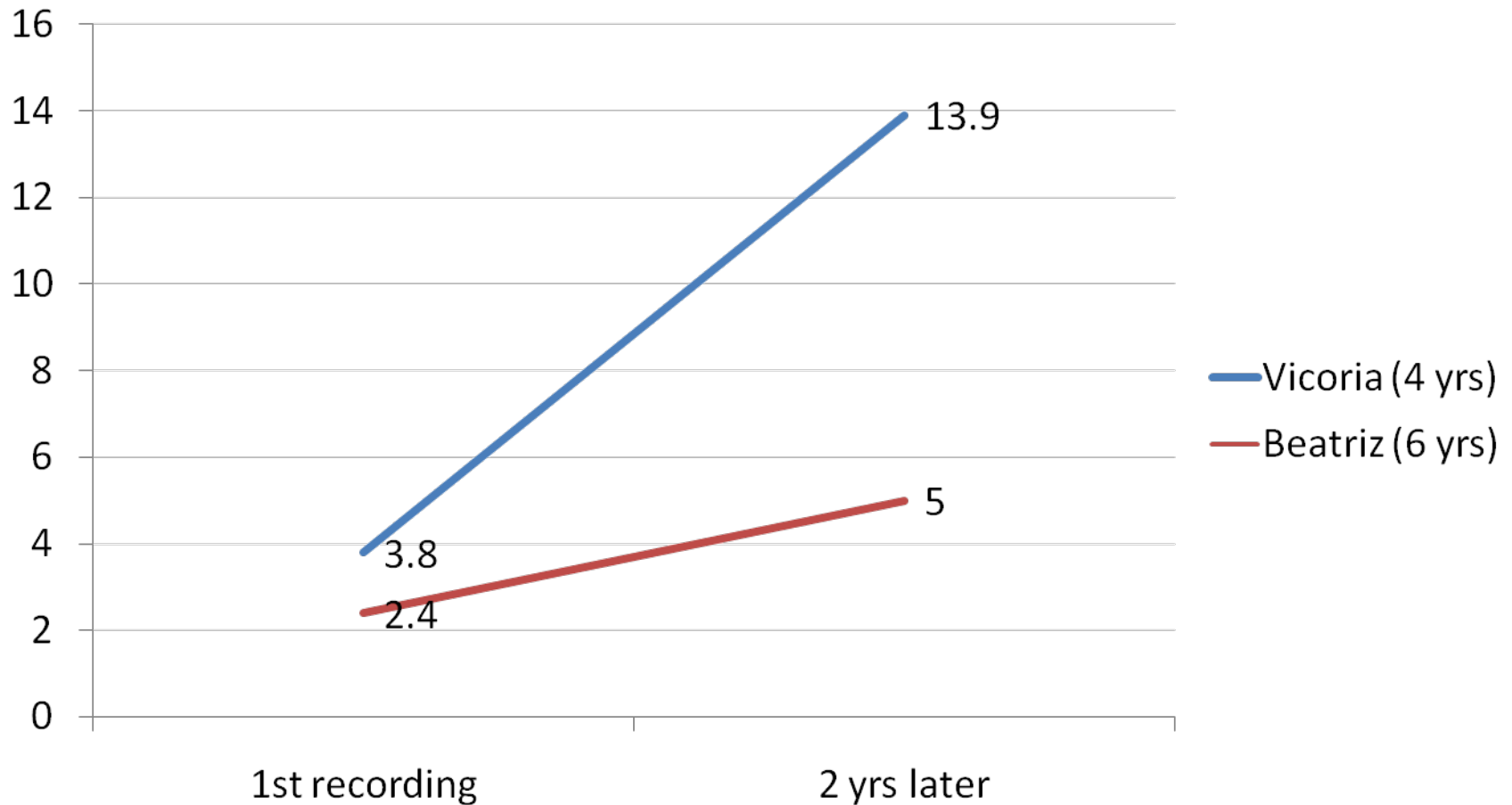
# Error rates with verbal morphology at the end of data collection



# Error Rates with Gender Agreement in Spanish



# Error Rates with Verbal Agreement



# Purpose of the Study

- To trace the non-native acquisition of DOM in Spanish heritage speakers.
- In addition to potential influence from the dominant language (English), is the omission of *DOM* with animate and specific direct objects due to incomplete acquisition, due to attrition, or due to exposure to qualitatively “different” input?

# Differential Object Marking

In general, Spanish objects that are [+specific] and [+animate] are marked with the (dative) preposition **A**.

(1) Juan vio **a** María. [+animate, + specific]  
Juan saw A Maria

(2) \*Juan vio María  
'Juan saw Maria.'

# Other objects are unmarked

- (3) Juan vio un tren [-animate, -specific]  
'Juan saw a train.'
- (4) \*Juan vio **a** un tren.
- (5) El gobierno destruyó la economía. [-animate, +specific]  
'The government destroyed the economy.'
- (6) \*/?El gobierno destruyó **a** la economía.'

# Generalization

<b>Marked Object (with A)</b>	<b>[+ animate] [+ specific]</b>
<b>Unmarked Object (no A)</b>	<b>[+ animate] [- specific]</b>
	<b>[- animate] [+ specific]</b>
	<b>[- animate] [- specific]</b>

# Nevertheless

In some cases, grammatical sentences are possible with or without *a*:

## Human indefinites

Juan necesita **a** un abogado.

[+ animate, + specific]

Juan needs prep a lawyer.

‘Juan needs a (*particular*) lawyer.’

Juan necesita un abogado.

