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ASSESSMENT OF INFERENTIAL AND MONITORING ABILITIES IN SPANISH –SPEAKING CHILDREN

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Abstract:
This study sought to design and validate two tests to assess inferential and monitoring abilities in reading comprehension. For the Inferences test, we adapted an inference task, and for Monitoring, we designed an error detection task. Both took into account psycholinguist aspects (type of inference, type of inconsistency), as well as Spanish grammar, lexicon, and general knowledge. A sample of 108 children aged 8-9 years old completed both tasks, along with Word Reading and Non-Word Reading Children, Vocabulary and Verbal Analogies. Reliability of both tests was adequate. For the Inferences task, there was a main effect of Type of Inference; for the Monitoring task, there was a main effect of type of Type of Inconsistency. Correlations between Inferences and Monitoring were significant and middle sized, as well as with Vocabulary and Verbal Analogies, but correlations between these four measures and decoding (a combination of Word and Non-Word Reading) were low and non-significant. Overall, the tests seem reliable and valid measures of reading comprehension inferences and monitoring for local Spanish speaking children.

Keywords: *reading comprehension-inferences-monitoring-assessment*

Reading comprehension is a complex ability mediated by a number of cognitive processes, ranging from basic grapheme decoding skills, word recognition, syntactic parsing, up to higher processes needed to integrate sentences in order to construct a global, organized and coherent situation model of the meanings conveyed by the text [1, 2, 3]. In order to construct this coherent mental representation the reader must draw inferences, adding information that is not explicitly stated in the text on the basis of his or her previous knowledge [4, 1, 2]. Inferences can be classified in multiple ways, a common view distinguishes local and global ones [4]. Local, anaphoric, or referential inferences link a word or part of a sentence to a previous text element. Global or elaborative inferences establish general coherence, connecting the semantic content of a word or sentence to the situation model. The ability to draw inferences and to derive semantic representations from text has been identified as an important predictor of reading comprehension in children beyond decoding and lexical processing, although these three aspects of reading seem to be interrelated in complex ways [5, 6, 7, 8, 9, 10, 11]. On one hand, if decoding is poor, reading comprehension is generally compromised [12, 9, 7]. The relationship between phonological awareness, decoding, and initial word reading is well established [13, 14, 15, 16, 17, 18, 19]. However, reading comprehension can fail beyond these basic skills. A series of studies found a sub-sample of poor comprehend who had normal decoding skills, such as speed of non-word reading [20, 21, 8, 11]. Studies by Oak hill et al. [22, 23, 24] identified children who obtained normal scores in word reading accuracy, but showed impaired reading comprehension at the inferential text level. For example, in Yuill and Oak hill's study [24], they had more difficulties answering questions about anaphoric referents (e.g. Pronouns referring to a previous sentence, such as *she* in *the girl went in to the shop. She bought some bread*), and in elaborative inferences (e.g. *A surprise parcel for Peter and Jane arrived on Saturday*; "*How do you know that the children were not expecting the parcel*?").

Extracting meaning from text seems to be related to semantic knowledge and linguistic ability [7]. In a longitudinal study of poor comprehend, Nation et al. [25] found that verbal ability was significantly related with reading comprehension. Although vocabulary knowledge and expressive

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language at five years old were not significant predictors of reading comprehension difficulties at eight years old, it could be partially attributed to low difficulty of word tests and restriction of the sample. In general, studies have shown that children who exhibit poor comprehension despite normal performance in decoding skills may have difficulties with vocabulary and word knowledge, and other aspects of language such as grammar and figurative uses [26, 5, 20, 27, 28, 29, 30].

