Introduction of Visual Amharic to Deaf Education in Ethiopia

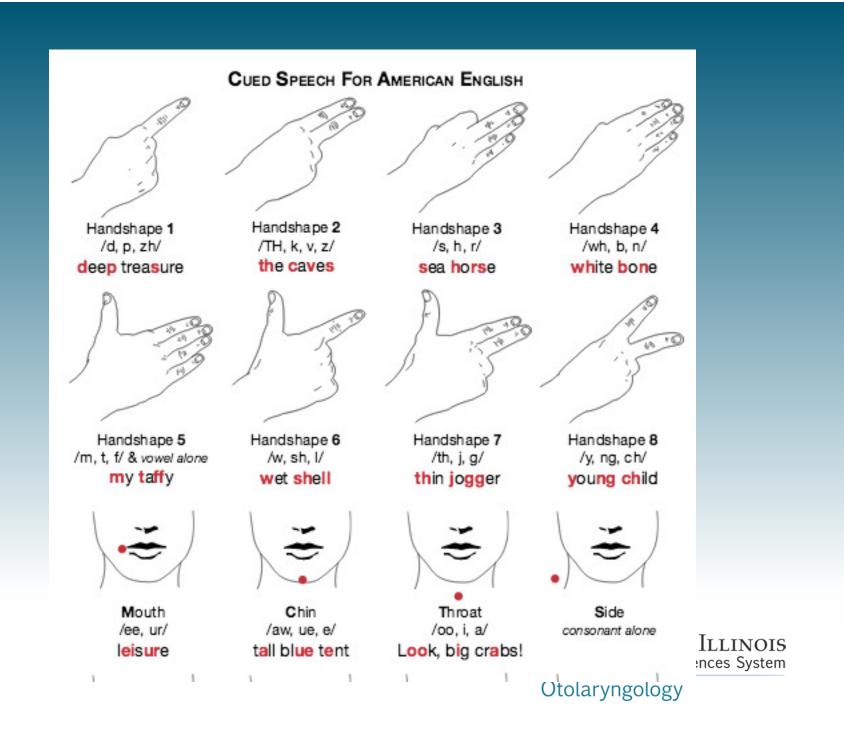
Global Hearing Health Gallaudet University October 10, 2015

- 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 # University of Illinois Hospital & Health Sciences System 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 UNIVERSITY OF ILLINOIS Hospital & Health Sciences System Otolaryngology

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 Gebrehiwotprovided linguistic expertise and edited of the workbook.
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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)

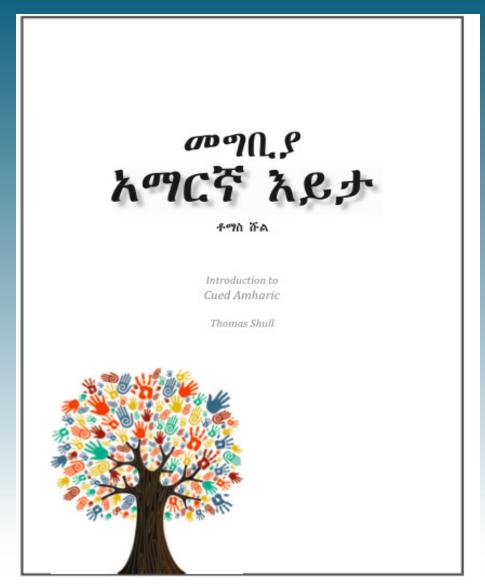




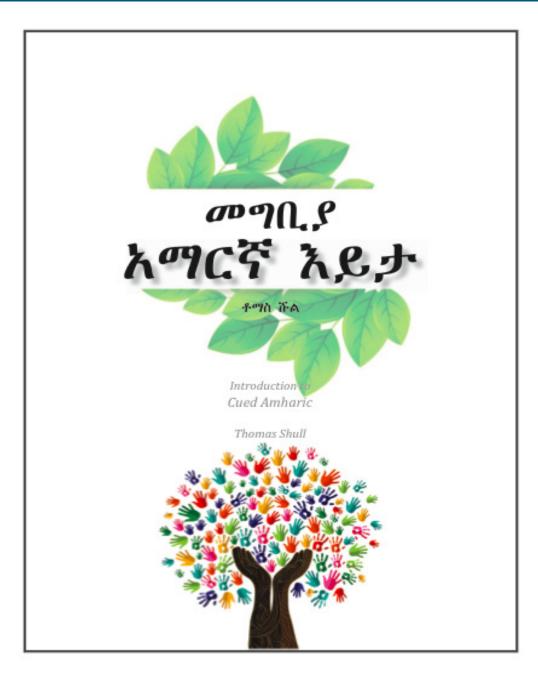






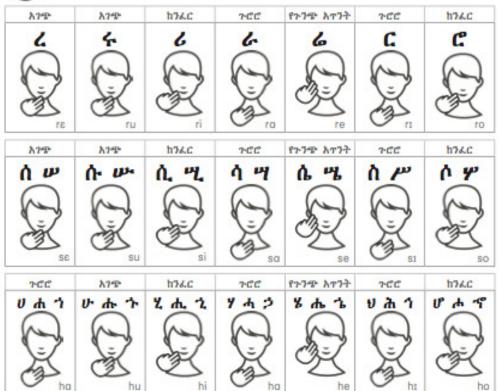






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- ↑ 6 /suri/ pants
- "C /sor/ grass
- ስስ /sis/ thin
- ↑↑ /sus/ addiction
- P6 /sira/ work
- ¿υ /rih/ rheumatism
- ምሳ /mrsa/ lunch
- እራት /irat/ dinner
- +6 /tera/ not special, queue
- ስፍራ /srfro/ place ħ₱ /sɪm/ name
- 60 /rgs/ head
- ሴት /set/ woman
- ሦስት /sost/ three
- ፍትሕ /fithi/ justice
- አምስት /amist/ five
- ስሜት /smet/ feeling