[+animate, -specific]

Juan needs a lawyer.

‘Juan needs *any* lawyer.’

# And...

- Negative quantifiers like **nadie** (nobody) receive a mandatory **A**, but are [- specific]
- **A** may also be used to clarify which of two inanimate NPs is the object

*La calma sigue **a** la tormenta*

“The calm follows the storm.”

- **A** can be used if animals are personified

*Vio **al** perro de Juan.*

“He saw Juan’s dog.”

# Diachronically


- A-marking expanded along the definiteness scale, at first being required with strong pronouns only but later also possible with animate definite and indefinite NPs.

Referentiality scale (Aissen 2003)

Pro>PN>Def> Spec> - Spec > -Arg

# A-marking depends on verbs

Scale of affectedness and expected animacy of the objects (von Heusinger & Kaiser 2007)



[+ animate]	[± animate]	[±/- animate]	[(±)/- animate]
<b>matar</b>	<b>ver</b>	<b>considerar</b>	<b>tener</b>
kill	see	consider	have

# How is DOM acquired by children?

Rodríguez Mondoñedo (2008) analyzed all the data from the Spanish-speaking children available in CHILDES (Maria, Koki, Juan, Emilio), ages ranging from 1;07 to 3;00.

Spanish-speaking children have an adult grammar.

# Child Spanish: Rodríguez Mondoñedo (2008)

	A required			Total
A present		No	Yes	
	Yes	8	45	53
	No	929	9	938
Total		937	53	98.38%

Accuracy animate objects  
Accuracy inanimate objects

$45/53 = 85\%$   
 $929/938 = 99\%$

# The Study

- Do younger bilingual children show omission of DOM as well?
- Does age of onset of bilingualism and intense exposure to English affect omission of DOM in child and adult heritage speakers?
- Do adult immigrants with several years of residence in the United States omit DOM with animate objects?

# **Hypotheses: attrition or incomplete acquisition?**

1. If younger bilingual children omit DOM like young adult heritage speakers then this may be interpreted as incomplete acquisition.
2. If the child heritage speakers are more accurate than the adults, then attrition during the lifespan may be at play (Polinsky 2011).

# **Hypotheses:**

## **Quantity or quality of input?**

3. Several studies have shown that heritage speakers who are simultaneous bilinguals have weaker command of the heritage language than sequential bilinguals. If this variable is relevant for DOM, simultaneous bilinguals will show more omission of DOM than sequential bilinguals.

# **Hypotheses:**

## **Quantity or quality of input?**

4. If Spanish speakers who immigrated in adulthood (after age 18) and have been living in the United States for more than 10 years also omit DOM, this would be a sign of attrition.

Since adult immigrants are akin to the parents of the young adult heritage speakers, this would suggest that heritage speakers also receive qualitatively different (attrited) input from their parents, which would also contribute to their arrested development of this feature of Spanish.

# Study 1: Children

- 39 Spanish-English bilingual children between the ages of 6 and 17.
- 20 were from Mexican heritage, the rest from several other LA countries.
- 17 were simultaneous, 22 were sequential bilinguals.
- Comparison group: 20 monolingual children from Mexico, matched in age.

# Assessment Measures

- Parental questionnaire
- Peabody Picture Vocabulary Test (PPVT)
- Test de Vocabulario en Imágenes Peabody (TVIP)
- Oral Narrative Task
- Picture Description Task

# Child Participants

groups	N	Mean age	Parental rating English	Parental rating Spanish	PPVT (English) Standard score	TVIP (Spanish) Standard score
Simultaneous bilinguals	17	10;1	5	<b>3.8</b>	98.9	<b>83.1</b>
Sequential bilinguals	22	12;2	4.7	4.4	97	<b>86.9</b>
Native speakers	20	11;0				<b>122.1</b>

**Age:**

ns

**Parental ratings**

English > Spanish both bilingual groups

**PPVT**

simultaneous bilinguals = sequential bilinguals

**TVIP**

native speakers > simultaneous and sequential bilinguals

# Oral Narrative Task



# Picture Description Task

- 28 images, many with children's characters
- 14 images depicting an animate object
- 14 depicting an inanimate object