As compared with basic reading skills, there are fewer psychometric instruments to evaluate higher order comprehension abilities. Studies frequently employ the Neal Analysis of Reading Ability test (NARA) [31], which requires children to read out loud several stories and answer questions about literal and inferential information afterwards. Two scores are obtained: one for errors in reading out-loud, another for comprehension responses. However, the independence of both scores has been questioned [7, 10]. Spooner et al. [10] compared children with low and high decoding abilities but matched for listening comprehension, and found that NARA measures were related: children with decoding difficulties also had lower performance in comprehension questions. They attributed this finding, in part, to an instrument artifact, namely, Nora's continue/discontinue rule based on the number of decoding errors. So then, assessment of both aspects of reading should be done separately. Assessment of higher order processes in reading comprehension should also take into account other confound variables, such as memory and speech production demands when responding. Spooner et al. [10, exp. 3] obtained better performance with recognition of correct responses than open-ended answers: while skilled comprehend were unaffected by question type, less skilled comprehend scored significantly higher with forced-choice questions than with open-ended questions. Nevertheless, forced-choice recognition might not be the best comprehension assessment method, given that the groups did not differ with this technique. Memory and lexical choice demands in response production were investigated by Cain and Oak hill [32]; they evaluated literal and inferential questions (anaphoric and elaborative) in two administration conditions, with or without the text when responding. When the text was absent, high and low skilled readers as assessed by the NARA [31] differed in both literal and inferential questions, but when it was present, differed only in the inferential questions. In Spanish, a frequently used reading comprehension test is PROLEC [33], which has different subtests for decoding and reading comprehension at the text level. The text comprehension subtest requires literal and inferential answers after reading four narrative short texts. Nevertheless, a large scale study of 524 children aged 6-8 years old found significantly more accurate responses to inferential than to literal questions [34], which suggests difficulty is tied to remembering exact information, and thus the test could be measuring memory rather than comprehension. Furthermore, although questions would admit several correct responses, or variations in the answers, PROLEC scoring only considers one correct response [34]. In synthesis, if higher order comprehension processes such as inferences are the target of assessment, the instrument should not score also for decoding ability, should avoid memory and lexical production demands by keeping the text present when responding, and should allow for response variation and difficulties in production, and forced-choice recognition might not be advisable. Oak hill, Cain and Bryant [2003] developed an experimental task to measure literal and inferential aspects in children's narrative reading comprehension that fulfills the criteria mentioned above. We have adapted and validated this task to employ it as a psychometric measure of inferences in reading comprehension for Spanish speaking children. One of the objectives of the present study is to present this adaptation and validation in an 8-9 years old local sample.

In order to build a coherent mental model, the reader not only needs to access previous knowledge; he or she must supervise ongoing comprehension to detect breaches in continuity, inconsistencies or errors, and activate repair strategies. Monitoring is another high-order ability related to reading comprehension, defined as the executive function or meta-comprehension processes that run parallel to comprehension, controlling and regulating the process, and detecting gaps and inconsistencies [36, 7, 37]. Error detection tasks have been usually employed to assess individual differences in monitoring or meta-comprehension [38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 24].

