

Preliminary results on the test framework for an online sign language receptive skills test

Tobias Haug (HfH Zurich), Ros Herman (City University London), and
Bencie Woll (University College London)

ALTE Conference Paris

April 10-11, 2014

Overview

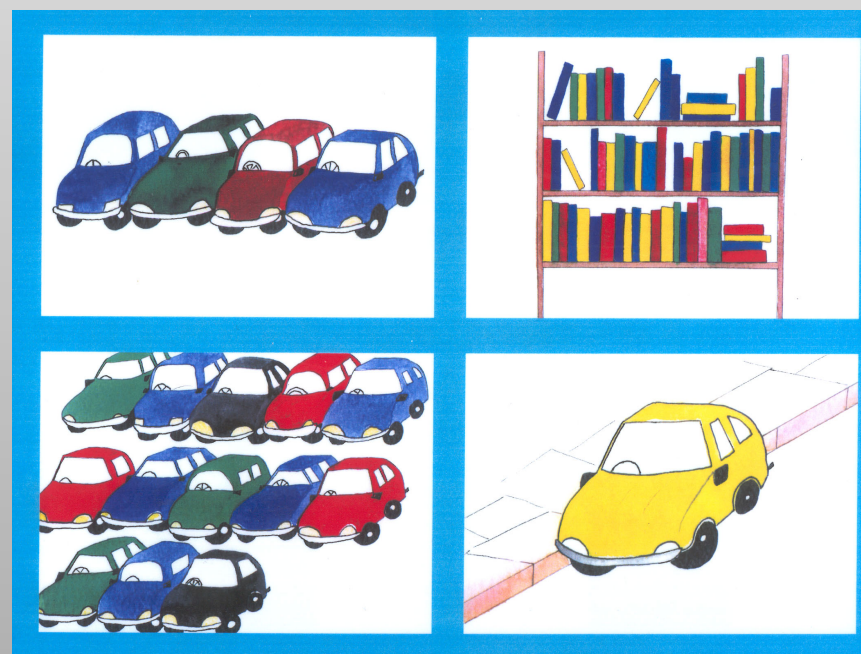
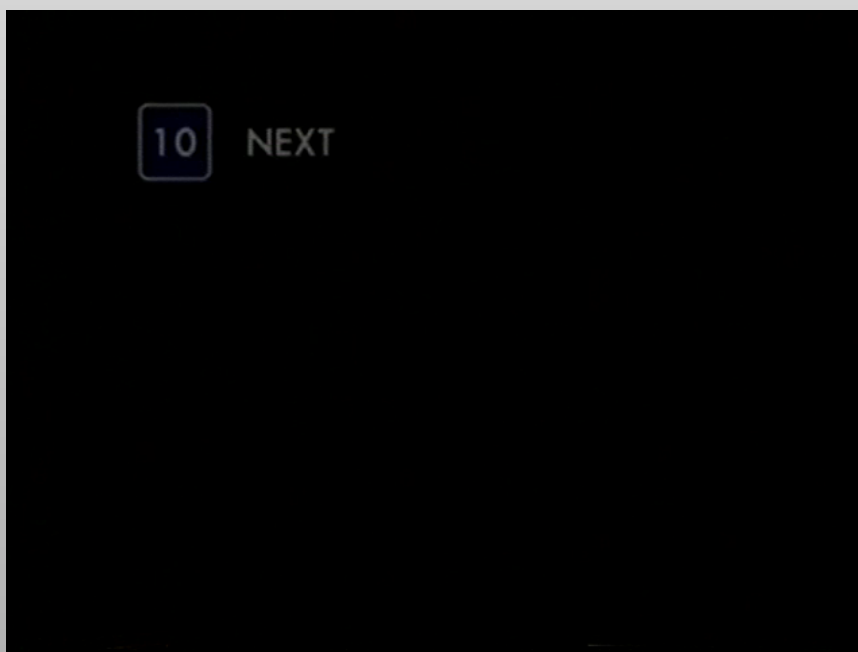
- Background (British Sign Language (BSL) Receptive Skills Test)
- Demo of online receptive skills test (German Sign Language)
- Preliminary results from the revised BSL test
- Usability study with the online receptive skills test
- Potential for research and practice

