INFERENCES SKILLS DEVELOPMENT IN READING COMPREHENSION OF DEAF CHILDREN. A REVIEW OF INVOLVED VARIABLES

Carrero Barril, Francisco Jesús
Barajas Esteban, Carmen
Linero Zamorano, María José
Quintana García, Inmaculada
González Cuenca, Antonia
Lavigne Cerván, Rocío
Navarta Pardo, Concepción

Dpto. Psicología Evolutiva y de la Educación
Universidad de Málaga
fjcarrero@uma.es

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The proposal of the current study is to analyze the relations between lexical comprehension and grammatical comprehension and the ability of deaf children to draw inferences from text reading.
PARTICIPANTS

- 22 deaf students of Primary Education (6–13 years) at ordinary centres.
- Hearing-loss: medium (40–70 dB) 14%, severe (71–90 dB) 43% and profound (+91 dB) 43%.
- 54% with cochlear implant, 27% digital hearing-aid, 19% analogical hearing-aid. All students have been prothesised before 4 years and six months. 53% before 3 years and 47% between 3 years and three months and 4 years and six months. 72% uses FM system in classroom.
- 90% uses oral language as usual way of communication and 10% uses oral language and sign language.
- They come from families with low sociocultural level (50%), medium (36.4%) and high (13.6%).
EVALUATION TESTS

- **Questionnaire**: information about hearing-loss and family and school environments, **coming from parents and school professionals**.

- **Peabody Picture Vocabulary Test (PPVT-III)**: level of oral receptive vocabulary by identifying words in a set out of four pictures that corresponds to the target word.

- **Test of Grammatical Structures Comprehension (CEG)**: Spanish adaptation from the Test for Reception of Grammar (TROG, Bishop, 1983), assesses level of oral receptive comprehension of simple and complex grammatical structures by having participant identify sentences and then point to the drawing from a set out of four that corresponds to the target sentence.

- **PROLEC–R**: Subtest of Texts Comprehension from *Batería de evaluación de Procesos Lectores–Revisada* (PROLEC–R) (Reading Processes Evaluation Battery–Revised), for students from 1º to 6º from Primary School. The test consists of reading two narrative texts and two expository texts (each one can subdivide in two short texts and two long texts) and answering questions about the content of texts, making inferences to do it right.
PPVT-III (PEABODY)

CRONOLOGICAL AGE (C.A) AND RECEPTIVE VOCABULARY AGE COMPARATIVE

- 7–10 YEARS BELOW* 9%
- EL > EC 29%
- 5–7 YEARS BELOW 24%
- 3–5 YEARS BELOW 24%
- 1–3 YEARS BELOW

* BELOW CRONOLOGICAL AGE
PROLEC-R
NORMAL–DIFFICULTIES (SCALED)

Severe difficulties: 52%
Mild difficulties: 29%
Normal: 19%
Cronological Age and Grammatical Comprehension Age Comparative

- 5-9 below: 18%
- 3-5 below: 32%
- 5-7 below: 27%
- 1-3 below: 14%
- EG>EC: 9%

CEG
Mean scores: Narrative vs expository texts (0–8)
Mean scores: Short and long texts (0–8)
VOCABULARY COMPREHENSION AGE

Global Model.
Corrected R-squared: 0.544
Sig.: 0.000

TEXT COMPREHENSION

Corrected R-squared: 0.370
Sig.: 0.002

GRAMMATICAL COMPREHENSION AGE

Corrected R-squared: 0.567
Sig.: 0.000

Linear regression. Level of statistic significance: 0.05
Global Model.
Corrected R-squared: 0.365
Sig.: 0.017

VOCABULARY COMPREHENSION AGE

NARRATIVE TEXT COMPREHENSION

GRAMMATICAL COMPREHENSION AGE

Pearson: 0.482
Sig.: 0.048

Pearson: 0.647
Sig.: 0.008

Linear regression. Level of statistic significance: 0.05
Global Model.
Corrected R-squared: 0.530
Sig.: 0.003

Linear regression. Level of statistic significance: 0.05
CONCLUSIONS

- It was found that deaf children were in a higher proportion close to their chronological age (in equivalent ages) in receptive vocabulary competence than in receptive grammatical abilities.
- The proportion of deaf students that were significantly delayed was higher in grammatical comprehension tests than in passive vocabulary tests, when we used measures of oral comprehension.
- A very few percentage of deaf children reached a text comprehension level equivalent to the academic level.
- The text comprehension difficulties were significantly higher in reading expository texts than in narrative texts.
- The performance in probes which evaluate reading comprehension did not depend on the length of text, so we can conclude that comprehension problems are not related to their working memory limitations.
- The lexical and grammatical comprehension (analyzed together) are good predictors of texts comprehension. The size of effect is higher in expository texts than in narrative texts.
- The grammatical comprehension competence is a better predictor of reading comprehension abilities than receptive vocabulary competence, in order to make inferences from written language, especially in expository texts.
REFERENCES