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They present texts with inconsistencies or contradictions between a character's description and his or her behavior (internal or structural consistency), or between information presented in the text and previous knowledge (external consistency), or errors in the quantity and quality of information provided by the text. For example, Marksman [45] employed an error detection task in which children read short stories, some of which contained conflicting information (e.g. *there is absolutely no light at the bottom of the ocean...When it is that dark the fish cannot see anything.... Some fish that live at the bottom of the ocean can see the color of their food; that is how they know what to eat*). They asked children to suggest any changes that they thought would make the stories easier to understand. Younger, and lower reading comprehension ability children, detected fewer inconsistencies, but performance was better if they were warned about inconsistencies and were provided with a strategy to detect them. Oakhill et al. [46] addressed error detection (spontaneous, and with instructions to detect them) in 9-10 years-old children with good or poor comprehension ability, controlling for decoding and vocabulary. They manipulated the amount of information between contradictory statements, and measured children's working memory capacity. Poor comprehenders had more trouble with inconsistencies, and performance was worse when the inconsistent information was not adjacent, but this effect was not explained by working memory capacity. Oakhill et al. [46] attributed this monitoring difference to defficiencies in the global mental model constructed by the poor comprehenders, a suggestion also made by Markman [45].
In Spanish, Jaramillo, de la Montana and Rojas [49] administered two texts with internal and external inconsistencies to a simple of 60 9-10 years old Colombian children. They found that external consistency errors (such as "*rabbit… short ears*") were better identified than internal inconsistencies (such as "*had killed the coyote*" and several sentences later "*when the coyote saw it*"). However, the task asked for reading out-loud and verbalizing thoughts along reading, but did not explicitly state that the texts had inconsistencies that were to be found. Furthermore, 26 % of the children reported a lack of knowledge of key text words, thus confounding monitoring with lexical processes. And although they were measuring individual differences, they did not analyze the task's psychometric characteristics. In synthesis, reading comprehension monitoring ability has been measured with error detection tasks, but there is not such an instrument in Spanish. In the present study we have constructed and validated a test of comprehension monitoring for Spanish speaking children.
So then, this paper presents the design and validation of two tests aimed at higher level processes in reading comprehension, inferences and monitoring. We have studied item characteristics of the new tasks, reliability, and relation to other reading measures to establish validity. A sample of urban Argentinean 6-8 years-old children completed both tests, along with measures for basic reading skills, Word and Non-Word Reading, and Reading Speed, from the Children Neuropsychological Assessment Battery (*Bacteria de Evaluation Neuropsychological Infantile – ENI*) [50], and for verbal general ability and word knowledge, Verbal Analogies - ENI [50] and Vocabulary – WISC-III [51].

Method

Participants

One hundred and eight children (50 girls and 58 boys) aged 8-9 years old (mean age = 8.52, s.d. = 0.66) native Spanish speakers, who attended two elementary schools in Mar del Plata, Argentina, completed all tasks. School authorities approved their participation and provided support for the study. Parents were informed about the research aims and tasks to be performed, and gave written consent.

Materials

Inferences. The reading comprehension inferences task (*Inferences*) was an adaptation of Cain and Oak hill's [32], which consisted of three short narrative stories followed by six questions: two about literal information, two requiring anaphoric inferences bridging two sentences (e.g. *Helen looked down on the beach from her hotel window. She could see lots of sunbathers and a man walking*

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along selling those ice-creams and cold drinks. Question: Where was the man selling ice-creams?) And two elaborative questions requiring previous knowledge to make sense of the information conveyed by the text (e.*g. Sam and Helen went on holiday to France. The journey took over two hours. Sam sat by the window. He looked down on the mountains as they passed overhead. Question: How did Helen and Sam travel to France?)* A fourth text provided by the original authors (Cain, personal communication, 2006) was also included. In addition, a fifth text practice text, and adequate instructions for the local context were generated.

Adaptation of the stories included two psychologists and a linguist expert, who inspected the texts for linguistic content and previous knowledge required, and informal pilot testing with children. Several changes were performed in an iterative process. Regarding anaphoric references, the referent of the anaphora was always placed in the previous sentence. Other modifications were related to Spanish language, such as eliminating repetitions of the subject of the sentence (English always requires a subject, in Spanish such a repetition is not required and is infrequent in normal communication), and adding some pronouns. For example: "*Jake was very hungry when he got home"* was substituted by "*Estaba muy hambriento cuando llegó a su casa*". However, care was taken to avoid facilitation of anaphoric inferences in the critical parts of the texts. As for the elaborative inferences, modifications were related to the local children's general knowledge, such as places, scenarios, or objects (e.g. *Chile* instead of *France*, *took a shower* instead of *got into the water*, *popcorn* instead of *candy floss*).

The Inferences task thus designed consisted of a practice text and four experimental texts (approximate length: 12 - 14 sentences), each followed by six questions. Questions were answered with the text in sight, not from memory recall. A set of possible correct answers was determined, as well as alternative responses with partial scoring. The maximum possible score was 24 points (8 for literal, 8 for anaphoric, and 8 for elaborative information).

