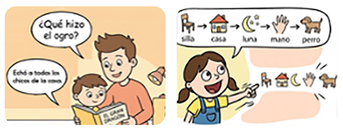
ASSESSING EARLY LITERACY PRECURSORS

DEVELOPMENT AND PILOT VALIDATION OF A SCREENING TOOL FOR ARGENTINE PRESCHOOLERS



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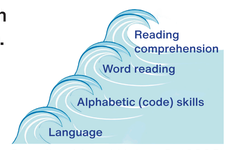
PROBLEM & CHALLENGES



- In Argentina, concerns over reading difficulties can be observed in a significant proportion of students **(46% in third grade with minimum level of competence according to ERCE, 2020, 2021)** that means below the regional level.
- Research efforts were aimed at strengthening early literacy precursor skills from preschool education, to develop valid and contextually appropriate assessment instruments.

PURPOSE

- To conduct a pilot study of a **screening test designed to assess linguistic and cognitive skills predictive of reading acquisition in children aged 4 and 5 from diverse sociocultural backgrounds.**
- To describe the development and preliminary analysis of **HA.PRE.LEC, a screening tool for the early assessment of pre-reading skills in Rioplatense Spanish**, which posits that early oral language forms the basis of Reading.
- The instrument assesses **three dimensions** consistent with RIL model (Hjetland et al. 2019, Snowling & Hulme, 2025).
  - **Oral language (receptive vocabulary and morphosyntactic knowledge)**
  - **Knowledge of the alphabetic principle**
  - **Rapid Naming**



Snowling M and Hulme C. (2025) *The Reading Is Language Model.*

METHOD

Instrumental pilot study, it comprises **five tasks:**

- Picture Vocabulary
- Sentence Repetition
- Initial Sound Recognition
- Sound-Letter Correspondence
- Rapid Naming



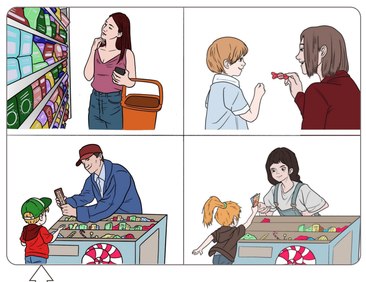
Administration was individual at school and lasting approximately 20 minutes per child.

These were reviewed by expert judges prior to validation. In this phase, other tasks were tested: a syllable segmentation task and others involving memory of commands and pseudowords repetition. These were discarded due to difficulties in understanding the instructions and in accurate scoring.

* **Participants:** Ninety children *(M=60.3 months; SD=6.5; 56,7% female; 4 years n=42 & 5 years n=48)* **from four preschool educational institutions located in the provinces of Buenos Aires and Río Negro, from lower-middle socioeconomic background.**

TASKS DESCRIPTION

1. PICTURE VOCABULARY



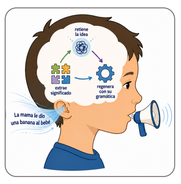
Pilot test: 39 items — Final Test 25 items
(70% nouns, 20% adjective, 10% verbs)

Pilot test: 20 items — Final Test: 15 items
(35% simples & 65% complex)
*SI=Simple intransitive;
*ST=Simple transitive;
*SD=Simple ditransitive;
*CC=Complex coordinated;
*CSS=Complex substantive subordinate;
*CSR=Complex relative subordinate;
*CSA=Complex adverbial subordinate.

2. SENTENCE REPETITION

2.1. Simple sentences

* Juan cerró el cajón con llave (ST)
* Las chicas corren rápido a sus casas. (SI)
* Papá le regaló una bici a mi hermana. (SD)



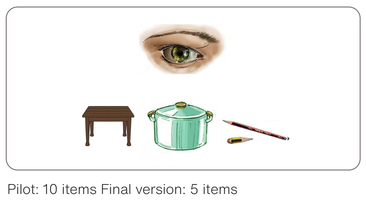
2.2. Complex sentences

* Los nenes querían salir al patio pero estaba lloviendo. (CC)
* Dijo tu abuela que te vayas a dormir temprano. (CSS)

Audio task

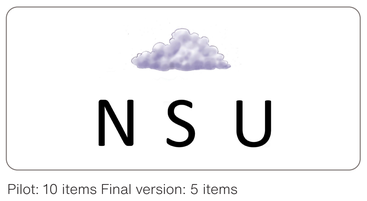
* La caja que tiene lápices de colores es de Pablo (CSR)
* Como el kiosco estaba cerrado, mamá no nos trajo los chocolates (CSA)

