# Adapting the MLAT-ES into Catalan: when young learners' age is not just any other variable 

Maria-del-Mar Suárez<br>Universitat de Barcelona

## What is foreign language aptitude?

"an individual's initial state of readiness and capacity for learning a foreign language, and probable facility in doing so given the presence of motivation and opportunity" (Carroll, 1981, p. 86)

## How is aptitude traditionally measured?

MLAT $($ Carroll \& Sapon, 1959) > MLAT-E (Carroll \& Sapon, 1959) > MLAT-ES (Stansfield et al., 2004, 2005)
$>$ MLAT-EC (Suárez 2010).

## Language-neutral aptitude tests?

- LLAMA (meara, 2005) $\rightarrow$ less valid in agglutinative (Mikawa \& De Jong, 2021) and in logographic contexts (Rogers et al, 2017)


## Bilingual contexts?

## Language dominance/ preference

## Language distance

## Bilingual contexts and... young learners?

## Research questions

1. What type of challenges were faced when adapting the MLATEC from the MLAT-ES?
2. Were the effects of these challenges the same across ages?

## Participants

Participants' Age and Grade

|  | All subjects |  |  |  | MLAT-EC group |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grade | N | Age | SD | N | Age | SD |
| 3 | 123 | 8.8 | .52 | 57 | 8.8 | .66 |
| 4 | 137 | 9.8 | .43 | 62 | 9.7 | .36 |
| 5 | 118 | 10.8 | .33 | 61 | 10.8 | .34 |
| 6 | 120 | 11.8 | .3 | 60 | 11.9 | .33 |
| 7 | 131 | 12.9 | .45 | 64 | 12.8 | .44 |


| Language preference $\rightarrow$ overruled (Suárez \& Stansfield, 2023) |  |  |
| :--- | :--- | :--- |
| Catalan | Spanish | No preference |
| 147 | 87 | 70 |

## $\mathrm{N}=304$ as just one pool

## Instrument: MLAT-EC (suárez, 2010)

| Part | MLAT-ES/EC <br> (grades 3 to 7) | Construct |
| :---: | :---: | :--- |
| $\mathbf{1}$ | Palabras ocultas / Paraules ocultes | - vocabulary <br> - sound-symbol association |
| $\mathbf{2}$ | Palabras que se corresponden / Paraules que <br> es corresponen | - grammatical sensitivity |$|$| Palabras que riman / Paraules que rimen |
| :--- |
| $\mathbf{3}$ |

## RQ1 <br> Challenges Part 1

15. bakka $\quad$ A és dolça $\quad$ B part de la cara $\quad$ C fa llet $\quad$ D amb arrugues
```
<g> T /g/ and/3/
<s> T /s/ and/z/
<l>}->\mathrm{ letter el <l>, capital ai <l>or number <1>?
```


## RQ1 <br> Challenges Part 2

6. Em vaig tallar el DIT amb un ganivet.

El meu germà s'oblidà les claus a casa.


RQ1
Challenges Part 3


## RQ1

## Challenges Part 3

| Spanish Alphabet |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Letter | A | B | $\mathrm{C}^{1}$ | D | E | F | G | H | I |
| Name | $a$ | be, be larga | ce | de | $e$ | efe | ge | hache | $i$ |
| IPA | /a/ | /b/ | /k/, /日/ | /d/ | /e/ | /f/ | /g/, /x/ | silent | /i/ |
| Letter | J | K | L | M | N | $\tilde{\mathbf{N}}$ | 0 | P | Q |
| Name | jota | ka | ele | eme | ene | eñe | $o$ | pe | cu |
| IPA | /x/ | /k/ | /1/ | /m/ | /n/ | /n/ | /o/ | /p/ | /k/ |
| Letter | $\mathbf{R}$ | S | T | $\mathbf{U}$ | V | W | X | Y | Z |
| Name | erre | ese | te | $u$ | ve, uve, vecorta | uvedoble vedoble dobleve doble u | equis | igriega ye | zeta |
| IPA | /r/, /r/ | /s/ | /t/ | /u/ | /b/ | /gw/,/b/ | /ks/, /x/ |  |  |



## RQ1 <br> Challenges Part 4

MLAT-ES and MLAT-EC Part 4 Number-Word Correspondences

|  | MLAT-ES numbers | Spanish correspondence | Catalan correspondence |
| :---: | :---: | :---: | :---: |
| 1 | co | uno | u |
| 2 | vein | dos | dos |
| 3 | ras | tres | tres |
| 10 | silca | diez | deu |
| 11 | silca co | once | onze |
| 12 | silca vein | doce | dotze |
| 13 | silca ras | trece | tretze |
| 20 | vinca | veinte | vint |
| 21 | vinca co | veintiuno | vint-i-u |
| 22 | vinca vein | veintidós | vint-i-dos |
| 23 | vinca ras | veintitrés | vint-i-tres |
| 30 | rasca | treinta | trenta |
| 31 | rasca co | treinta y uno | trenta-u |
| 32 | rasca vein | treinta y dos | trenta-dos |
| 33 | rasca ras | treinta y tres | trenta-tres |

## MLAT-ES = MLAT-EC

- All items were inspected for content validity, difficulty, and reliability rendering similar results for both tests although the MLAT-EC has one item less than the MLAT-ES. (see Suarer, 2010, Suarez \& Sansfield, 2023).


## RQ2 Results: cognitive development

Parts $1,2 \& 3$ significantly longer (and more unanswered items) for grades 3 and 4

Percentages of Unfinished Parts in the MLAT-EC Across Grades

| Grade |  | 3 | 4 | 5 | 6 | 7 | All grades |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| N |  | 57 | 62 | 61 | 60 | 64 | 304 |
| Part 1 | Unfinished | 46 | 21 | 16 | 18 | 11 | 112 |
|  | Percentage | $37 \%$ | $15 \%$ | $2 \%$ | $15 \%$ | $6 \%$ | $14 \%$ |
| Part 2 | Unfinished | 22 | 10 | 6 | 14 | 11 | 63 |
|  | Percentage | $38.6 \%$ | $16 \%$ | $10 \%$ | $23 \%$ | $17 \%$ | $20.7 \%$ |
| Part 3 | Unfinished | 39 | 13 | 16 | 15 | 12 | 95 |
|  | Percentage | $6.8 \%$ | $21 \%$ | $26.2 \%$ | $25 \%$ | $18.8 \%$ | $31.3 \%$ |

Spelling confusion and lack of certain vocabulary (mathematical terms, f. ex.) played also a part on these parts, especially Parts 1, and 3.

## RQ2 Results: Cognitive development

- Metalinguistic awareness from grade 5 in Part $2 \rightarrow$ explicit teaching of grammatical terms.
- Part 4 presented the same challenges and types of confusion in the MLAT-ES than in the MLAT-EC across grades.


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## Conclusions

- Catalan and Spanish are close Romance languages but not translatable word per word
- Same response patterns observed across grades:
- Vocabulary (parts 1 \& 3)
- Literacy (parts 1 to 3)
- Cognitive development (all test)

But

- Cultural challenges solved in the MLAT-EC
- Unaffected by language preference
- Valid language aptitude test in a minoritarian language


## Thank you!

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