Monitoring. An error detection task [38, 45, 52] was constructed to assess reading comprehension monitoring (*Monitoring*). We wrote six texts adapted from Marksman [45] and children's books, embedding in each story a semantic inconsistency or contradiction. Two presented an internal inconsistency, that is, information inconsistent with a previous statement. For example, "*The dog and the cat hated each other. The dog chased the cat and bit his tail... The dog, whose tail ached ...*" [original, in Spanish]. Other two stories presented a structural or coherence inconsistency, where a sentence about a character's behavior contradicted previous trait information. For example, "*The city of White Houses has a lot of friendly neighbors... no one as generous as the water man.... The water man, angry as always...*" [Original, in Spanish]. The remaining two stories presented an external inconsistency, that is, a sentence contained information that did not conform to the reader's general knowledge. For example, "*On Sunday morning, Ines and her sister woke up early. They ... went to the bakery to buy croissants and other pastries. When they got back home, they went directly to the kitchen to prepare dinner to surprise their parents...*" [Original, in Spanish]. In addition, instructions and a practice text with a structural inconsistency were developed. As for Inferences, the Monitoring task was refined in an iterative process with judges and informal pilot testing.

The final version of the task consisted of a practice text and six experimental items (approximate length: 4 sentences). The inconsistent information was in adjacent sentences for two stories, and with one intervening sentence in the other two stories. The child was asked to read each text out-loud, to detect (point out) which part of the text was incorrect or did not make sense, and to explain why. If the child did not perform adequately in the practice text, the experimenter showed the error and how to detect it. The maximum total score was 6.

Decoding ability. Participants completed two subtests, Word Reading and Non-Word Reading, from the Children Neuropsychological Assessment Battery (*Batería de Evaluación Neuropsicológica Infantil – ENI*) [50]. These tests required reading out-loud printed words and non-words, and were scored for accuracy. Scores were combined to generate the *Decoding* measure.

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Verbal ability and conceptual knowledge. Two tests measured the child's vocabulary and conceptual knowledge, and verbal ability. In Vocabulary (WISC – III) [51] children had to define meanings of frequent and infrequent words. Verbal Analogies - ENI [50] presented word pairs, and the child's task is to explain what they have in common (e.g.: *freedom-justice*; *eye- nose* [original, in Spanish]).

Procedure

After parent's informed consent, children were tested individually in a quiet room at their school, in a two session lasting half hour approximately. Tasks were completed in the same order. Word Reading, Non-Word Reading, Verbal Analogies, and Vocabulary were administered according to published norms. For the Inferences task, a booklet with each story in a different page was presented to the child. Instructions asked for careful reading at his or her own pace, to answer questions about each story. A training story was completed first, with feedback and explanation of the correct answers in case of errors. Literal answers were transcribed and then scored according to pre-established criteria as incorrect (0), partial (0.5), or correct (1) for each answer, for a total of 24 answers. Monitoring stories were also presented in printed cards in a booklet. The order of presentation was contra balanced. The Monitoring task's instructions required the child to read each text out-loud and to point out which part of the text was incorrect or did not make sense, providing an explanation for it. If the child did not perform adequately in the practice text, the experimenter showed the error and how to detect it. Scoring as correct (1) required detection of inconsistency and explanation of the error, for a total of six answers.

After all the children were tested, parents were offered a written feedback, in general terms, about their child's performance.

Results

Both new tasks, Inferences and Monitoring, were analyzed first. Item analyses for each task are shown in Tables 1 and 2. In both cases, items varied in their overall difficulty, and also in their correlation with the total scale. Overall internal consistency was adequate: for Inferences, Cronbach's $\alpha = 0{,}69$; for Monitoring, Cronbach's $\alpha = 0{,}72$. For the Inferences task, there was a main effect of Type of Inference ($F_{(2,105)} = 109.34$; $p < 0.001$, $\eta^2 = .68$). Paired comparisons showed that elaborative inferences were more difficult than bridging (t_{106}=11.349 p<.001) and literal ones ($t_{106} = 14.249$ $p < .001$), but there were no differences between literal questions and those requiring bridging inferences ($t_{106} = -1{,}318$ $p = .190$). For the Monitoring task, there was a main effect of type of error detection ($F_{(1,107)} = 202{,}962$, $p < 0.001$, $\eta^2 = .65$). External inconsistency were significantly more difficult than structural ($t_{107} = 5.603$ p< .001) and internal ones ($t_{107} = 5{,}308$ $p < .001$).

