Metalinguistic Awareness of College Students at Early Stages of Foreign Language Learning

Angela Cortez (Mentors: Maya C. Rose, & Patricia J. Brooks)
In Collaboration with Arshia K. Lodhi

Background

- Adults exhibit remarkable individual differences in language learning aptitude.1
- Schmidt (1990) proposed that success in L2 learning requires noticing features of the new language.
- However, others suggest that adults can learn grammar without developing explicit metalinguistic awareness.2

Current Study and Research Questions

The current study used a computer-assisted language learning (CALL) protocol to explore learning of Turkish as an L2, with a focus on comprehension of case and number marking.

1. Is it possible to learn Turkish case and number marking without developing metalinguistic awareness?
2. Does aptitude affect learning through its association with metalinguistic awareness?

Participants

156 college students (93 women, 61 men, 1 non-binary, 1 did not disclose), ages 18 to 28 years (M = 19.5, SD = 2.0).

Turkish Vocabulary and Scenarios

36 nouns ending in -ek, -ok, or -a; e.g., gömlek [shirt], bardak [cup], araba [car]
4 scenarios with a goat coming from [ABL = ablative] or going to [DAT = dative] one or two objects [PL = plural]

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Coding of Exit Questionnaire

<table>
<thead>
<tr>
<th>Explanation of Code</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>No mention of variation in word endings, included responses like &quot;I guessed&quot; or unrelated mnemonic strategies. &quot;When the goat kept moving I knew the words were going to be different.&quot; (Female, 18)</td>
</tr>
<tr>
<td>1</td>
<td>Noticed variation in the word endings, i.e., mentioned that noun/object/word endings change depending on the direction of the goat and/or listed one or two case marking suffixes. &quot;I notice that every time that the goat was with the back was a word ten.&quot; (Female, 26)</td>
</tr>
<tr>
<td>2</td>
<td>Noticed allomorphic variation in the endings by listing three or more case markings. &quot;I believed &quot;don&quot; or &quot;tan&quot; meant moving away and &quot;ya&quot; or &quot;a&quot; meant coming towards.&quot; (Male, 24)</td>
</tr>
<tr>
<td>Number</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>No mention of a plural marker; included responses like &quot;I guessed&quot; or unrelated mnemonic strategies. &quot;Since I didn't know the difference between the words, I would guess.&quot; (Female, 18)</td>
</tr>
<tr>
<td>1</td>
<td>Noticed the plural marker, i.e., mentioned that Turkish has syllables/sounds/words that go before the end of the word, or that the word gets longer for plural. &quot;The word had an &quot;l&quot; sound in between when it was for two.&quot; (Female, 21)</td>
</tr>
<tr>
<td>2</td>
<td>Noticed allomorphic variation in the plural marker by listing both forms of the plural marker. &quot;There were many different endings the sound like &quot;lara&quot;, &quot;lere&quot;.&quot; (Male, 20)</td>
</tr>
</tbody>
</table>

Mediation Models: Case and Number Marking

- Some participants (~20%) learned without developing awareness. This suggests that adults may rely on procedural memory and learn aspects of grammar implicitly.2
- However, most participants developed awareness while learning case and number marking.
- Turkish case marking was easier to learn than number marking, which aligns with the serial-position effect in memory.3
- Mediation models show an indirect effect of aptitude, suggesting that higher aptitude increases the likelihood of noticing patterns, although awareness was limited.3
- Awareness is associated with better L2 learning outcomes.
- Future studies should include declarative and procedural memory tasks as measures of aptitude to elucidate involvement of memory systems in L2 learning.4

What did we learn?

Learning Outcomes

<table>
<thead>
<tr>
<th>Test 1: Case</th>
<th>Case trials</th>
<th>58.0% (16.2)</th>
<th>Posttest</th>
<th>Case trials</th>
<th>82.4% (19.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number trials</td>
<td>55.4% (14.1)</td>
<td>16.7–94.4%</td>
<td>Number trials</td>
<td>79.0% (19.7)</td>
<td>30.5–100%</td>
</tr>
</tbody>
</table>

Chi-Square

<table>
<thead>
<tr>
<th>Case</th>
<th>No awareness (Score of 0)</th>
<th>Some Awareness (Score of 1)</th>
<th>Awareness (Score of 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>At chance (n = 44)</td>
<td>77.3%</td>
<td>20.4%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Above chance (n = 112)</td>
<td>18.8%</td>
<td>46.4%</td>
<td>34.8%</td>
</tr>
</tbody>
</table>

Number

| At chance (n = 50) | 74.0% | 26.0% | 0.0% |
| Above chance (n = 106) | 17.0% | 74.5% | 7.6% |

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