BSL Receptive Skills Test

- BSL Receptive Skills Test (Herman et al., 1999)
 - Vocabulary check
 - Multiple-choice test
 - Morphology and syntax
 - Children 3-11 years old
 - Normed on 135 children



Example: BSL Receptive Skills Test

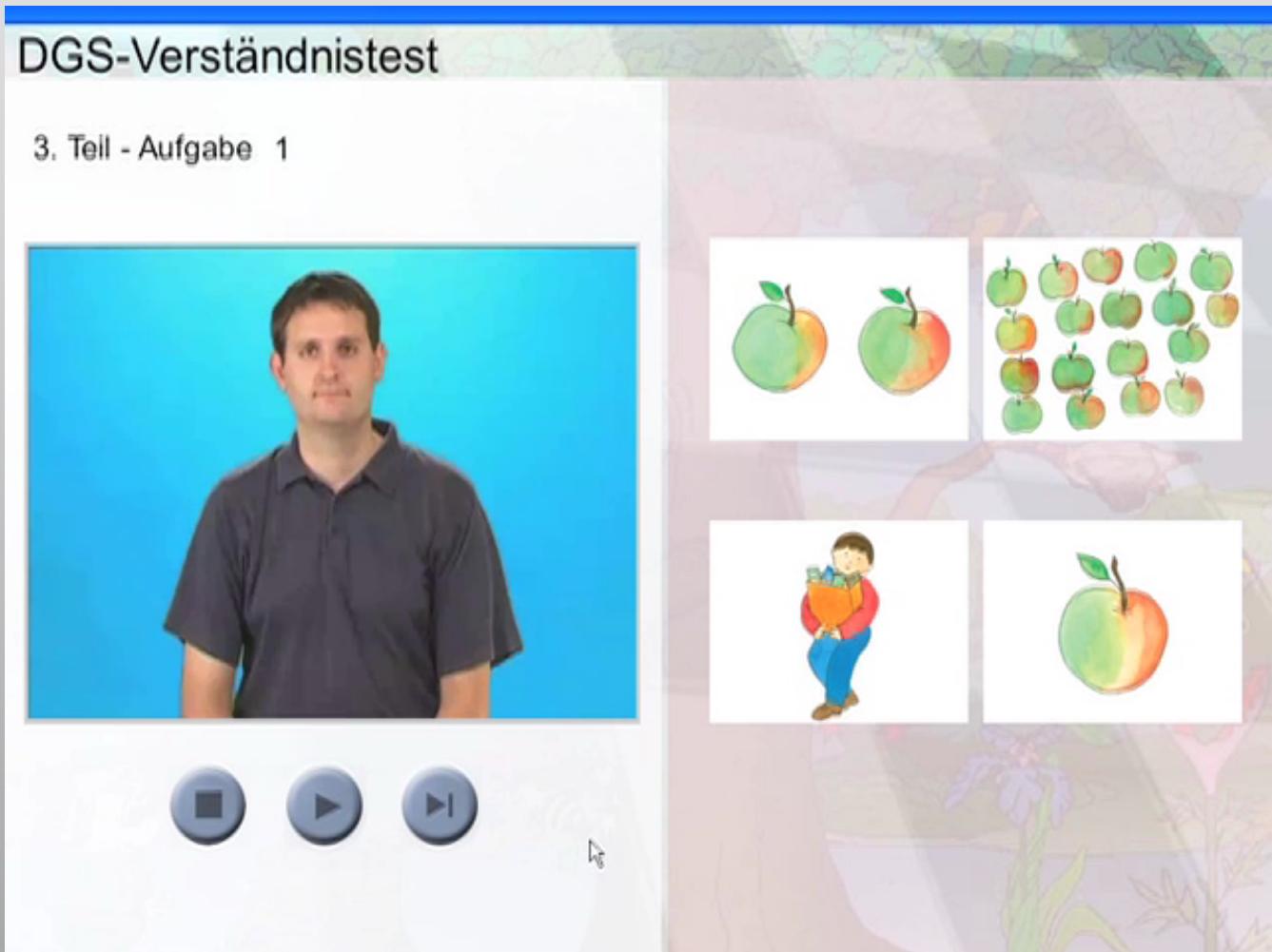


(Herman et al., 1999)

