Comprehending written and spoken text: the same or different?

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1. INTRODUCTION

- Audio-visual information intake is on the rise among children
- Literary reading is in decline
- Only reading comprehension is an important subject in primary education
- Listening comprehension is given much less attention

What is then the relationship between reading and listening comprehension?
- They correlate highly, not perfectly: thus overlap, but there are differences
- Overlap: creation of situation model of text, regardless of modality
- Difference: modality-specific skills that help processing the information presented in a specific modality

Reflection

Listening comprehension

Reading comprehension

Visual memory

Word reading fluency

Vocabulary

Inhibition

Attention

Short memory

Working memory

Eye tracking

This study

The relationship between reading (RC) and listening comprehension (LC)
- 1. Their overlap (explained variance one comprehension type by the other)
- 2. Similarities and differences in contribution of foundational cognitive skill

PARTICIPANTS

- 85 Dutch children
- M age 8.7 years
- 35 2nd graders, 50 3rd graders

MATERIALS

- Reading comprehension: Cito reading comprehension
- Listening comprehension: Cito listening comprehension
- Word reading fluency: One minute reading task
- Vocabulary: Peabody Picture Vocabulary Test
- Short term memory: WISC forwards digit span task
- Working memory: WISC backwards digit span task
- Sustained attention: NEPSY II Auditory Attention subtest
- Inhibition: Stroop test

Regression analyses

Analyses research question 1:

Analyses research question 2:

REFERENCES


CONTACT

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3. RESULTS

1. Overlap reading (RC) and listening comprehension (LC)

<table>
<thead>
<tr>
<th></th>
<th>RC Listening comprehension</th>
<th>LC Listening comprehension</th>
<th>by the opposite type</th>
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</thead>
<tbody>
<tr>
<td>Predictor</td>
<td>β</td>
<td>β</td>
<td>β</td>
</tr>
<tr>
<td>Grade</td>
<td>- .27**</td>
<td>.18*</td>
<td>.13</td>
</tr>
<tr>
<td>Step 1**</td>
<td>.60**</td>
<td>.32**</td>
<td></td>
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<tr>
<td>Step 2</td>
<td>.56*</td>
<td>.25*</td>
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<tr>
<td>Word reading fluency</td>
<td>.48*</td>
<td>.50**</td>
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<tr>
<td>Vocabulary</td>
<td>.07</td>
<td>.02</td>
<td></td>
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<tr>
<td>Verbal STM</td>
<td>.13</td>
<td>.08</td>
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<tr>
<td>Verbal WM</td>
<td>.06</td>
<td>.03</td>
<td></td>
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<tr>
<td>Visual memory</td>
<td>.04</td>
<td>.04</td>
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<tr>
<td>Sustained attention</td>
<td>-.10</td>
<td>-.03</td>
<td></td>
</tr>
<tr>
<td>Inhibition</td>
<td>-.14</td>
<td>.04</td>
<td></td>
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<tr>
<td>Total R²</td>
<td>.61**</td>
<td>.49**</td>
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The effects of the variables (β and p-value) displayed in step 1 are those from the final step.
* β is scored reversely, with high scores indicating lower levels of inhibition
** p < .05, *** p < .001

2. Similarities and differences in contribution foundational skills

4. DISCUSSION

1. Overlap reading (RC) and listening comprehension (LC)

34-40%

2. Similarities and differences in contribution foundational skills

CONCLUSIONS:
- Neither comprehension type can fully explain the other
- Thus: reading and listening comprehension partly overlapping constructs, but substantially different
- Overlap: shared contributors word reading fluency and vocabulary
- No unique contributors to either comprehension type

Construction situation model is different in different modalities, but precise process differences are yet unknown. With declining literary reading, listening comprehension should get a prominent place in education.