# ABRAZAR



# COMER



# Tocar



Ana

El bebé

# Llevar



Diego

Isabel

# Acoger

La inmigrante



La familia

# Tocar

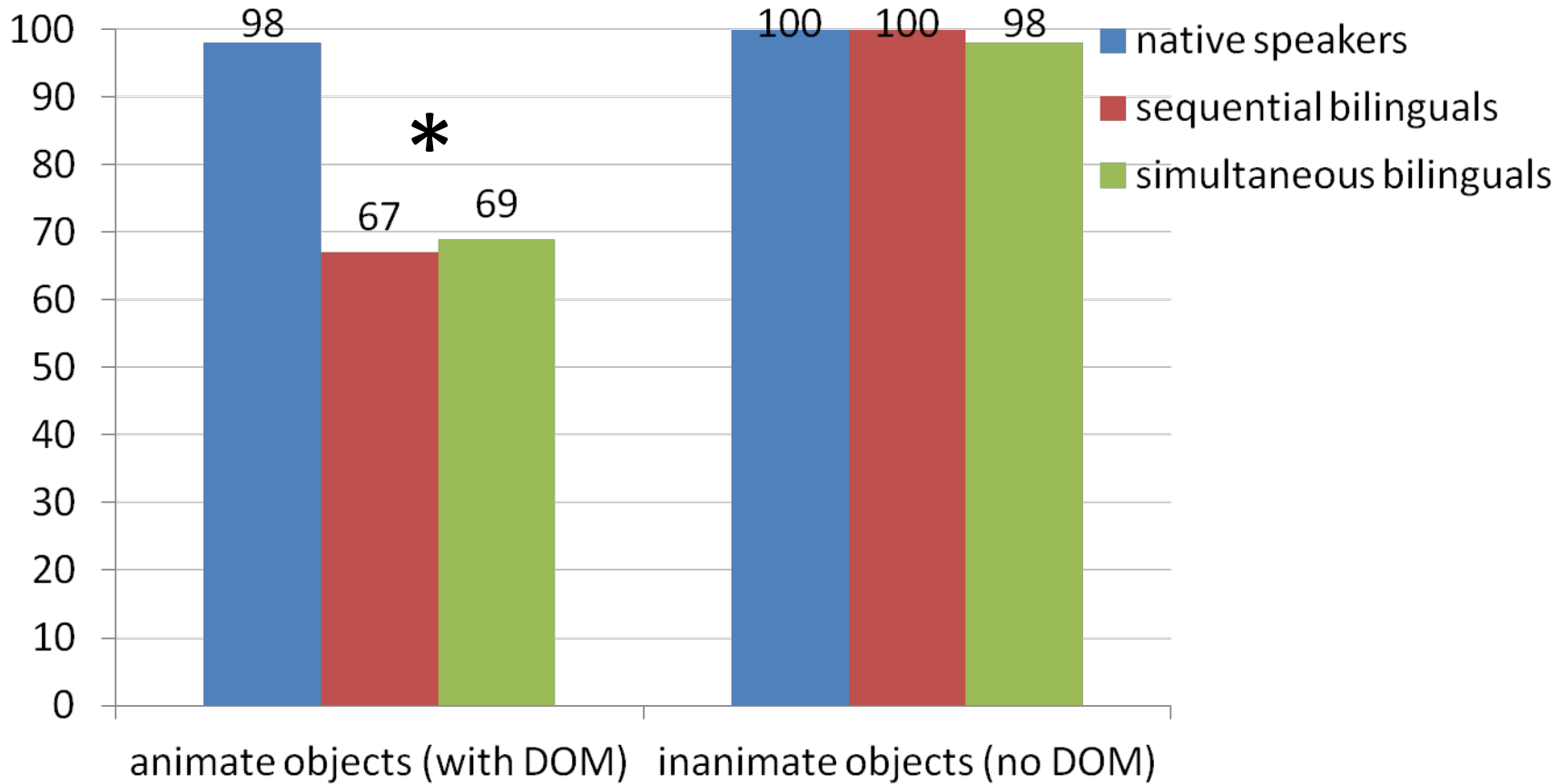
Julián



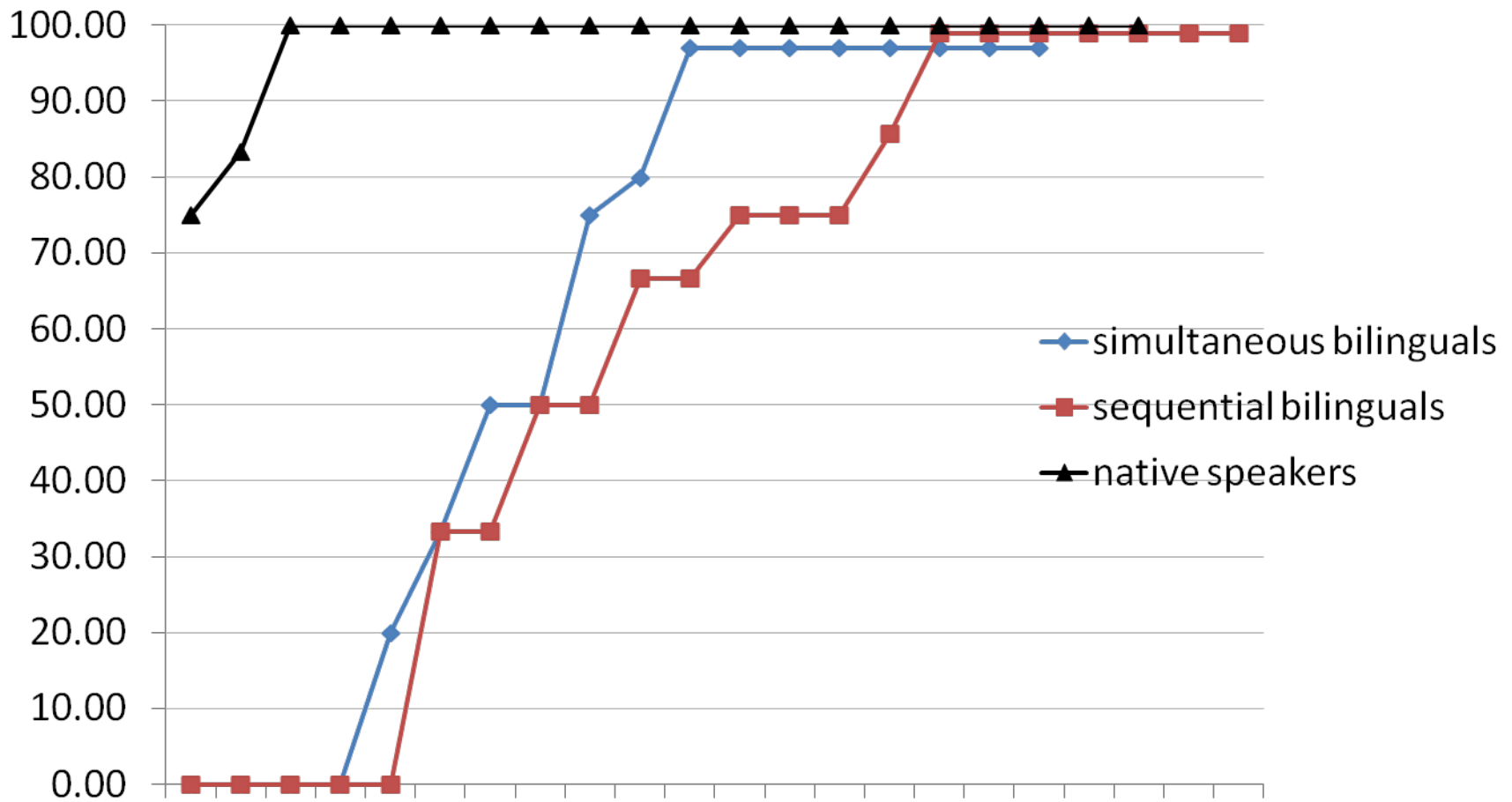
La planta

Ayer Julián ...