Table 1.

Item Statistics (Mean Score, S.D., Item-Test Correlation, Difficulty Index) as a Function of Type of Inference for the Inferences Task

Type of Inference	Mean Score (S.D.)	S.D.	Item-Test Correlation (corrected)	Mean Difficulty Index
Literal	0.74	0.2	.460	79.11
Bridging	0.71	0.18	.584	72.89
Elaborative	0.46	0.85	.524	41.79

Table 2.

Item Statistics (Mean, S.D., Item-Test Correlation, Difficulty Index) as a Function of Type of Inconsistency for the Monitoring Task

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Item	Type of Inconsistency	Mean	S.D.	Item-Test Correlation (corrected)	Difficulty Index
1	Internal inconsistency	0.70	0.46	0.359	29.6
2	Internal inconsistency	0.42	0.50	0.495	58.3
3	Structural inconsistency	0.34	0.48	0.342	65.7
4	External inconsistency	0.43	0.50	0.448	56.5
5	Structural inconsistency	0.39	0.49	0.586	61.1
6	External inconsistency	0.28	0.45	0.507	72.2

Descriptive statistics for Inferences, Monitoring, and tests for basic reading skills and word and conceptual knowledge are shown in Table 3. Measures approximated normal distribution, with values of skewness and kurtosis under 1. Correlations between these tests are shown in Table 4. Inferences and Monitoring presented a significant and middle sized correlation ($r = 0.49$). They also both exhibited significant and similar magnitude correlations with Vocabulary and Verbal Analogies (r between 0.30 - 0.60). On the contrary, correlations between these four measures and the decoding one (a combination of Word and Non-Word Reading) were low and non-significant.

Table 3.

Descriptive Statistics (Mean, S.D., Min and Max Scores, Skewness and Kurtosis) for Inferences, Monitoring, Word Reading, Non-Word Reading, Vocabulary and Verbal Analogies

Task	Min	Max	Mean	S.D.	Skewness	Kurtosis
Inferences	1	21	14.76	3.83	-.79	.74
Monitoring	0	6	2.58	1.84	.13	-1.25
Decoding	14	19	17.35	1.10	-1.17	.806
Vocabulary	1	38	17.91	6.97	.23	-.07
Verbal Analogies	0	11	6.17	2.12	-.41	.47

Table 4.

Correlations Between Inferences, Monitoring, Word and Non-Word Reading, Vocabulary and Verbal Analogies

Task	*2*	*3*	*4*	*5*	*6*
1. Inferences	.493*	.088	.099	.318*	.451*
2. Monitoring	-	.102	.090	.540*	.608*
3. Word Reading		-	.071	.068	.168
4. Non-Word Reading			-	.320*	.150
5. Vocabulary				-	.522*
6. Verbal Analogies					-

* $p < 0.01$ (2-tailed).

Discussion

We have presented two tasks aimed at measuring inferential and monitoring reading comprehension abilities for Spanish speaking 8-9 years-old children. The Inferences task was an adaptation of Cain and Oak hill's [32]. The Monitoring task was based on the error detection paradigm employed by Marksman [45]. In both cases, stories were adapted according to Spanish grammar, lexicon, and local children's general knowledge. Items were systematically constructed to reflect psycholinguistic variables: type of inference (questions about literal content, anaphoric or bridging, and elaborative inferences); and type of error to be monitored (internal, structural, or external inconsistency). Length of the stories was taken care of, as well as distance of key information within the story.

