How an app can help to improve the assessment of children’s communicative capacities in the L2 in authentic communicative settings?

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DIPF Frankfurt: Marcus Hasselhorn, Wolfgang Woerner (since 06/2016)

TestDaF Institut Bochum: Gabriele Kecker

Universität Basel: Heike Behrens (until 08/2018), Karin Madlener (since 10/2016), Katrin Skoruppa (since 09/2016)

Hochschule für Medien Stuttgart: Frank Thissen (since 10/2015)

Homepage: http://www.sprachstandsermittlung.daf.uni-muenchen.de
Assessment of the proper communicative potential & need for language learning support of 4- to 5-year-old children in German
The Potential of Serious Games for Assessment

• Promoting user engagement in assessment
• Providing more valid assessments compared to traditional approaches
• Providing meaningful and authentic (e.g. ecologically valid) contexts for assessments through interactive immersive environment
• Reducing the players test anxiety through a „stealth approach“
• Applying innovative technology → Advantages of digital software environment

Interactive App(s) for Language Assessment
Serious Game & Authentic Language

- Game versus examination
- Childfriendly background story incorporating inspiring characters
- Player’s quest → Children are asked to help the game’s character.
- To accomplish this task, the child talks to the character on the tablet.
- Inherent motivation
- Test items are embedded in communicatively relevant situations.

Realistic Setting

- speaker
- addressee
- message
**Corpus Studies:** Spontaneous speech recordings of four children aged 4;0 to 4;11 years from German longitudinal corpora in CHILDES (MacWhinney 2000)

- Questions and answers:
  - Children do not give full answers at once
  - Elaboration on a topic takes several turns
    - Providing specific follow-up questions helps the child to focus on the precise information that is requested.

- Spatial expressions are highly frequent
  (approx. 30% of utterances contain spatial information)

Prompts

- unspecific
- verbal
  - explicit
  - less explicit

Behrens et al. 2016; Madlener et al. 2017; Roche et al. 2016
Domain Space

- Languages show strikingly different lexicalization patterns in the expression of motion events (e.g. Slobin 1996; Talmy 2000).
- Cross-linguistic differences affect the speakers’ focus of attention (*Thinking-for-Speaking*: Slobin 1996, 2004).
- When verbalizing a motion event, speakers choose among several means of expressions those which are typical of their native language.

**Implications for early L2 acquisition** (Bryant 2012)
- L2 learners produce spatial descriptions deviant from target language norms.
- Even with a contact time of 24 months, children with L2 German differ from L1 children.
### Discourse Type

<table>
<thead>
<tr>
<th>Discourse Type</th>
<th>(Figure) Ground</th>
<th>Relation</th>
<th>Event</th>
<th>Event Type</th>
<th>Canonicity</th>
<th>Complexity</th>
</tr>
</thead>
<tbody>
<tr>
<td>instruction</td>
<td>(Du) Gras</td>
<td>durch</td>
<td>springen</td>
<td>motion</td>
<td>path</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(you) grass</td>
<td>through</td>
<td>to jump</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>narration</td>
<td>(Hut) großer Korb</td>
<td>in</td>
<td>legen</td>
<td>placement</td>
<td>ground</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(hat) big basket</td>
<td>in</td>
<td>to put</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>description</td>
<td>(Flasche) Tisch</td>
<td>auf</td>
<td>stehen</td>
<td>position</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(bottle) table</td>
<td>on</td>
<td>to stand</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Why are you afraid, dog?
How do I get to the hat?
You can swim yourself, too?
Can’t you?
Or you jump onto the stone?
Or are you afraid?
But how?
You can [uh] swim yourself.
Mhm.
Or jump on the stone then.
Okay. I’m gonna try that.
Good job, dog! You made!
App Demonstration

Unspecific prompt: OOHHHHHHH

Verbal prompt (1): How do I get to the hat?

Verbal prompt (2): How exactly?
Unspecific prompt:

There is the hat. How you should do. Jump. Best is to jump. Jump. Jump. Can you please jump. You have to jump.

Verbal prompt (1):
Du musst springen.

How do I get to the hat?
You have to jump.

Verbal prompt (2):
Du musst einfach hüpfen. Durch des Feuer.

How exactly?
You just have to hop. Through the fire.
Data Analysis

• Measurements for analysis of language use are based on orthographic transcripts
• Expert ratings for
  • a) language abilities (covered by test systematics)
  • b) need for language learning support
  • c) Analysis of linguistic features (e.g. diversity in use of prepositions, motion verbs)
• Are there differences in a), b), c) between groups with different e.g. L1, age, contact time with German?
• Which linguistic features are most discriminative to predict children’s needs for language learning support?
Overview Preliminary Features
Future Perspectives

• Pilot testing of the App: 120 children aged 4;6 to 6;0 years with German as a first and second language

• Validation studies: Expert ratings, correlations with existing tests, evaluations on the authenticity of language production (e.g. use of modal particles and ellipses, questions addressing the dog)

• Usability testing of the Apps

• Adding more domains to the assessment tool (discourse, definiteness, possession)

• Standard setting

• Incorporation of spoken language features
Thank you for your attention!
Acknowledgments

• **Daimler and Benz Foundation** and all members of the Ladenburger Kolleg:
  Wolfgang Klein, Gabriele Kecker, Elisabetta Terrasi-Haufe, Christoph Draxler, Heike Behrens, Katrin Skoruppa, Karin Madlener, Dirk Ifenthaler, Jan Delcker, Frank Thissen, Marcus Hasselhorn, Wolfgang Woerner

• **Student assistants:** Mitra Shateri, Agnieszka Kubacka-Mauer, Nicole Vogl

• **NEXT Munich**

Reference