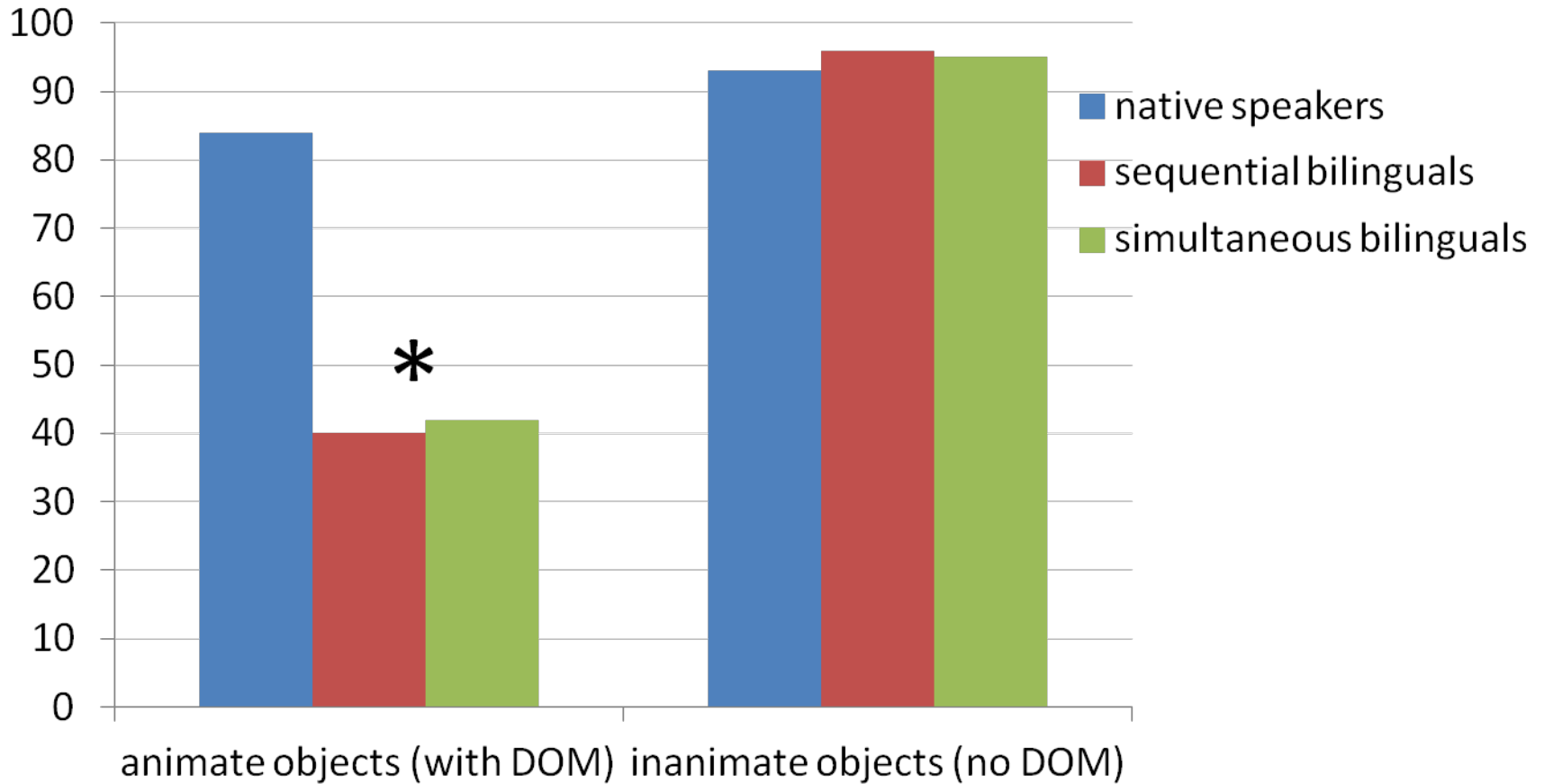
# Accuracy on DOM Oral Narrative



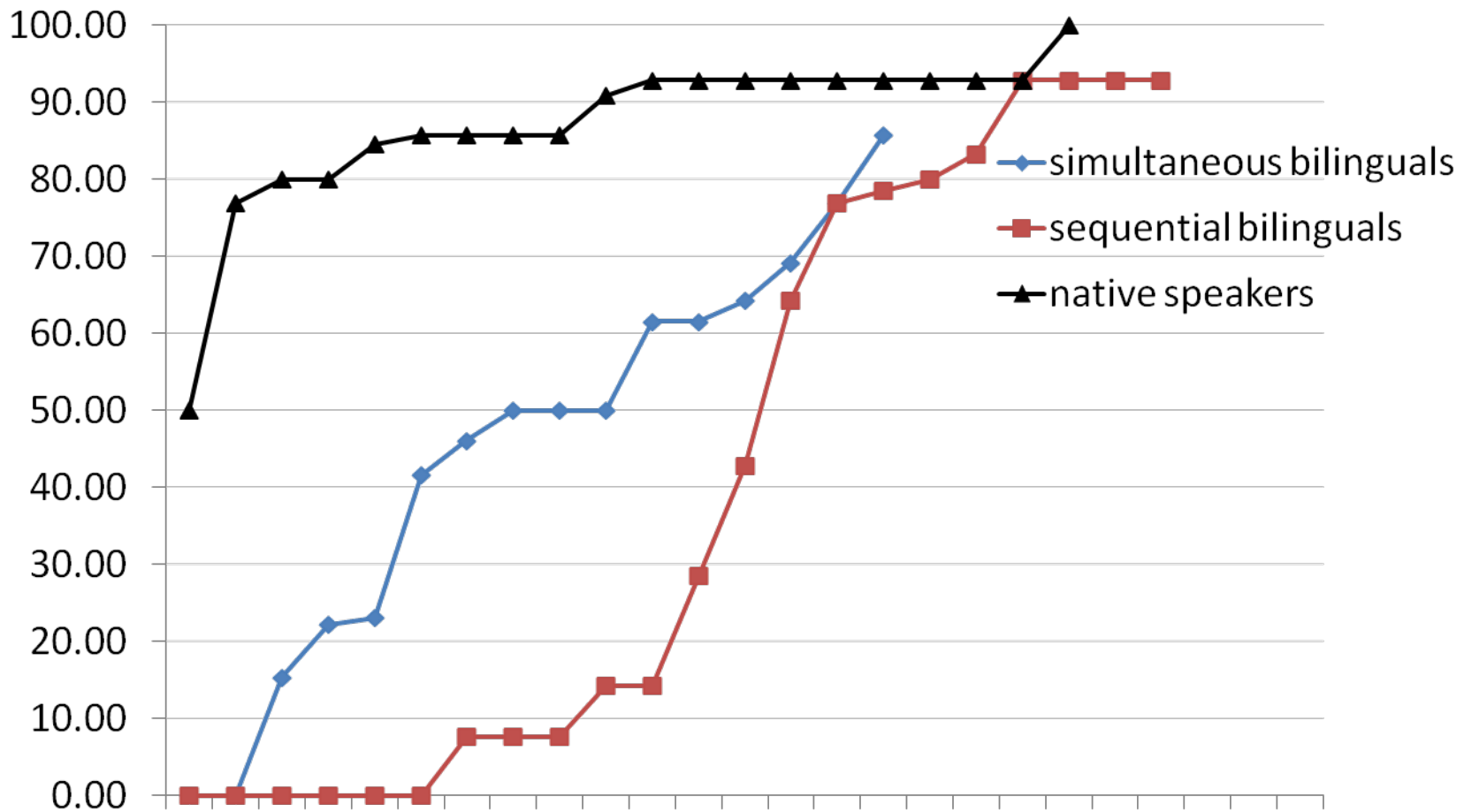
# Accuracy on animate objects by participants



# Accuracy on the Picture Description Task



# Accuracy on animate objects by participants



# Variability by Items

item	% DOM
Bob Esponja saludó a Squidworm.	76.7%
El Goblin Verde atacó al hombre araña.	54.3%
La abuelita visitó al niño.	17.1%
La mamá tocó al bebé.	10%

# Summary

- School-age Spanish heritage speakers omit DOM in Spanish significantly more than age-matched native speakers from Mexico. **This is a sign of incomplete acquisition.**
- Quantity of input as indicated by age of onset of bilingualism (simultaneous vs. sequential bilinguals) does not seem to matter.
- There is high individual variability in the two bilingual groups.

# Study 2: Adults

- 56 young adult heritage speakers (ages 18-25)  
40 from Mexican background, 16 from other  
LA countries  
35 simultaneous bilinguals  
29 sequential bilinguals
- 20 age and SES-matched controls from Mexico  
(also university students)

- 23 adult immigrants from Mexico (n =15) and other LA countries (n =8) (age 25-58), residing in the US for several years.
- 20 age and SES-matched adult native speakers from Mexico.