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Overall distribution of Inferences and Monitoring scores was normal. Regarding reliability, internal consistency indexes were psychometrically adequate, Combat's α =.69 for Inferences and Combat's α =.72 for Monitoring. Test items varied in their correlation with the total score and in difficulty, providing adequate sampling. Difficulty was associated with the psycholinguistic requirements. For the Inferences task, literal questions were significantly easier than those requiring bridging and elaborative inferences, a result also obtained by Bower-Crane and Snowing [47], Cain and cols. [32, 5] and Nation et al. [21]. For the Monitoring task, internal inconsistencies were significantly more difficult than structural and internal ones, consistent with Jaramillo et al. [49] and Williams et al. [48].

Inferences and Monitoring presented significant and middle sized correlations between them, and with Vocabulary and Verbal Analogies. Cain et al. [5] also found an association between text-level variables and Vocabulary, but poorer correlations between inferential skills and error detection. The close relationship between inferences and monitoring could be supporting Marksman [45] who argued that monitoring depends on a global representation of the text, which requires inferences. Oak hill et al. [46] also made the suggestion that monitoring relied on a unified and coherent mental model of the text. Also in line with the previous literature, both these text-level comprehension factors seem to rely, or interact with, more general verbal abilities and semantic knowledge [5, 35, 21]. On the contrary, decoding skills were not significantly related with any of these measures. This pattern of results was also found by several authors who established that poor comprehend could have normal decoding skills with impairment in some aspect of reading comprehension [25, 8, 11]. For psychometric purposes, the pattern of moderate and poor correlations between inferences, monitoring, decoding skills, vocabulary and verbal analogies provides convergent and discriminate validity to the tests presented here. In addition, they add to the comprehension literature, again showing that around 8-9 years old, extracting meaning from a text is not relevantly tied to reading words and sentences, but to general semantic knowledge and verbal ability.

In synthesis, we have developed and validated two tests aimed at reading comprehension abilities, Inferences and Monitoring. Since they were designed following psycholinguistic criteria, they take into account the type of inference required, or type of error the child has to monitor. The tests have adequate reliability and convergent – discriminate validity. Both tasks could be employed in other Spanish speaking contexts, provided that researchers make appropriate changes related to Spanish lexical differences, and local children's general knowledge.

References

1. Kintsch, W. The role of knowledge in discourse processing: A construction-integration model. Psychological Review, 1988, 95, 163–182.
2. Surname, Initials. Title of article. Name of journal, year, volume, number, pages.
3. Kintsch, W. Comprehension: A paradigm for cognition. New York: Cambridge University Press, 1998.
4. Gernsbacher, M. A., Varner, K. R., Faust, M. E.. Investigating individual differences in general comprehension skill. Journal of Experimental Psychology: Learning, Memory, and Cognition, 16, 1990, 430–445.
5. Graesser, A. C., Singer, M., Trabasso, T. Construction inferences during narrative comprehension. Psychological Review, 1994, 101, 371–395.
6. Cain, K., Oakhill, J., Bryant, P. E. Children's reading comprehension ability: Concurrent prediction by working memory, verbal ability, and component skill. Journal of Educational Psychology, 2004, 96, 671–681.
7. Kendeou, P., Bohn-Gettler, C., White, M. J., van den Broek, P. Children's inference generation across different media. Journal of Research in Reading, 2008, 31, 259-272.
8. Nation, K. Children's reading comprehension difficulties. In N.J. Snowing, & Ch. Hulme (Eds.), The Science of Reading: a Handbook (248-265). Victoria: Blackwell Publishin, 2005.
9. Nation, K., Snowling, M. J. Semantic processing and the development of word recognition skills: Evidence from children with reading comprehension difficulties. Journal of Memory and Language, 1998, 39, 85–101.