Adaptations of the BSL Receptive Skills Test



Example of adaptations: German Sign Language



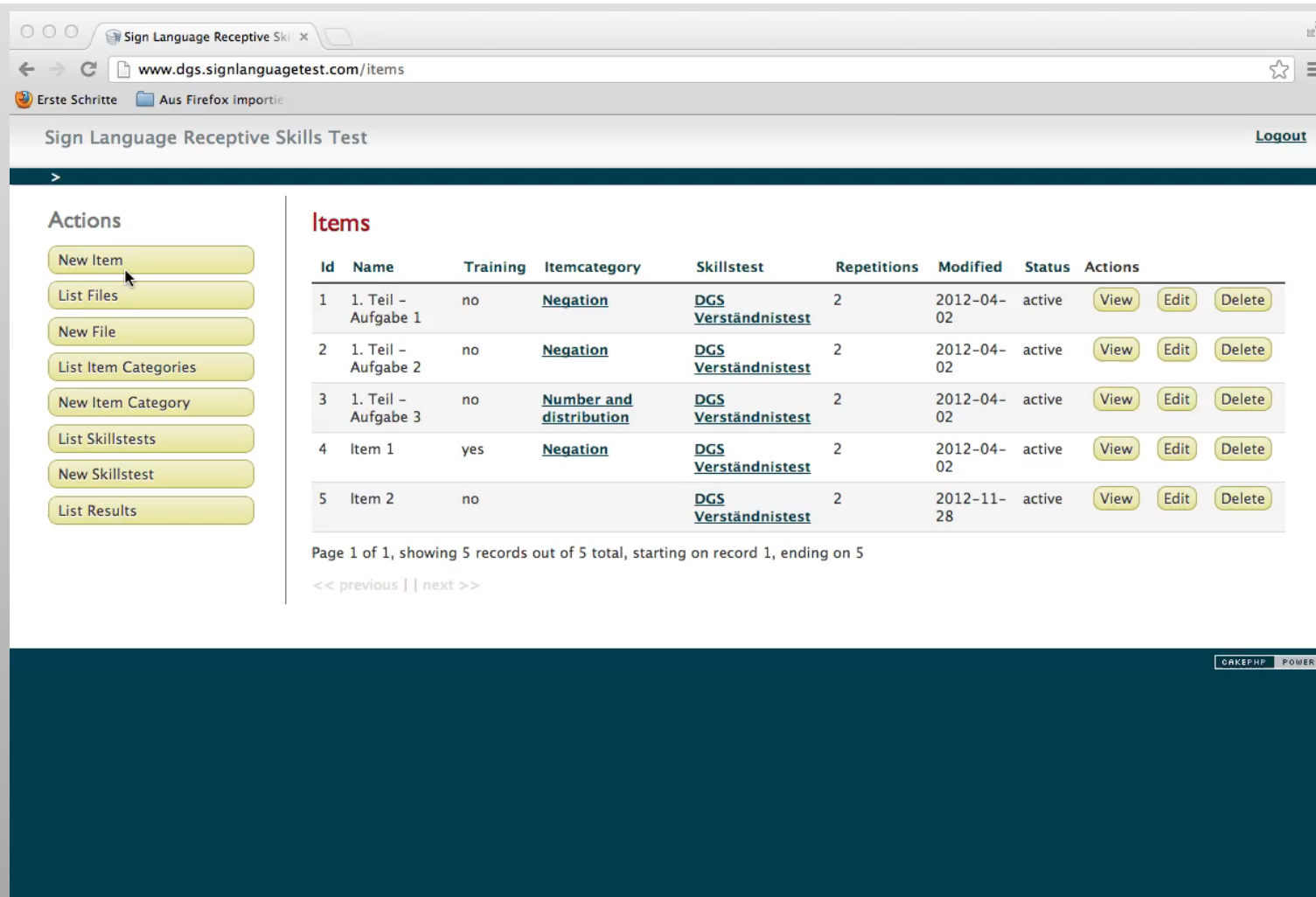
The screenshot displays the 'DGS-Verständnistest' (German Sign Language Comprehension Test) interface. On the left, a video window shows a man against a blue background. Above the video, the text '3. Teil - Aufgabe 1' is visible. Below the video are three navigation buttons: a square, a play button, and a next button. On the right, four picture options are presented in a 2x2 grid: two apples, a group of twelve apples, a person carrying a basket of fruit, and a single apple. The background of the interface features a faint, artistic illustration of a person's hands in sign language.