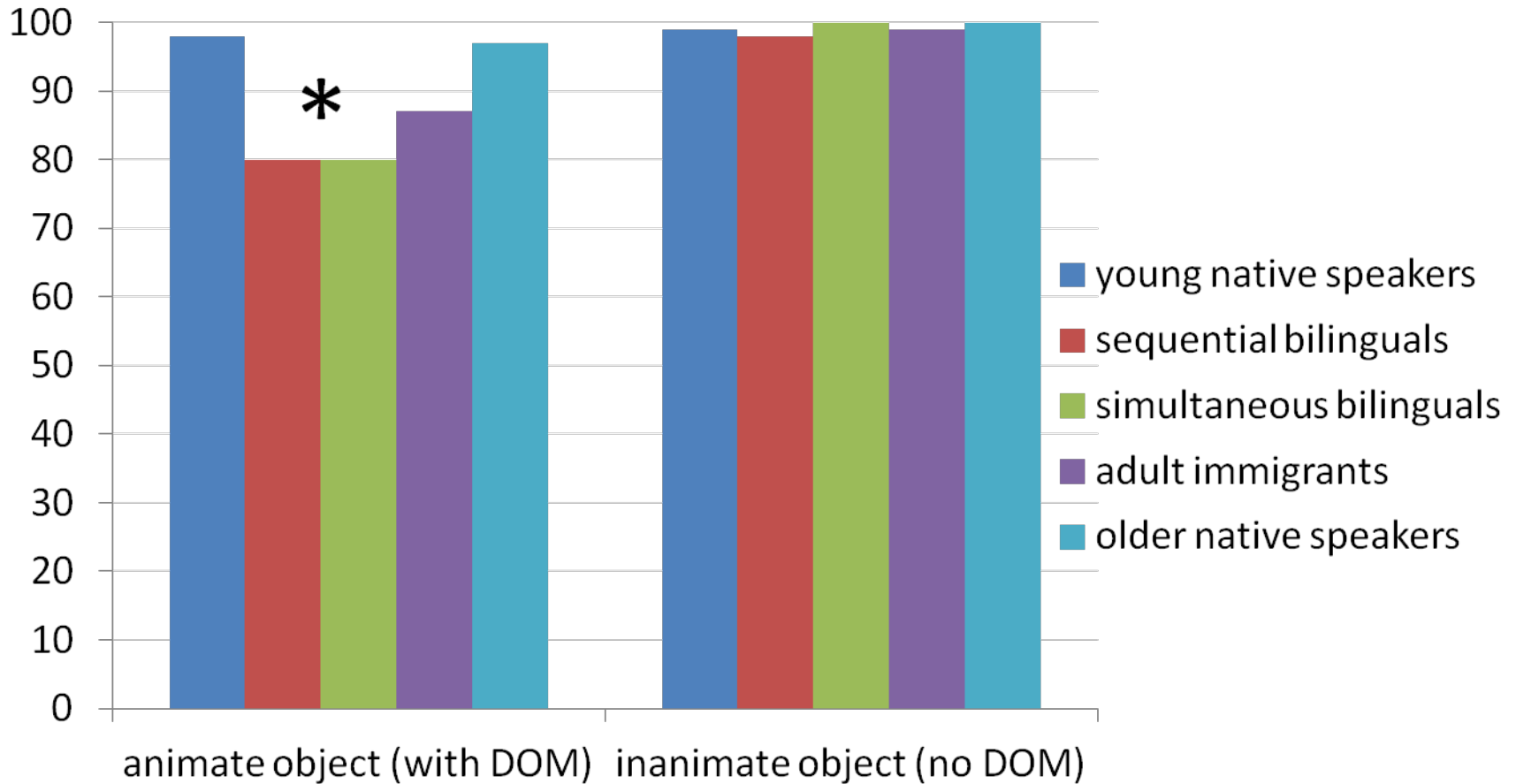
# Younger Cohort

groups	N	age	AoA English	LoR US	self ratings English	Self-ratings Spanish	Written Prof. Spanish
simultaneous bilinguals	35	20.6	2.5	18.1	4.8	3.8	75%
sequential bilinguals	29	20.9	7.8	13	4.6	4.1	79%
native speakers	20	21	--	--	2.4	5	91%