ISSN 1512-1801

10. Perfetti, C. A. (2010). Decoding, vocabulary, and comprehension: The golden triangle of reading skill. In M. G. McKeown & L. Kucan (Eds.), Bringing reading researchers to life: Essays in honor of Isabel Beck (pp. 291-303). New York: Guilford, 2010.
11. Spooner, A., Gathercole, S. E., Baddeley, A. D. Does weak reading comprehension reflect an integration deficit? Journal of Research in Reading, 2006, 29, 173-193.
12. Stothard, S.E., Hulme, C.. A comparison of phonological skills in children with reading comprehension difficulties and children with word reading difficulties, Journal of Child Psychology and Child Psychiatry, 1996, 36, 399–408.
13. Perfetti, C. A. Reading ability. New York: Oxford University Press, 1985.
14. Adams, M. J. Beginning to read: Thinking and learning abut print. Cambridge, MA: MIT Press, 1990.
15. Carrillo, M. S. Developmental of phonological awareness and reading acquisition. Reading and Writing, 1994, 6, 279-298.
16. Defior-Citoler, S.A. La conciencia fonológica y la adquisición de la lectoescritura. Infancia y Aprendizaje, 1994, 67-68, 91-113.
17. Goswami, U.. Phonological representations, reading development and dyslexia: towards a cross-linguistic theoretical framework. Dislexia, 2000, 6, 133-151.
18. Metsala, J., Ehri, L. C. Word recognition in beginning reading. Hillsdale, New Jersey: Erlbaum, 1998.
19. Stanovich, K. E., Siegel, L. The phenotypic performance of reading disables children: a regresión based test of the phonological-core variable difference model. Journal of Educational Psychology, 1994, 86, 221-234.
20. Vellutino, F.R., Scanlon, D.M. Emergency literacy skills, early instruction and individual differences as determinants or difficulties in learning to read: The case for early intervention. In S. Neuman y D. Dickinson (Eds.), Handbook of early literacy research (pp. 295-321). Londres: The Guildford Press., 2002.
21. Cain, K., Oakhill, J. Profiles of children with specific reading comprehension difficulties. British Journal of Educational Psychology, 2006, 76, 683–696.
22. Nation, K., Clarke, P., Snowling, M. General cognitive ability in children with reading comprehension difficulties. British Journal of Educational Psychology, 2002, 72, 549.
23. Oakhill, J. V. Children's difficulties in reading comprehension. Educational Psychology Review, 1993, 5, 223–237.
24. Oakhill, J. V., Yuill, N. Pronoun resolution in skilled and less-skilled comprehenders: Effects of memory load and inferential complexity. Language and Speech, 1986, 29, 25-37.
25. Yuill, N. M., Oakhill, J. V. Children's problems in text comprehension: An experimental investigation. Cambridge: UK: Cambridge University Press, 1991.
26. Nation, K., Cocksey, J., Taylor, J. S. H., Bishop, D. V. M. A longitudinal investigation of the early reading and language skills in children with poor reading comprehension. Journal of Child Psychology and Psychiatry, 2010, 51, 9, 1031–1039.
27. Anderson, R. C., Freebody, P. Vocabulary knowledge. In J. Guthrie (Ed.), Comprehension and teaching: Research reviews (pp. 77–117). Newark, DE: International Reading Association, 1981.
28. Joshi, R. M. Vocabulary: A critical component of comprehension. Reading & Writing Quarterly, 2005, 21, 209–219.
29. Nagy, W. E. Met linguistic awareness and the vocabulary-comprehension connection. In R. K. Wagner, A. E. Muse, & K. R. Tannenbaum (Eds.), Vocabulary acquisition: Implications for reading comprehension (pp. 52–77). New York: Guilford Press, 2007.
30. Ricketts, J., Nation, K., Bishop, D. V. M. Vocabulary is important for some, but not all reading skills. Scientific Studies of Reading, 2007, 11, 235–257.
31. Stahl, S. A., Fairbanks, M. M. The effects of vocabulary instruction: A model-based meta-analysis. Review of Educational Research, 1986, 56, 72–110.
32. Neal, M. D. Neal Analysis of Reading Ability-Revised (NARA-II). Windsor, UK: NFER, 1997.
33. Cain, K., Oak hill, J. V. Inference making ability and its relation to comprehension failure. Reading and Writing, 1999, 11, 489-503.
34. Cuetos, F., Rodríguez, B., Ruano, E. Evaluación de los Procesos Lectores. Madrid: TEA Ediciones, 2000.