- መሥራት /mesrat/ work (v.) ←υ←υ /ruhruh/ considerate
- ተሳሳተ /tesasate/ got wrong
- ፍርሃት /firhat/ fear
- σοςυ /mer(h)ε/ plan
- \$6\$6 /frafre/ fruit
- CU&¥ /rihirahe/ mercy
- ተሳሳሙ /tesasame/ kissing

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M /lela/ other

♠ /lole/ servant AA /ltl/ loose

Λ9º /lεm/ fertile

/lomi/ lemon/lime ሙሉ /mulu/ full

11 /lab/ sweat

A-An /libs/ clothes 114 /selasa/ thirty ለስላሳ /leslasa/ smooth

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S je	S ju			Je je	JI JI	

K /[i/ thousand

nn /[s[s/ flee

アヘ /ʃolɛ/ be sharpened NC /ser/ mischief

N& /jera/ canvas ากักร /bɪʃɪʃɪt/ flank NA& /[srrefs/ broke off

7 /smma/ shawl ሻማ /ʃama/ candle

ሽልግት /ʃɪlɪmat/ prize ሽበት /ʃɪbɛt/ grey hair

পাৰ্ব /majajal/ improve nan,→ /jslsbta/ nodding off

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WE WE	(F)	Wi	G WO	We We	WI	Wo

oc /wer/ month

@& /were/ gossip

σε /wεf/ bird PS /wana/ swimming

PS /wanna/ chief

m-t-m- /metew/ quit እም /awo/ yes

ውኝ /wissa/ dog

₼%~₹ /hamrawi/ pink





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ሰ-ቅ /suk'/ shop

क्न /k'rt'a/ pita bread

ቁስ /k'es/ priest

♦C↑ /k'urs/ breakfast

** /k'olo/ fried garbanzos T*C /t'1k'ur/ black

₱Aፍ /k'ulf/ key

n## /bak'olo/ com

*6\$ /k'arija/ pepper

ቆስጣ /k'ost'a/ spinach

ቀበቶ /k'sbsto/ belt

ቅንድብ /k'indib/ eyebrow

ቅጽበት /k'rtsbat/ wink

<i>እንጭ</i>	h7&C	7-00	የጉንጭ አጥንት	ጉሮሮ	ከንፌር
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and /tf'aw/ salt

an f /tj'swa/ polite person

14 /net/ / white

76- /giratj'a/ gray

TAC /tj'raro/ twigs

47.4 /tf'ank'a/ shoulder

?7 /gunt / cheek

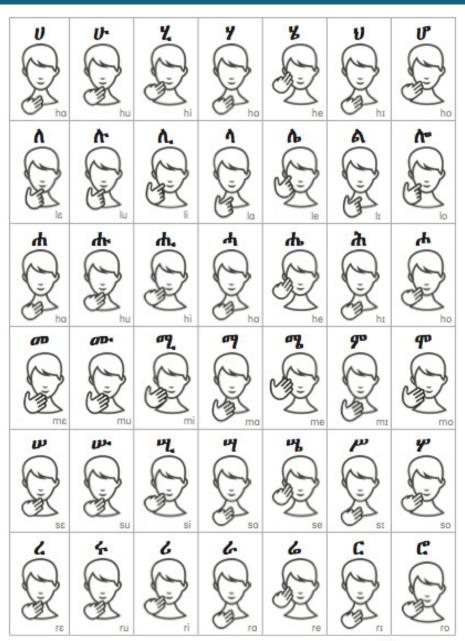
A7₽ /aget['/ chin

አፍንሜ /afintj'a/ nose

Than /tf'ibtf'aba/ applause

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ኬክ /kek/ cake ኪስ /kis/ pocket hnc /kebero/ drum

tha /kokeb/ star

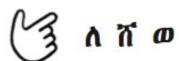
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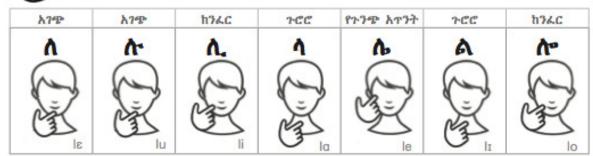
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ስልክ /sɪlk/ telephone

ኩባያ /kubaja/ cup

ዳክዬ /dakje/ duck ከብሪት /kibrit/ match





♣4 /lela/ other ሎሱ /lole/ servant AA /II/ loose

Λም /lεm/ fertile ^~~ /lomi/ lemon/lime σ⊶Λ· /mulu/ full

11 /lab/ sweat

ልብስ /libs/ clothes ሰላማ /sɛlasa/ thirty ለስላሳ /leslasa/ smooth

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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)
- Student 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)
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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

- Mekanisssa 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 multiculturalism.
- 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

