

From endangered language shift to maintenance: where do formal linguists fit?

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August 21, 2020

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Grandfather and I

IntGrid 10_A_Kar_Kanu_lowling_makad_nuding_nimung

Edit Query View Select Interval Boundary Tier Spectrum Pitch Intensity Formant Pulses

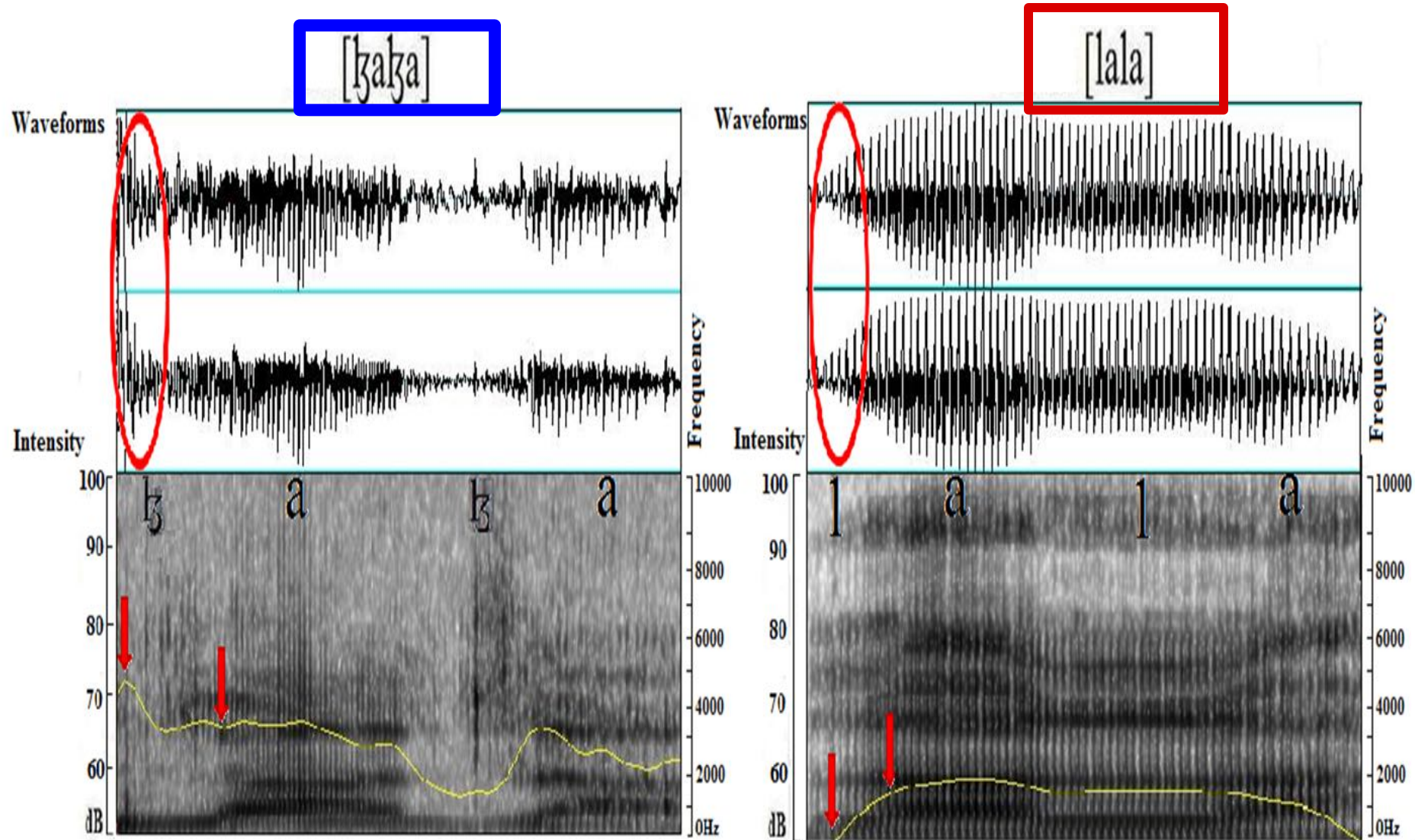
gun nani sbiyaw pusu ey.. knngali nani kari knudus ni tama, soni ka gisu na gimun balay.. pklay ku ho tama, hmut wada ...? bi shngiyen da kn-rudan uri
tana jyaqi ku cisay ku tama, so dawn nani.. dawn so ming hnu ni... pprgun nani..