(Haug, 2011)

Online version – Main features

- Different roles of user/user profiles
- Setting up a test (items, item categories)
- Adding schools and test participants
 - incl. online questionnaire
- Media management (e.g., images, videos)
- Flexible layout
- Score reporting and analysis
- Flexibility of online version

Example: Create a new item



The screenshot shows a web browser window with the URL www.dgs.signlanguagetest.com/items. The page title is "Sign Language Receptive Skills Test" and there is a "Logout" link in the top right. On the left, under the "Actions" heading, there is a list of buttons: "New Item", "List Files", "New File", "List Item Categories", "New Item Category", "List Skilltests", "New Skilltest", and "List Results". The "New Item" button is highlighted with a mouse cursor. The main content area, titled "Items", displays a table with 5 records. Each record has columns for Id, Name, Training, Itemcategory, Skilltest, Repetitions, Modified, Status, and Actions (View, Edit, Delete).

Id	Name	Training	Itemcategory	Skilltest	Repetitions	Modified	Status	Actions
1	1. Teil - Aufgabe 1	no	Negation	DGS Verständnistest	2	2012-04-02	active	View Edit Delete
2	1. Teil - Aufgabe 2	no	Negation	DGS Verständnistest	2	2012-04-02	active	View Edit Delete
3	1. Teil - Aufgabe 3	no	Number and distribution	DGS Verständnistest	2	2012-04-02	active	View Edit Delete
4	Item 1	yes	Negation	DGS Verständnistest	2	2012-04-02	active	View Edit Delete
5	Item 2	no		DGS Verständnistest	2	2012-11-28	active	View Edit Delete

Page 1 of 1, showing 5 records out of 5 total, starting on record 1, ending on 5
 << previous | next >>

Study 1: BSL Pilot test sample

- 7 children
- Age range from 3-11 years
- Age of starting to sign ranged from birth to 5
- Most use both BSL and English-influenced varieties of signing

Issues

- One recent immigrant with her Deaf family
- Uncertainty about age of exposure, age of beginning to sign, etc.
- Some improvements to participant data questions needed

Study 1: BSL user questionnaire



Did you like using the computer for the BSL test?

Yes I love!



What was good about doing the test on a computer?

Good sign lady.



What was bad about doing the test on a computer?

Nothing



What can we change to make it better?

Don't know

Study 2: Usability study

- Two stage usability study of online version (German Sign Language version)
- Stage 1: Usability study with experts from Human Computer Interaction (HCI), followed by implementation of results in online test
- Stage 2: Usability study with teachers (May/June 2014)

>> report on results of stage 1 >>

Methodology

- Sample: Human-Computer Interaction group at University of Zurich (N=6)
- Task to be completed as „user persona“ (day before)
- Focus group

Sample (N=6)

- Gender: 3 male/3 female
- Role/Position:
 - Master student: 1
 - Ph.D. students: 4
 - Professor: 1

Two „user personas“:

- *Pretend to be a teacher.....*
- Two teachers working in a school for the deaf, with different experiences/backgrounds, e.g.,
 - Background as teacher (degree, experience with Internet, social media, etc.)
 - Signed language skills
 - Professional experience
 - Age of children in own class
 - Assignment from school principal to use online version of the test (in addition to regular workload)

Focus group

- Completed task together (beamer) and providing feedback
- Audio-recording of focus group session
- Time: 70 minutes

Results

Comments/Feedback clustered around the following topics

- Online background questionnaires for teachers and children
- Design and navigation
- Introduction to test/system

Questionnaires

- Too many questions (30) which need to be answered before testing a child
 - Separate: test-relevant and research-relevant questions (split questionnaire in two parts)
- As many drop-down questions as possible (e.g., for dates)
- Wording of questions
- Profile of teachers (similar to social media)