3. INITIAL SOUND IDENTIFICATION



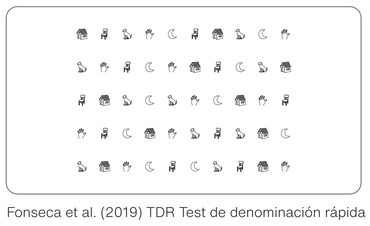
Pilot: 10 items Final version: 5 items

4. S/L CORRESPONDENCE

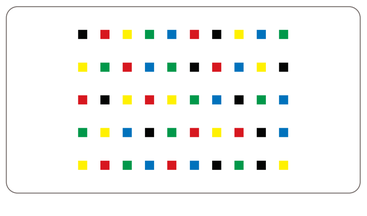


Pilot: 10 items Final version: 5 items

5. RAPID NAMING



Fonseca et al. (2019) TDR Test de denominación rápida



RESULTS

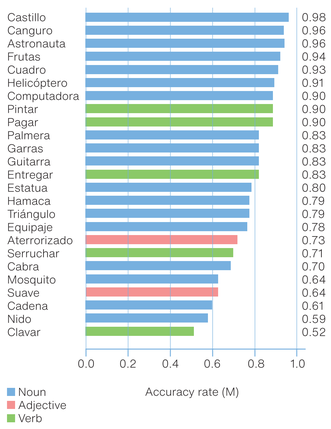
Descriptive statistics for HA.PRE.LEC. (Subtests by age 5 n=48 & 4 n=42)

Subtest	M	M	SD	M	SD	ΔM
		GROUP 5		*GROUP 4*		*(GR5-GR4)*
Accuracy measures (higher=better)						
Vocabulary (max 25)	ω=.784	20.80	3.27	19.20	4.08	+1.60*
Sentence repetition (max 67)	ω=.911	55.30	10.39	51.40	13.24	+3.90
Initial sound identification (max 5)	ω=.727	3.35	1.58	2.29	1.45	+1.06*
Sound-letter correspondence (max 5)	ω=.628	3.77	1.32	2.39	1.54	+1.38*
Rapid automatized naming — RAN (seconds, lower = better)						
RAN objects		75.86	22.21	97.05	19.74	-21.19*
RAN colors	ω=.774	86.40	34.08	115.19	36.99	-28.79*

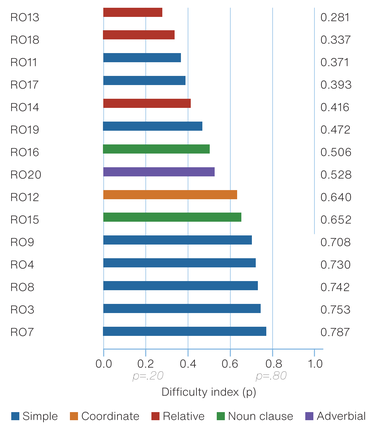
Note. M=mean; SD=standard deviation. ΔM=Group 5 minus Group 4. Positive values indicate higher scores in Group5; for RAN negative values indicate faster performance in Group 5

The instrument showed an age-appropriate developmental progression and statistically significant differences in almost all tests*
Also demonstrates acceptable to excellent internal consistency (ω), supporting its reliability as a screening tool.

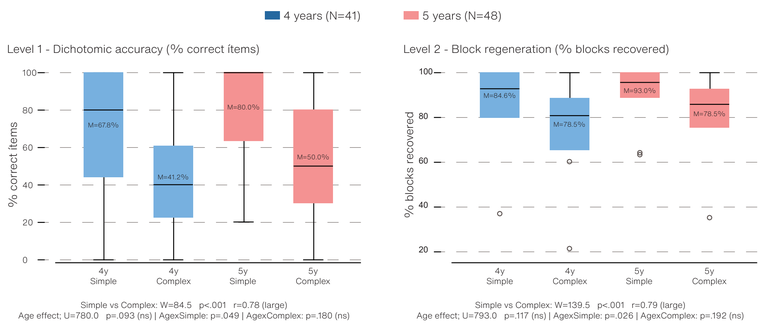
VOCABULARY



SENTENCE REPETITION



SENTENCE REPETITION: LEVEL 1 AND LEVEL 2 BY SENTENCE TYPE AND AGE



Simple vs Complex: W=84,5 p<.001 r=0.78 (large)
Age effect; U=780.0 p=.093 (ns) | AgexSimple: p=.049 | AgexComplex: p=.180 (ns)

Simple vs Complex: W=139,5 p<.001 r=0.79 (large)
Age effect; U=793.0 p=.117 (ns) | AgexSimple: p=.026 | AgexComplex: p=.192 (ns)

Simples vs. Complex: N1: W=84,5 p<,001 r=,78 N2: W=139,5 p<,001 r=,79
Total age effect: p=,093 (ns) The pattern holds within each age group.