Hualien, eastern Taiwan, 2013



Sound correction



Waveforms, intensity (dB), frequency (Hz)
of the word *kaʔa* ‘many’ in Truku

Uniqueness

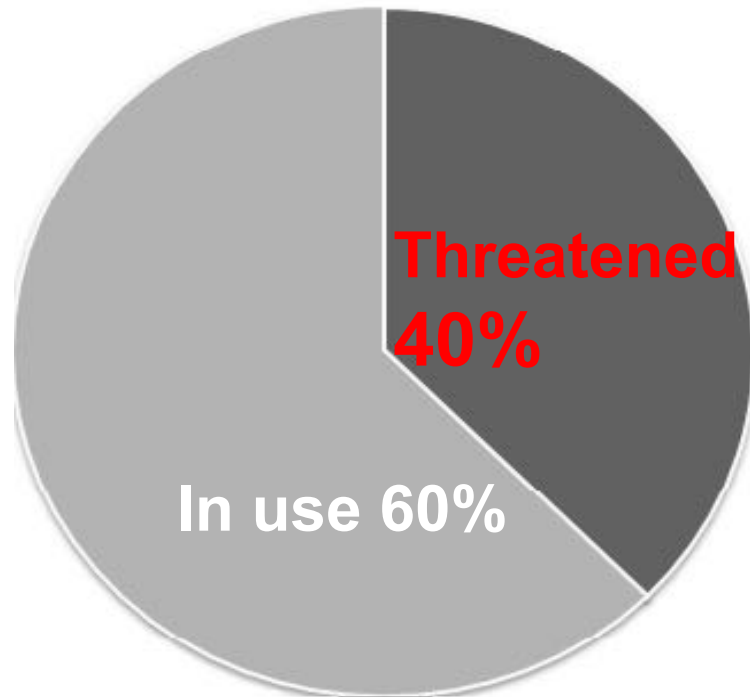
- The discovery of a (new speech sound, lexicon, word order, etc) is to linguists like the discovery of a new species to biologists.



- Linguists have the goal of understanding what is possible and impossible in human languages, advancing our knowledge of how the human mind works

Language endangerment

- **An alarming decline** in the number of the world languages
- Some 40 percent of the 7,000 world's languages are threatened (Endangered Languages Project).



- Varying degrees of decline in indigenous languages in Taiwan (Hsieh & Huang 2007)
- 9 vulnerable, 1 definite, 1 severe, 5 critical (UNESCO 2009)

Outline

1. A psycholinguistic assessment of
language shift
2. Language maintenance at
microscopic level
3. Formal linguists' contributions to
benefit language communities

Psycholinguistic assessment of Language shift

Truku Seediq as an example

Truku Seediq



- One of the 16 officially-recognized indigenous languages

- 3 Seediq dialects: Teuda, Tkdaya, and **Truku**

- **Population:** 32,472 (CIP 2020)

- **Speakers:** unknown (50 yrs old above speaking Truku;
no speakers of young children)

- **Contact situation:**

- **Truku:** disappearing language
- **Mandarin:** dominant language

- **Classification:**

- Definitely endangered language
- Amount and Quality of Documentation: *fair* 8
(UNESCO 2003)

Body-part & Nature-image naming tasks

- The HALA (Hawaii Assessment of Language Access) project focuses on a comparative measure –**speed of access to words** in one language relative to the speaker's other language(s) (O'Grady, Schafer, Perla, Lee, and Wieting 2009).