Design & navigation

Sign Language Receptive Skills Test
Logout

Home > Items

Actions

New Item
List Files
New File
List Item Categories
New Item Category
List Skillstests
New Skilltest
List Results

Items

Id	Name	Training	Itemcategory	Skillstest	Repetitions	Modified	Status	Actions
1	Aufgabe 1	no	Number and distribution	DGS-Verständnistest	2	2012-12-05	active	View Edit Delete
2	Aufgabe 2	no	Negation	DGS-Verständnistest	2	2012-12-05	active	View Edit Delete
3	Aufgabe 3	no	Number and distribution	DGS-Verständnistest	3	2013-01-09	active	View Edit Delete
4	Aufgabe 4	no	Negation	DGS-Verständnistest	2	2012-12-05	active	View Edit Delete
5	Aufgabe 5	no	Negation	DGS-Verständnistest	2	2012-12-05	active	View Edit Delete
6	Aufgabe 6	no	Number and distribution	DGS-Verständnistest	2	2012-12-05	active	View Edit Delete
7	Aufgabe 7	no	Spatial verb morphology	DGS-Verständnistest	3	2012-12-05	active	View Edit Delete
8	Aufgabe 8	no	Negation	DGS-Verständnistest	3	2012-12-05	active	View Edit Delete
9	Aufgabe 9	no	Negation	DGS-Verständnistest	3	2012-12-05	active	View Edit Delete
10	Aufgabe 10	no	Size and shape specifiers	DGS-Verständnistest	3	2012-12-07	active	View Edit Delete
11	Aufgabe 11	no	Negation	DGS-Verständnistest	2	2012-12-05	active	View Edit Delete
12	Aufgabe 12	no	Negation	DGS-Verständnistest	3	2012-12-05	active	View Edit Delete
13	Aufgabe 13	no	Negation	DGS-Verständnistest	3	2012-12-05	active	View Edit Delete
14	Aufgabe 14	no	Negation	DGS-Verständnistest	2	2012-12-05	active	View Edit Delete
15	Aufgabe 15	no	Negation	DGS-Verständnistest	3	2012-12-05	active	View Edit Delete
18	Item 1	no	Number and distribution	BSL Receptive Skills Test	1	2014-02-14	active	View Edit Delete
19	Item 2	no	Spatial verb morphology	BSL Receptive Skills Test	1	2014-02-14	active	View Edit Delete
20	Item 3	no	Negation	BSL Receptive Skills Test	1	2014-02-14	active	View Edit Delete
21	Item 4	no	Negation	BSL Receptive Skills Test	1	2014-02-14	active	View Edit Delete
22	Item 5	no	Spatial verb morphology	BSL Receptive Skills Test	1	2014-02-14	active	View Edit Delete

Page 1 of 1, showing 20 records out of 20 total, starting on record 1, ending on 20
<< previous | next >>

Design & navigation

- Have navigation that indicates „progress“/steps (similar to completing the booking of a flight)
- Structure of navigation
- Revise different levels of navigation
- Order of navigation

Actions

New Item

List Files

New File

List Item Categories

New Item Category

List Skillstests

New Skillstest

List Results

Introduction to test/system

- Resource subite, including online tutorial

Priorities to be implemented

- Navigation
- Questionnaires
- Designs

Potential for research & practice

- Collecting data over a longer period of time (e.g., re-testing of same children)
- Development of „language profiles“
- Norming of tests
- Linking research to practice
- Cross-linguistic research
- >> applicable to other SL tests

Contact details & links

Tobias Haug: tobias.haug@hfh.ch

Ros Herman: r.c.herman@city.ac.uk

Bencie Woll: b.woll@ucl.ac.uk

www.signlanguagetest.com

www.signlang-assessment.info

References

Haug, T. (2011). *Adaptation and Evaluation of a German Sign Language Test - A Computer-Based Receptive Skills Test for Deaf Children Ages 4-8 Years Old*. Hamburg: [Hamburg University Press](#).

Herman, R., Holmes, S., & Woll, B. (1999). *Assessing BSL Development - Receptive Skills Test*. Coleford.