INITIAL SOUND IDENTIFICATION & SOUND AND LETTER CORRESPONDENCE

Initial sound identification. Item-level descriptive statistics and reliability indices

Item	M	Item-test correlation	ω if item deleted
1.ROSA	0.77	.52	.69
2.ALA	0.73	.45	.70
3.ISLA	0.69	.53	.69
4.SAPO	0.67	.37	.72
5.TAZA	0.50	.50	.70

Sound-letter correspondence. Item-level descriptive statistics and reliability indices

Item	M	Item-test correlation	ω if item deleted
1.UVA	0.92	.48	.67
2.RATA	0.77	.25	.73
3.MAMA	0.75	.50	.69
4.PAPAS	0.69	.49	.69
5.DEDO	0.65	.43	.71

PARTIAL CORRELATION (RHO) BETWEEN MEASURES CONTROLLED FOR AGE (N=450) FINAL TEST SAMPLE

	1	2	3	4	5	6
1. Vocabulary	—					
2. Sentence Rep.	.40***	—				
3. RAN colors	−.23***	−.27***	—			
4. RAN objects	−.26***	−.29***	.77***	—		
5. IS-SLC	.45***	.46***	−.42***	−.38***	—	
6. SLC	.39***	.39***	−.42***	−.37***	.86***	—
7. IS	.38***	.37***	−.36***	−.31***	.85***	.48***

* p < .05, ** p < .01, *** p < .001.

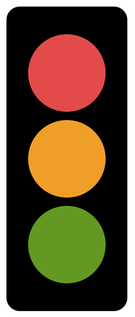
CONCLUSIONS & DISCUSSION

The preliminary study of HA.PRE.LEC. suggests a **robust and promising structure** for screening literacy-related risks in young children.
The development process —including expert judgment and post-pilot revisions— resulted in **adequate reliability levels** across most subtests.

CRITICAL GAP ADDRESSED
Rapid, easy-to-administer assessment adapted to *"Rioplatense Spanish"*, designed for educational counselors in kindergartens-based use prior to formal primary education.

THREE-DOMAIN STRUCTURE
Oral language, alphabetic principles, and RAN enable identification of specific risk profiles to guide early preventive intervention.

EQUITY IN EARLY LITERACY
Timely identification of skills requiring reinforcement promotes more equitable conditions for literacy acquisition.



POSSIBLE DELAY
Furher assessment recommended

AT RISK
Classroom guidance for educators

EXPECTED RESULTS
Skills within expected range

ONGOING WORK — 2025/2026

The instrument is being administered to a normative sample of 450 children aged 4-5 from state and private schools.

Analyses examine reliability, concurrent validity, discriminative capacity through a clinical sample of children with Developmental Language Disorder (DLD) and predictive validity in reading and comprehension in first grade.



REFERENCES

- Fonseca L, Corrado I.; Pujals, M.; Migliardo G.; Mendivelzúa A.; Sánchez M.; Lagomarsino, I.; Lasala E.; García Blanco L.; Alegre M. y Simián M. (2019) *TDR Test de denominación rápida.* Autores de Argentina. Buenos Aires. ISBN 978-987-761-756-6
- Hjetland, Hanne N., Arne Lervåg, Solveig-Alma H. Lyster, Bente E. Hagtvet, Charles Hulme & Monica MelbyLervåg (2019). *Pathways to reading comprehension: A longitudinal study from 4 to 9 years of age.* Journal of Educational Psychology 111/5: 751–763. https://doi.org/10.1037/edu0000321
- Marder, S.; Resches, M.; Borus, M.R.; Fonseca, L; Barreyro, JP.; Arista, G. (2026). *Desarrollo y análisis preliminar de "HA.PRE.LEC.": Una herramienta para la evaluación temprana de habilidades prelectoras en español.* Quintú Quimun. Revista de Lingüística No 10 (1) Dossier "Aportes de la lingüística a la alfabetización inicial" Q140. doi:0.5281/zenodo.21035983 https://revele.uncoma.edu.ar/index.php/lingustica/en/article/view/7125
- Snowling M. & Hulme Ch. (2025). *The Reading Is Language Model: A Theoretical Framework for Language and Reading Development and Intervention.* Annual Review Developmental Psychology. 7:195-218. https://doi.org/10.1146/annurev-devpsych-111323-084821
- UNESCO. (2021). *Los aprendizajes fundamentales en América Latina y el Caribe, Evaluación de logros de los estudiantes: Estudio Regional Comparativo y Explicativo (ERCE 2019);* Resumen ejecutivo. https://unesdoc.unesco.org/ark:/48223/pf0000380257
- UNESCO. UNICEF y CEPAL. (2022). *La encrucijada de la educación en América Latina y el Caribe: Informe regional de monitoreo ODS4-Educación 2030.* Perfiles Educativos, 44(178), 182- 199. https://doi.org/10.22201/iisue.24486167e.2022.178.61123

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