"I always dessert cake to diet":
Elicited Imitation as an L2 task
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Introduction

- Elicited imitation tasks test second language (L2) learners’ grammar knowledge:
- L2 learners repeat a sentence containing the targeted grammatical structure.
- If the stimulus is long enough, the learner cannot hold it in working memory while repeating it. She is forced to store the information as a semantic unit, and use her own grammar when reproducing the sentence (Gass & Selinker, 2001).
- Scoring non-native spoken data can be difficult. Scoring only the target structure may ignore working memory limitations but fail to yield good data.

Method

- Participants: 31 high-intermediate English L2 students
- Heard grammatical pre-recorded English sentences
- 6-11 words in length; 8-14 syllables per sentence
- Target structures: (number of stimuli/structure):
  - (18) Indefinite articles “a” and null
  - (6) Modals (may, should, would)
  - (18) Subject-verb agreement 3rd person singular −s
  - (6) Passive verb structure
  - (6) Verb complement structure
- Production recorded - 8 seconds/sentence
- 6 sentences per set, 2 sets per session, in three weekly sessions = 36 different sentences per student

Scoring Method

Responses were scored with two methods

Target structure accuracy (T Score)

- 1 – Correct target structure, including on-line corrections (n = 704)
- 0 – Obligatory context – missing target and avoidance of obligatory context (n = 271)
- missing data – utterance did not include target structure (n = 128)

Overall Sentence Accuracy (S Score)

- 1 – Correct target structure, including on-line corrections (n = 419)
- .75 – Changed but grammatical (n = 124)
- .50 – Sentence is present and grammatical (n = 27)
- .25 – Sentence produced in full with 1+ error (n = 81)
- 0 – less than ½ a correct grammatical sentence (n = 41)
- Missing data – participant did not attempt (n = 11)

How do the results from the two analyses supplement each other?

References


Results

Comparison of Scores per target structure

Means, Standard Deviations, and Correlation per sentence stimuli

<table>
<thead>
<tr>
<th>Structure</th>
<th>T Score (SD)</th>
<th>S Score (SD)</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indefinite article (“a”)</td>
<td>.757 (.408)</td>
<td>.653 (.374)</td>
<td>.808</td>
</tr>
<tr>
<td>Null article</td>
<td>.677 (.469)</td>
<td>.566 (.361)</td>
<td>.663</td>
</tr>
<tr>
<td>Modals</td>
<td>.854 (.354)</td>
<td>.636 (.350)</td>
<td>.522</td>
</tr>
<tr>
<td>3rd Person −s</td>
<td>.707 (.456)</td>
<td>.594 (.373)</td>
<td>.503</td>
</tr>
<tr>
<td>Passive</td>
<td>.522 (.459)</td>
<td>.482 (.337)</td>
<td>.125</td>
</tr>
<tr>
<td>Verb complement</td>
<td>.775 (.419)</td>
<td>.636 (.361)</td>
<td>.245</td>
</tr>
</tbody>
</table>

- Correlation between T score and S score:
  - With some structures, the two scores seem to be measuring different components of the task
  - Is sentence difficulty affected by target structure difficulty?

Comparison of scores within one target structure

Scores of sentences within 3rd person –s target structure

<table>
<thead>
<tr>
<th>Verb</th>
<th>T Score (SD)</th>
<th>S Score (SD)</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>seems</td>
<td>.901 (.300)</td>
<td>.756 (.333)</td>
<td>.380</td>
</tr>
<tr>
<td>means</td>
<td>.890 (.466)</td>
<td>.494 (.382)</td>
<td>.596</td>
</tr>
<tr>
<td>lives</td>
<td>.507 (.503)</td>
<td>.529 (.345)</td>
<td>.802</td>
</tr>
</tbody>
</table>

- T score seems to depend on vocabulary

Comparison of specific sentences

<table>
<thead>
<tr>
<th>Stimuli</th>
<th>T Score (SD)</th>
<th>S Score (SD)</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I need a computer for my school work</td>
<td>1.00 (0.00)</td>
<td>.883 (.265)</td>
<td>–</td>
</tr>
<tr>
<td>I will buy my son a toy for his birthday</td>
<td>.917 (.289)</td>
<td>.467 (.352)</td>
<td>.185</td>
</tr>
<tr>
<td>on long bus rides I bring a book to read</td>
<td>.293 (.488)</td>
<td>.250 (.177)</td>
<td>-.189</td>
</tr>
<tr>
<td>our friends brought _ wine and glasses to the party</td>
<td>.900 (.316)</td>
<td>.500 (.409)</td>
<td>.607</td>
</tr>
<tr>
<td>I go to the library because I like _ books</td>
<td>.750 (.452)</td>
<td>.703 (.332)</td>
<td>.683</td>
</tr>
<tr>
<td>I would travel more if I had time</td>
<td>.895 (.315)</td>
<td>.444 (.279)</td>
<td>.165</td>
</tr>
<tr>
<td>That look on her face means she’s angry</td>
<td>.900 (.316)</td>
<td>.482 (.409)</td>
<td>.333</td>
</tr>
<tr>
<td>I am lonely because my sister lives far away</td>
<td>.500 (.522)</td>
<td>.571 (.346)</td>
<td>.930</td>
</tr>
<tr>
<td>I really don’t know what this word means</td>
<td>.417 (.515)</td>
<td>.577 (.373)</td>
<td>.929</td>
</tr>
</tbody>
</table>

- T score seems to depend on sentence location
- For some sentences, the T score and S score correlate; for others, the S-score may be measuring another component of these sentences

Conclusions

- If the target structure or sentence is difficult, the S score might reflect the impact of the increased processing load, which the T score might miss.
- A sentence with a high standard deviation in S score may indicate that the stimulus captures individual differences in proficiency.
- Characteristics of the carrier sentences seem to affect target structure scores, including:
  - Vocabulary of the target structure (seems > means > lives)
  - Target structure location (beginning > end; main clause > embedded clause)
  - Structure of the sentence (Subject-Verb-Other > Other-Sub-Verb)
- Pilot testing may benefit from both scoring methods to select appropriate stimuli (i.e. high S scores if you want to code target structure)
- Further analysis include “How well does each score predict accuracy on free production tasks?”

Acknowledgement

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