Stroop Interference impacts both languages of proficient bilinguals. Word reading is rapid and automatic for Deaf signers who do not use speech.

Automaticity of Lexical Access for Sign and Print in Deaf and Hearing Bilinguals: Cross-linguistic Evidence from the Stroop Task

Rain G. Bosworth, Sarah Tyler, Eli Binder & Jill P. Morford

QUESTIONS
1. Can the Stroop interference effect be observed in both L1 and L2 of deaf bilinguals?
2. What is the impact of script similarity of the two languages used by a bilingual on the magnitude of Stroop interference?

RESULTS
1. Stroop Interference affects both languages in Deaf ASL-English Bilinguals

How the Stroop Task Works:
The classic Stroop Task indexes automaticity in practiced and unpracticed tasks (Stroop, 1935)

METHODS
• 4 task conditions
  1. L1 color naming
  2. L1 word reading
  3. L2 color naming
  4. L2 word reading
• Incongruent and Congruent conditions, mixed across trials
• 2 blocks each, order counterbalanced
• 200 trials per block
• Dependent Measures:
  1. Reaction Time (in milliseconds)
  2. RT incongruent – RT congruent = Stroop Interference Scores

PARTICIPANTS
<table>
<thead>
<tr>
<th>Bilingual (L1/L2) Groups</th>
<th>Script Similarity</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing English-Spanish</td>
<td>High</td>
<td>34</td>
</tr>
<tr>
<td>Hearing English-Korean</td>
<td>Moderate</td>
<td>15</td>
</tr>
<tr>
<td>Hearing English-Chinese</td>
<td>Low</td>
<td>22</td>
</tr>
<tr>
<td>Deaf ASL-English</td>
<td>None</td>
<td>15</td>
</tr>
</tbody>
</table>

All participants lived in the U.S. and attended schools in which written work was completed in English. Hearing participants rated their proficiency in both languages; only participants who reported balanced proficiency or English dominance were included. Deaf participants completed the ASL-CT to assess ASL proficiency.

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