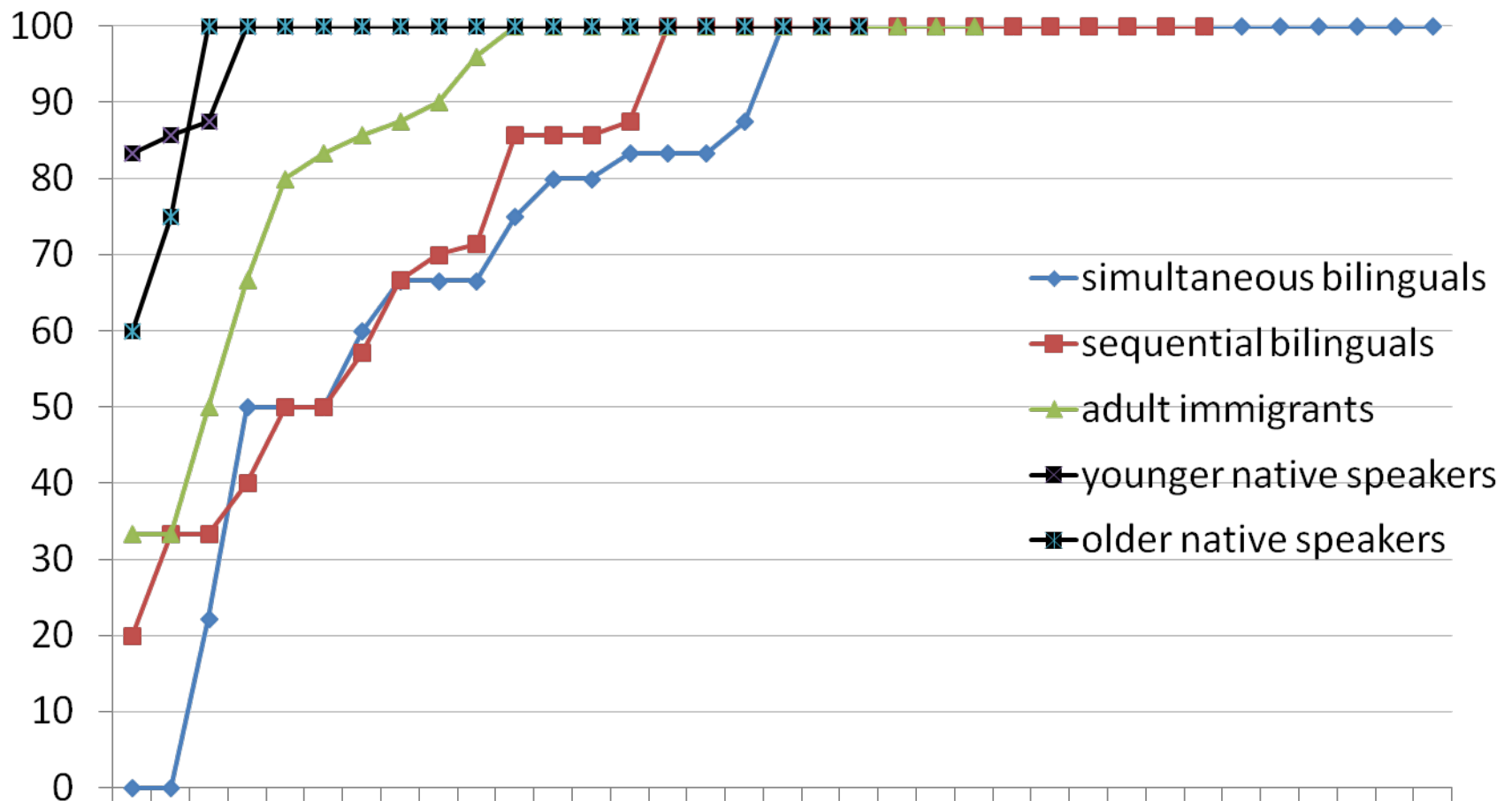
# Older Cohort

groups	N	age	AoA English	LoR US	self ratings English	Self- ratings Spanish	Written Prof. Spanish
adult immigrants	23	45.4	21	24.9	3.6	4.9	76%
native speakers	20	47	--	--	1.2	5	91%

