How does foreign language proficiency change over time?

Results of preliminary data mining

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Executive Summary

PURPOSE

Similar to other organizations within the Intelligence Community, the Defense Intelligence Agency (DIA) employs many individuals with foreign language proficiency. The Department of Defense mandates that, to receive Foreign Language Proficiency Pay (FLPP), military personnel must demonstrate the required level of listening and reading proficiency on the Defense Language Proficiency Test (DLPT) and speaking proficiency on the Oral Proficiency Interview (OPI) on an annual basis.

The DIA asked the University of Maryland Center for Advanced Study of Language (CASL) to investigate the effect of length of time between testing occasions on foreign language proficiency outcomes, as measured by the DLPT and OPI.

To begin to address this question, CASL conducted exploratory analyses on existing DIA employee testing records and official language training records. Researchers examined rates of language skill attrition (i.e., skill loss) at varying lag times between test occasions, patterns of change in language skills over time, and the impact of language training on these patterns of change.

Researchers will further analyze the DIA test records after obtaining additional data, including the results of a survey targeting language use and independent language training.

CONCLUSIONS

CASL's preliminary analyses support the following conclusions:

1. Reading and listening scores on the DLPT improved over time, while speaking skills showed a slight decline.

Analyses of the overall change in test scores across test occasions revealed a pattern of improvement for DLPT reading and listening scores (see Figures 1a and 1b). For OPI speaking test ratings, there was a trend toward slight loss across test occasions (see Figure 1c).
Over time, employees performed better on reading and listening proficiency tests and worse on speaking proficiency tests. Analyses of personnel who showed a loss in proficiency between their first and most recent test revealed speaking to be the most volatile skill. The proportion of employees maintaining their speaking skills drops sharply when the lag between initial test and second test exceeds 400 days (see Figure 2). Listening and reading skills appear to be more stable. A substantial proportion of employees who eventually show attrition sustain their reading and listening skills even when the lag between initial test and second test exceeds two years.

![Figure 1](image1.png)

**Figure 1.** Over time, employees performed better on reading and listening proficiency tests and worse on speaking proficiency tests.

Test scores over time

<table>
<thead>
<tr>
<th>Number of test occasions</th>
<th>Reading</th>
<th>Listening</th>
<th>Speaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2+</td>
</tr>
<tr>
<td>2</td>
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<td>3</td>
<td>2+</td>
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<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2+</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>3</td>
<td>2+</td>
</tr>
</tbody>
</table>

Skill loss over time

- Reading
- Listening
- Speaking

![Figure 2](image2.png)

**Figure 2.** Employees’ speaking skills dropped sharply when their second testing occasion was more than 400 days after the first.

A yearly OPI may help retain speaking proficiency, while DLPT testing might be alternated every other year.

Test scores tended to be lower overall for employees who had engaged in training, indicating these employees may have been selected for training based on a need to improve proficiency scores. However, employees who received training improved their DLPT reading and listening scores over test occasions significantly faster than employees who had not received training (see Figures 1a and 1b). Change in OPI speaking scores did not differ according to whether employees had received training (see Figure 1c).

**RELEVANCE**

The preliminary results provide initial information on the frequency of language testing needed to monitor attrition in language proficiency. These results also suggest that future research should examine factors that mitigate the attrition of foreign language skills.

**ENDNOTE**

1 Due to an OPI vendor change, the first speaking score in the dataset was excluded for each employee. Figure 1c thus includes only the second, third, and fourth scores in the dataset.

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