ISSN 1512-1801

35. Urquijo, S., Canet Juric, L., Andrés, M. L., Ané, A. Los Procesos Lectores en Primer Ciclo de EGB (Informe Técnico para la Municipalidad de General Pueyrredón). Mar del Plata, Buenos Aires: Universidad Nacional de Mar del Plata, Grupo de Psicología Cognitiva y Educacional, 2006.
36. Oakhill, J., Cain, K., Bryant, P. E. The dissociation of word reading and text comprehension: evidence from component skills. Language and Cognitive Processes, 2003, 18, 443-468.
37. Eme, E., Puustinen, M., Coutelet, B. Individual and developmental differences in reading monitoring: When and how do children evaluate their comprehension?. European Journal of Psychology of Education, 2006, 21, 91-115.
38. Wagoner, S. A. Comprehension monitoring: What it is and what we know about it. Reading Research Quarterly, 1983, 18, 328-346.
39. Baker, L., Brown, A. L. Metacognitive skills and reading. In P.D. Pearson. Handbook of reading research (pp. 353-394). EE.UU.: Longman, 1984.
40. Ceci, S. J.; Caves, R., Howe, M. J. A. Children's long-term memory for information incongruous with their knowledge. British Journal of Psychology, 1981, 72, 443-450.
41. Danner, F.W. Children's understanding of intersentence organization in the recall of short descriptive passages. Journal of Educational Psychology, 1976, 68, 174-183.
42. Ehrlich, M.F. Metacognitive monitoring in the processing of anaphoric devices in skilled and less-skilled comprehnders. In C. Cornoldi & J.V. Oakhill (Eds.), Reading comprehension difficulties: Process and remediation (pp. 221-249). Mahwah, NJ: Erlbaum, 1996.
43. Ehrlich, M.F., Remond, M., Tardieu, H. Processing of anaphoric devices in young skilled and less skilled comprehenders. Differences in metacognitive monitoring. Reading and Writting, 1999, 11, 29-63.
44. Garner, R., Kraus, C. Monitoring of understanding among seventh graders: An investigation of good comprehender-poor comprehender differences in knowing and regulating reading behaviours. Educational Research Quarterly, 1982, 6, 5-12.
45. Kotsonis, M.E., Patterson, C.J. Comprehension monitoring skills in learning disabled children. Developmental Psychology, 1980, 16, 541-542.
46. Markman, E. M. Realizing that you don't understand: Elementary school children's awareness of inconsistencies. Child Development, 1979, 50, 643–655.
47. Oakhill, J. V., Hartt, J., Samols, D. Levels of comprehension monitoring and working memory in good and poor comprehenders. Reading and Writing, 2005, 18, 657-686.
48. Bowyer-Crane, C. Snowling, M. Assessing children's inference generation: What do tests of reading comprehension measure? British Journal of Educational Psychology, 2005, 75, 189-201.
49. Williams, J.P.; Taylor, M.B., Ganger, S. Text variations at the level of the individual sentence and the comprehension of simple expository paragraphs. Journal of Educational Psychology, 1981, 73, 851-865.
50. Jaramillo, A.; Montaña, G., Rojas, L.M. Detección de errores en el proceso metacognitivo de monitoreo de la comprensión lectora en niños. Revista Latinoamericana de Ciencias Sociales, Niñez y Juventud, 2006, 4, 1-18.
51. Matute, E., Roselli, M., Ardila, A., Ostrovsky-Solís, F. Evaluación Neuropsicológica Infantil (ENI).Manual de aplicación. México D.F., México: El Manual Modern, 2007.
52. Wechsler, D. Test de Inteligencia para Niños WISC-III. Manual . Buenos Aires: Paidós, 1991.
53. Markman, E. M., Gorin, L. Children's ability to adjust their standards for evaluating comprehension. Journal of Educational Psychology, 1981, 73, 320–325.

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