Can selectively activating language optimize multilinguals’ performance?

Maureen Ehrensberger-Dow & Susanne J. Jekat
Zurich University of Applied Sciences
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Optimizing performance through activation

- Grosjean’s model of language mode
- special case of translation
- source or target language of translation
- multilingual translators (Swiss German, German, Spanish, English, French, +/or Italian)
- dominant or non-dominant language of individual
- activated languages in multilingual translators
- selective activation experiments
“Activating” language

- language mode model (Grosjean 2001: 3)

- multilingual mode?
Special case of translation

- one language should be optimally understood (source language)
- other language should be optimally produced (target language)
Source or target language of translation

- English-German translation
  - English activated to enhance comprehension?
  - German activated to enhance production?
Multilingual translators

- Switzerland officially quadrilingual (German, French, Italian, Romansh)
- English unofficial national language (government, business, education)
- undergraduate translation program requires minimum of 3 working languages (so-called A, B, C)
  A = strongest / native / L1 / dominant language
  B = strongest L2 / less dominant L1 / secondary language
  C = passive L2 / translation from but not into this language
  - various combinations possible:
    (A/B/B, A/B/C, A/B/C/D, A/C/C, seldom A/A/B)
Dominance of language

In German-speaking Switzerland:
• Swiss German used in spoken interactions
• standard German used for written communication (medial diglossia)
• German usually learned at school and from media (while learning to read and write)
• English or French learned at school or acquired
• Italian or Spanish acquired or learned at school
• other languages acquired or fostered by ethnic schools
Activated languages in translators

For a translator competent in Swiss German, German, English, French, and Spanish doing a translation from English to German, the ideal constellation might be:
Selective activation before written translation

English-German translation:
- 2 groups of 1st-year translation students (EG/a and EG/b)
- dominant language German, non-dominant language English
- English activated first session, German the next
- German activated first session, English the next

Spanish-German translation:
- 2 groups of 2nd-year translation students (SG/a and SG/b)
- dominant language German, non-dominant language Spanish
- German activated first session, Spanish the next
- Spanish activated first session, German the next
Selective activation before written translation

Evaluation method / error scheme:

<table>
<thead>
<tr>
<th>Expression</th>
<th>The paradisical conditions astounded the tourists.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grammatical</td>
<td>I remember my first Russian teacher, which was the most interesting person.</td>
</tr>
<tr>
<td>Syntax</td>
<td>Roger likes football more than Elisabeth.</td>
</tr>
<tr>
<td>Loyalty/ completeness</td>
<td>Hitting the head on something without stopping will dramatically reduce the chances of survival in a bad collision.</td>
</tr>
<tr>
<td>Translation strategy</td>
<td>Thomas discovered/noticed the private det. rummaging through his desk.</td>
</tr>
</tbody>
</table>

Adapted from Laemmel et al., to appear.
Selective activation before written translation

Results of English-German translations (per 100 words):

<table>
<thead>
<tr>
<th>Activation</th>
<th>Group EG/a 1st German</th>
<th>Group EG/a 2nd English</th>
<th>Group EG/b 1st English</th>
<th>Group EG/b 2nd German</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expression</td>
<td>6.9</td>
<td>5.4</td>
<td>7.9</td>
<td>4.7</td>
</tr>
<tr>
<td>Grammar</td>
<td>4.0</td>
<td>2.7</td>
<td>6.3</td>
<td>5.5</td>
</tr>
<tr>
<td>Syntax</td>
<td>0.5</td>
<td>0.8</td>
<td>0.9</td>
<td>1.2</td>
</tr>
<tr>
<td>Loyalty</td>
<td>2.0</td>
<td>2.7</td>
<td>2.2</td>
<td>2.5</td>
</tr>
<tr>
<td>Strategy</td>
<td>0.7</td>
<td>0.4</td>
<td>0.4</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14.1</strong></td>
<td><strong>11.8</strong></td>
<td><strong>17.6</strong></td>
<td><strong>14.3</strong></td>
</tr>
</tbody>
</table>
Selective activation before written translation

Results of Spanish-German translations (per 100 words):

<table>
<thead>
<tr>
<th>Activation</th>
<th>Group SG/a 1st German</th>
<th>Group SG/a 2nd Spanish</th>
<th>Group SG/b 1st Spanish</th>
<th>Group SG/b 2nd German</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expression</td>
<td>3.5</td>
<td>3.4</td>
<td>2.4</td>
<td>3.3</td>
</tr>
<tr>
<td>Grammar</td>
<td>1.4</td>
<td>0.7</td>
<td>0.9</td>
<td>1.4</td>
</tr>
<tr>
<td>Syntax</td>
<td>0.2</td>
<td>0.1</td>
<td>0.6</td>
<td>0.3</td>
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<td><strong>7.5</strong></td>
<td><strong>11.1</strong></td>
</tr>
</tbody>
</table>
Selective activation before written translation

German-English translation:
- 2 groups of 2nd-year translation students (GE/a and GE/b)
- dominant language German, non-dominant language English
- translation into non-dominant language
- English activated for first text, German for second text
- English activated first for GE/a, German for GE/b

Results of German-English translations:
- no effect of topic familiarity
- slight effect of dominant/source language activation
- slight effect of non-dominant activation on syntax
Selective activation before sight translation

German-English sight translation (written to spoken):
- 4th-year translation students
- dominant language German, non-dominant language English

3 activation conditions:
- no activation of English
- activation by reading an English news article
- activation by watching and discussing English newscast

Results:
- far fewer errors with maximum activation
- better fluency and higher self-assessment after activation
Activation before judging translation variants

English translations of German sentences:

- 1st year translation students
- dominant language German, non-dominant language English
- German or English activated by 30-minute lecture
- preference for tense and aspect variants:
  \textit{Ich lebe seit fünf Jahren in der Schweiz.}
  I live in Switzerland for five years.
  I have lived in Switzerland for five years.
  I am living in Switzerland for five years.
  I lived in Switzerland for five years.
- self-report of frequency of English use:
  \textit{seldom} 1 2 3 4 5 \textit{frequently}
Activation before judging translation variants

Judgment results:
• no overall effect of activating English or German in judging English variants
  (80% identification of best/correct variant, 75% identification of worst/incorrect variant)
• no effect of activation related to language competence
• effect of activation dependent on frequency of use:
  – positive effect of English for frequent users of English
  – no effect for people who use it occasionally
  – positive effect of German for infrequent users of English
Optimizing performance through activation

Factors to consider in education of multilingual translators:
• metalinguistic awareness of users
• psychotypological distance between languages
• status of source language for written translation
• modalities involved in translation task (written/aural/spoken)
• length of activation
• frequency of use of non-dominant languages
References


References