■ Frequency & access speed



Paradis' Activation Threshold Hypothesis (2004:28)

Method

- Using these two naming tasks to exploits the fact that **the speed** with which **Truku and Chinese** speakers access lexical items in these two languages offers a sensitive measure of relative language strength
- It also allows the evaluation of **label accuracy**, another indicator of language strength.
- **Main purposes of this study are to**
 - (1) further assess the HALA approach
 - (2) **assess Truku strength (vs. Mandarin) across age groups**
 - (3) establish baseline data as a starting point for developing conservation programs

Participants:

68 participants in 4 age cohorts

Cohort

Age

Gender

M

F

Older adults

41–65

6

11

Adults

26–40

9

8

Young adults

16–25

8

9

Youth

10–15

10

7

17 people in
each cohort

Only OA's first language is Truku.

Body-part (43 words)



Nature-image (48 words)



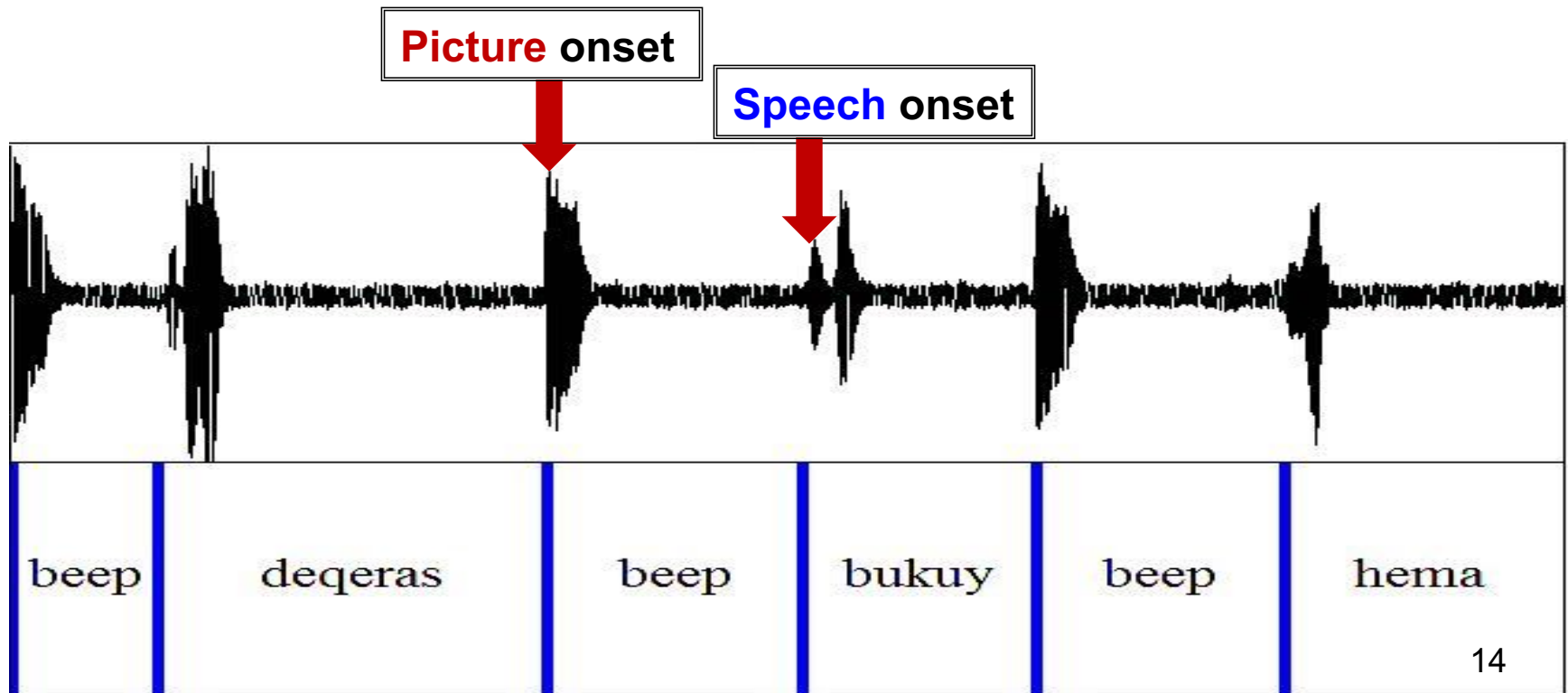
2 sets of words were divided into three strata of estimated frequency of occurrence based on the English Lexicon Project (Balota et al. 2007)

