**Introduction**

- Hesitation vowel \( \text{uh}/\text{um} \) in English central or the back vowel \( \text{a} \) [1, 2], in German central or the front vowel \( \text{ɛ} \) [3]
- Are hesitation vowels of English and German different?
  - If yes, in which parameters, i.e. formants (F1, F2)?
  - Do L2-learners adapt the vowel quality?
  - Does the language competence have an impact?

**Method**

- Spontaneous speech of 24 subjects
  - 12 native German speakers
  - 12 native English speakers
  - L2 competence in English/German
- Measurement of formants (F1, F2)
- Statistical analyses (t-test, ANOVA)

**Results**

- Vowels in L1 hesitation particles show significant effects for F1 but not for F2 (= central vowel in ENG & GER)
- Intermediate learners show larger differences in F1 than advanced learners (the effect is larger in spoken GER)
- Advanced learners seem to be able to adapt the hesitation vowel of their L2 in a native-like fashion
- Long exposure to L2 may influence L1 hesitations

**Discussion**

- Comparison with monolingual speakers
- Speaker normalisation using point vowels
- Individual speaker performance
  - Is the vowel quality language- and/or speaker-specific?
- Expansion to other languages and language families

**Future work**

References


---

**Fig. 1: Schematic representation of subject groups**

- Low-intermediate (L2)
- Advanced (L2)

**Table:**

<table>
<thead>
<tr>
<th>Task</th>
<th>Language for both groups</th>
<th>Speaker group</th>
</tr>
</thead>
<tbody>
<tr>
<td>GER-INT</td>
<td>ENG-INT</td>
<td>Speaker group</td>
</tr>
<tr>
<td>GER-ADV</td>
<td>ENG-ADV</td>
<td>Speaker group</td>
</tr>
</tbody>
</table>

---

**Task**

- Language for both groups
- Speaker group

---

**Find more information about our project on pauseparticles.org**