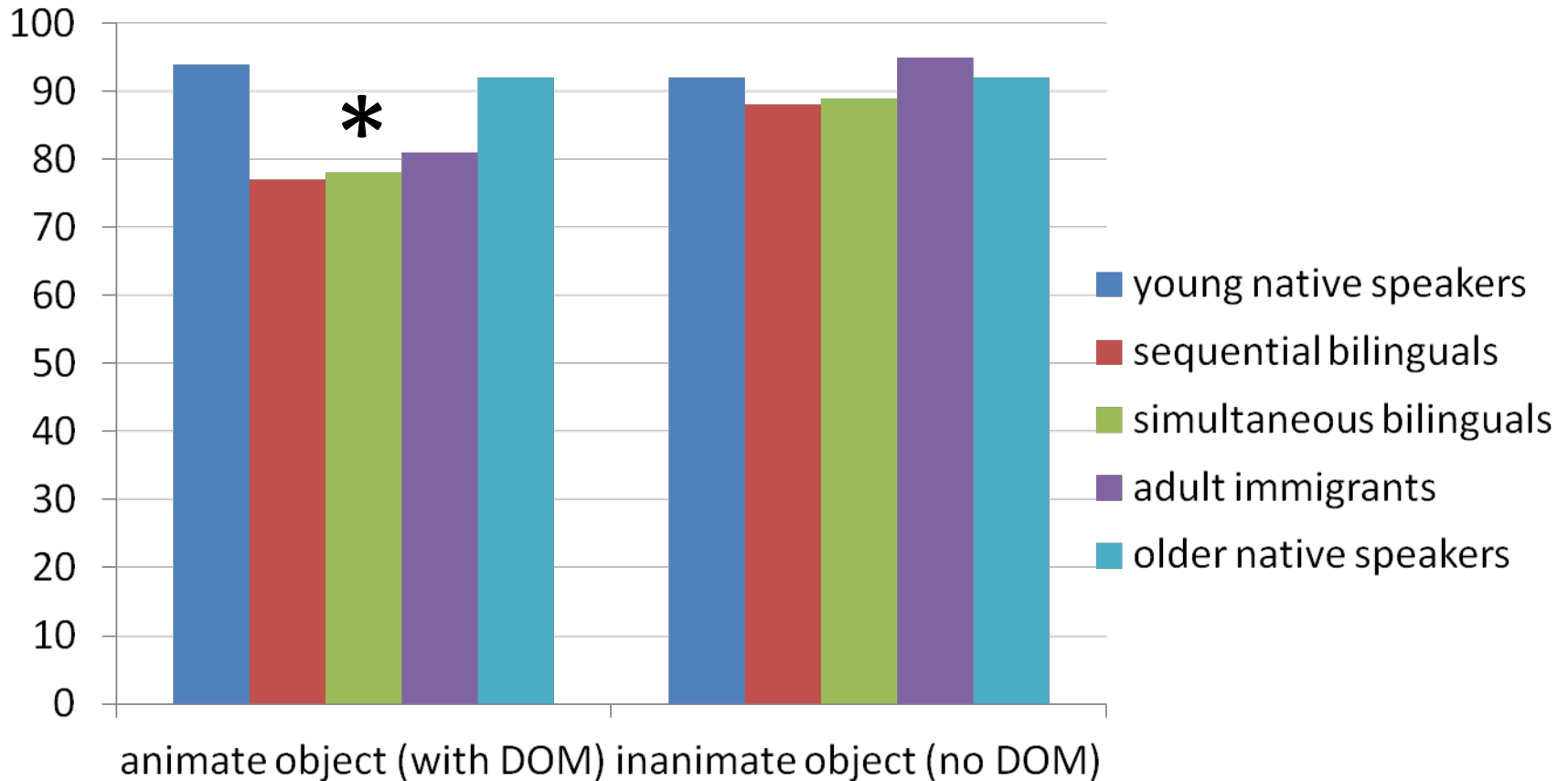
# Accuracy Oral Narrative Task



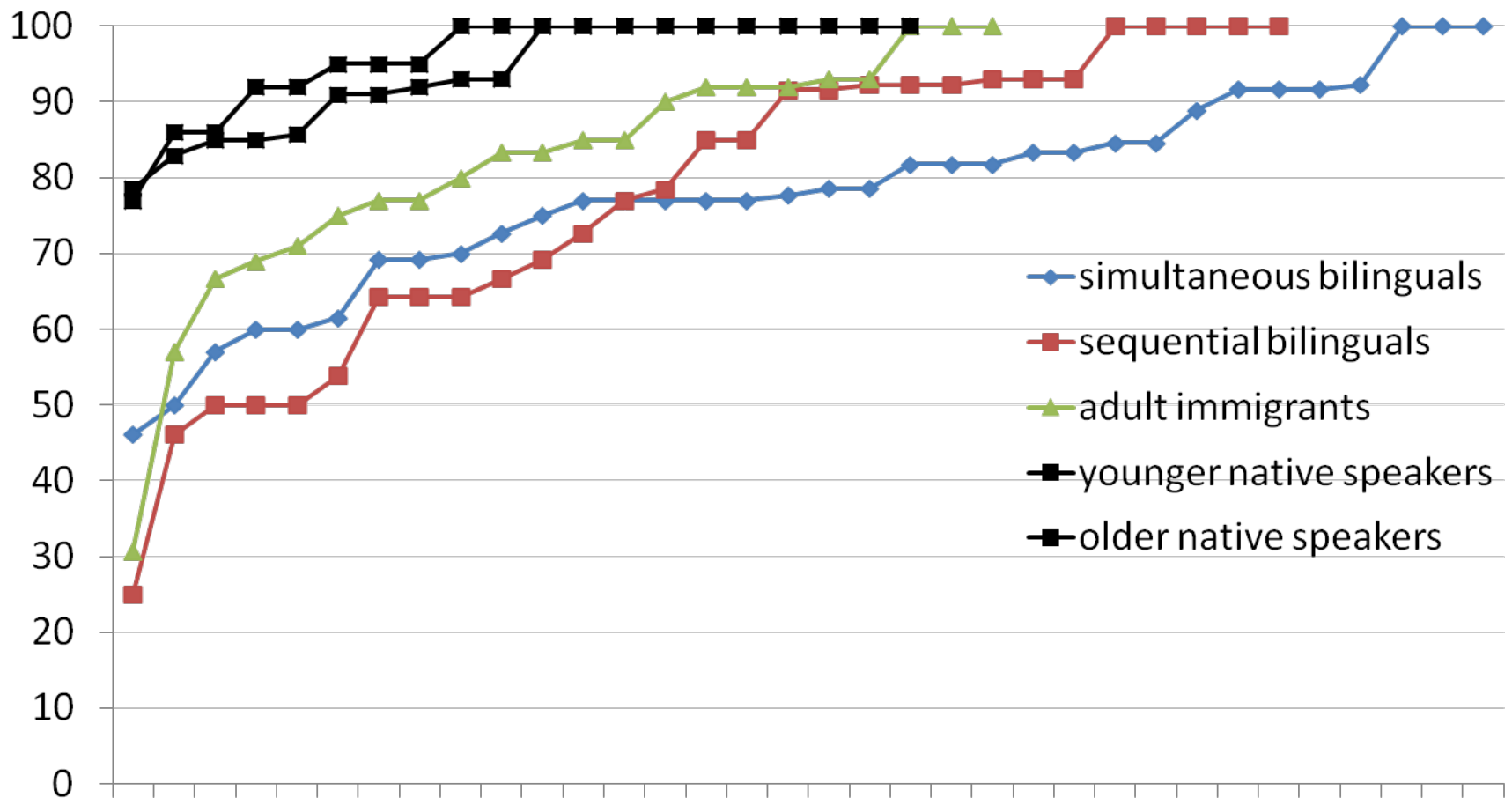
# Accuracy on animate objects by participants



# Accuracy Picture Description Task



# Accuracy on animate objects by participants



# Variability by Items

Items	% DOM
Diego llevó a Isabel.	97.6%
María vio a Jaime.	96.3%
Julieta besó a Romeo	94.5%
Ana tocó al bebé.	51.2%
La familia acogió a la inmigrante.	35.8%

# Summary

- Adult heritage speakers and adult immigrants omit DOM with animate objects much more than native speakers.
- There is no difference between the three bilingual groups: simultaneous bilinguals, sequential bilinguals and adult immigrants.

# Discussion

- Adults are more accurate than the children, but still reach non-native levels of ultimate attainment.
- No difference between simultaneous and sequential bilinguals was found for the children or the adults.
- Evidence of incomplete acquisition of DOM in the adults and in the children
- Evidence of attrition of DOM in the adult immigrants.
- Adult immigrants are the main source of input to the heritage speakers

# Conclusion

Non-native command of DOM in Spanish bilinguals result from:

Transfer from the dominant language

Delayed/incomplete acquisition in childhood

Attrition in the adults who are the input to the second generation.

Although there is development with age (adult heritage speakers are more accurate than child heritage speakers), all these factors contribute to the maintenance of an incompletely acquired feature or fossilization of DOM in Spanish.

# Acknowledgements

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