Introduction of Visual Amharic to Deaf Education in Ethiopia

Global Hearing Health
Gallaudet University
October 10, 2015

- Thomas Shull- Boston Public Schools
- Molash Hailu- Victory School Addis Ababa
- Abera Nega- East African Hearing Aid Company
- Zenebesh Redleaf- Project Assistant
- Telahun Gebrehiwot- Boston University
- Miriam Redleaf – University of Illinois-Chicago
What is Cued Speech?

• Developed for English
• 8 handshapes show consonant phonemes
• 4 hand positions show vowel phonemes
• In tandem with lip reading
• All the sounds (phonemes) of English are made visible
• Gestures are in real time
Cued Speech for American English

Handshape 1 /d, p, zh/
  deep treasure

Handshape 2 /TH, k, v, z/
  the caves

Handshape 3 /s, h, r/
  sea horse

Handshape 4 /wh, b, n/
  white bone

Handshape 5 /m, t, f/ & vowel alone
  my taffy

Handshape 6 /w, sh, l/
  wet shell

Handshape 7 /th, j, g/
  thin jogger

Handshape 8 /y, ng, ch/
  young child

Mouth /ee, ur/
  leisure

Chin /aw, ue, e/
  tall blue tent

Throat /oo, i, a/
  Look, big crabs!

Side consonant alone

Otolaryngology
Orin Cornett

- Dr. Orin Cornett, physics background
- Vice President of Long-Range Planning at Gallaudet University
- Devised this system in 1966 as an aid to English language acquisition and literacy
- Shown to increase literacy levels in deaf children
Advantages of Cued Speech

*a phonemic system*

- A way to “see English”
- Better name might be “visual English” (but this collides with other terminology in the US)
- Makes English a visual language
- Residual hearing or CI-use supported but not necessary.
- Cueing produced in real time
Ethiopia

- Many deaf people
- Little access to hearing aids or cochlear implantation
- National language is Amharic (1 of 80 languages)
- Written representation is in syllables
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Amharic is written in syllables

- Cueing modality seemed ideal to visually represent the Amharic language
- Experienced multilingual cuer-Thomas Shull – adapted the cueing method to Amharic
- Native speaker – Zenebesh Redleaf - clarified pronunciation, provided vocabulary by phoneme groups
- Professor of Linguistics – Telahun Gebrehiwot- provided linguistic expertise and edited the workbook.
Differs from English Cued Speech

- Amharic has 2 symbols, always at the start of a word, for which no preceding consonant is pronounced - assigned to handshape 5 (eg – “Addis Ababa”)
- Amharic has ejective consonants – assigned to a new handshape 9
- Amharic has 7 vowels (unlike English which also has many diphthongs)
Angelina Jolie
Introduction to Cued Amharic

Thomas Shull
Introduction to Cued Amharic

Thomas Shull
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- ልም /suk'/ shop
- ኢም /k't'a/ pita bread
- ኢም /k'es'/ priest
- ኣም /k'urs/ breakfast
- ኤም /k'olo/ fried garbanzos

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| k'ebeta/ belt
- ሱም /k'indib/ eyebrow
- ስም /k'tsbat/ wink

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| ኣም /k'aw/ salt
- ሱም /k'ewa/ polite person
- ሲም /nef'j/ white
- ሳም /guraf'/ gray

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| ሳም /gara'/ twigs
- ሹም /gnak'a/ shoulder
- ሺም /gunj'/ cheek
- ሻም /agef'/ chin
- ሼም /afsef'/ nose
- ረም /bafbi'b/ applause

**University of Illinois**
Hospital & Health Sciences System
Otolaryngology
\[ \text{Hitter's} \quad \text{ke} \quad \text{ku} \quad \text{ki} \quad \text{ka} \quad \text{ke} \quad \text{ki} \quad \text{ko} \]

- /kek/ cake
- /kis/ pocket
- /kebero/ drum
- /kokeb/ star

- /lek/ check
- /lok/ chalk
- /kaisi/ socks
- /karot/ carrot

- /silk/ telephone
- /kubaja/ cup
- /dakje/ duck
- /kibrit/ match

\[ \text{NURSE'S} \quad \text{le} \quad \text{lu} \quad \text{li} \quad \text{la} \quad \text{le} \quad \text{lo} \]

- /ile/ other
- /ile/ servant
- /il/ loose
- /leem/ fertile
- /leemi/ lemon/lime
- /mulu/ full
- /lab/ sweat

- /lads/ clothes
- /slosa/ thirty
- /leslosa/ smooth
Two successive workshops

- First in February 2015 (Thomas Shull and Ben Lachman-a deaf native cuer)
- Survey of workshop attendees (Molash Hailu and Abera Nega)
- Second in July 2015 (Thomas Shull and Dr. Shilpa Hanumantha- a deaf native cuer)
Workshop #1 - February 2015

• VICKtory School
• 24 deaf students
• 8 Teachers of the deaf – 2 deaf, 6 hearing
• 7 parents - hearing
• 39 participants total
• https://vimeo.com/123391234
• https://vimeo.com/123391381
Cost of workshop #1

- Approximately $3K to produce workbook
- Approximately $9K to run the weeklong workshop
- Total approximately $12K
- (ALL INSTRUCTIONAL LABOR DONATED)
Follow-up survey from workshop #1 (– Molash Hailu)

• 15/24 students responded
• 2 additional students responded
• 8/8 teachers responded
• 1/7 parents responded
• 24/39 responded (plus 2 extras=26 responses)
Who was using visual Amharic?

• All 26 respondents used Ethiopian Sign Language (EthSL) routinely

• All 15 responding students had used visual Amharic since the workshop – with friends, teachers and parents

• 7 of the 8 teachers had used visual Amharic since the workshop – to help in teaching and vocabulary

• The 1 mom responding used visual Amharic with her child
Learnability and usefulness

- 6 of the 17 students responding had taught visual Amharic to some of their friends.
- 6 of the 8 teachers had taught their friends, or more students, and one had taught his wife.
- Students stated that they liked the system (10) and had found it “easy to learn” (3).
- Students recognized it helped them communicate (10).
- The students recognized that it helped them with lip reading (2) and literacy (2).
- Teachers stated it helped with vocabulary and to express what was hard to express in Ethiopian Sign Language (EthSL).
Visual Access to Amharic

• Visually represents phonology/pronunciation
• Visually represents syntax and grammar
• Shows pronunciation, not spelling
  – Double consonants are pronounced (and cued) but not spelled (eg “wana” vs “wanna”)
  – Lone consonants exist in Amharic, but can’t be written. **But they can be cued.**
Workshop #2- July 2015

- Mekanisse School
- Teachers – Thomas Shull and Dr. Shilpa Hanumantha
- 4 days of an introductory workshop
- 1 day of a follow-up workshop for the VICKtory School students and teachers
Attendees for workshop #2

- 25 (new) Mekanissa teachers
- 11 (new) Alpha school teachers
- 1 new VICKtory School teacher
- 7 returning VICKtory School teachers
- 1 parent
- 2 new VICKtory School students
- 10 returning VICKtory School students
- 39 news, 18 returning, 57 students total
Cost of workshop #2

- Approximately $9K
- (ALL INSTRUCTIONAL LABOR DONATED)
Future Directions

• Ethiopian Sign Language and Visual Amharic allow both languages to be visually accessible for true multi-lingualism and multi-culturalism.

• Collaborate with Deaf EthSL signing teachers Molash Hailu and Temesgen Tadele who taught sessions in July 2015 workshop.

• Offer support to parents’ modeling Amharic to their deaf children via Visual Amharic
Next workshop #3 – Feb 2016