Test items by stratum

High frequency/stratum 1	Medium frequency/stratum 2	Low frequency/stratum 3
back ear eye face fingers foot hair hand head knee leg lips	arm cheek chin eyebrow fingernail forehead neck palm thumb toe waist wrist	ankle arch bicep calf cheekbone elbow eyelid forearm heel knuckle pupil shin toenails
18 words	12 words	13 words

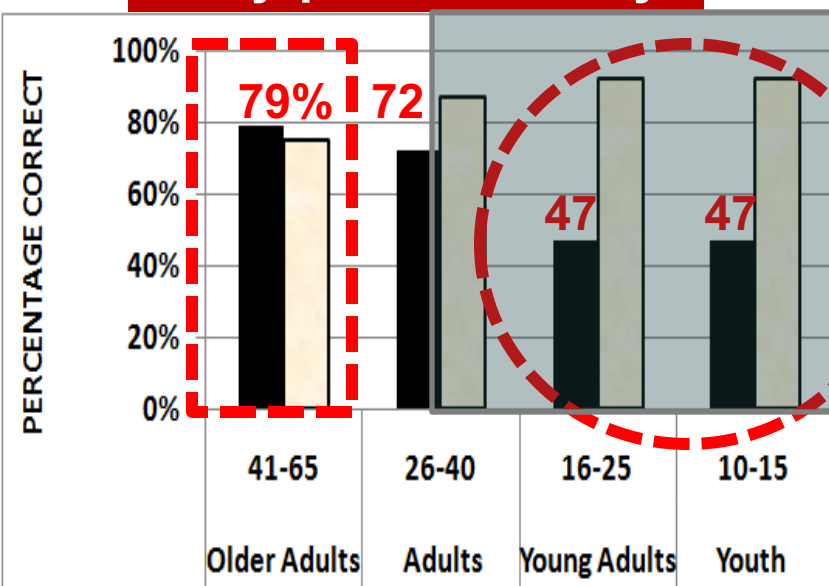
Procedure

- Picture naming (Body-part & Nature-image)
→ questionnaire (LEAP-Q) & brief interview
- Measure the response time (in ms) from the onset of the picture to the onset of participant's reaction

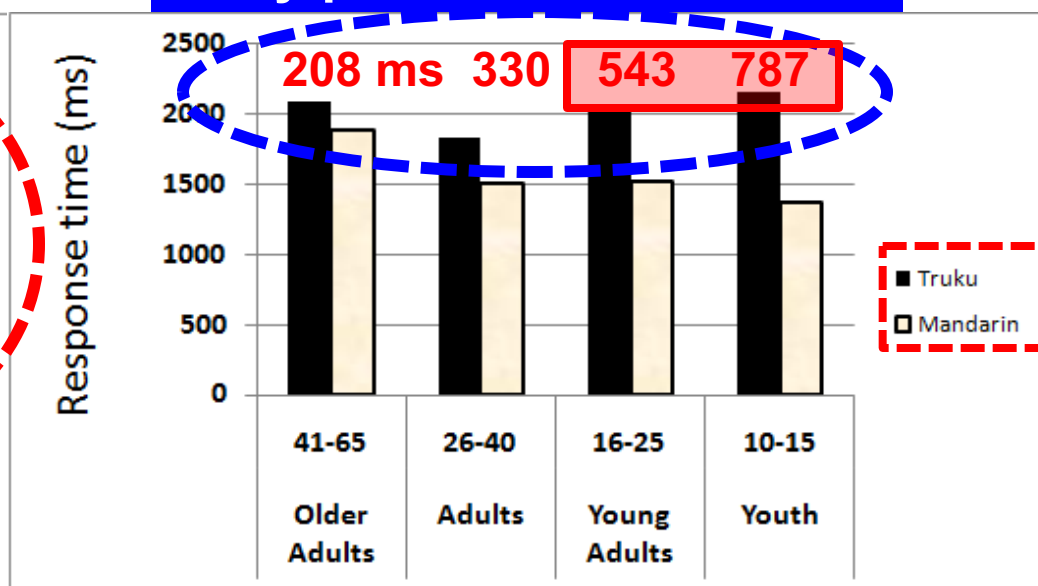


Two indicators of language strength

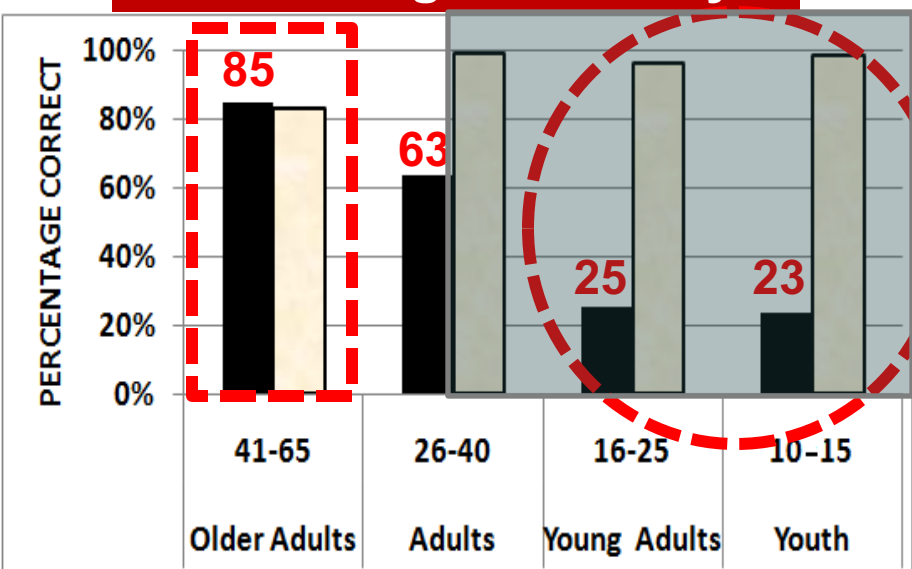
Body-part: accuracy



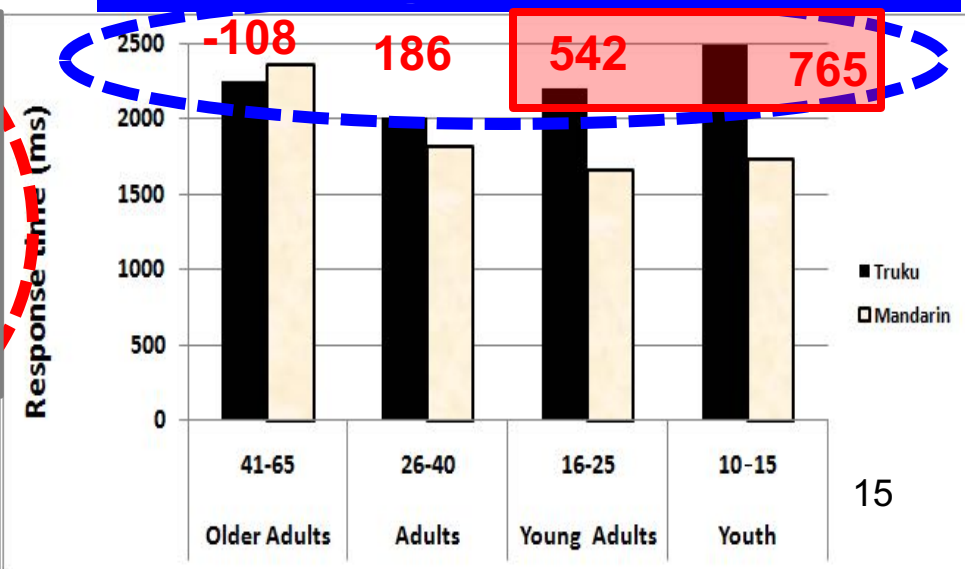
Body-part: difference in RTs



Nature-image: accuracy



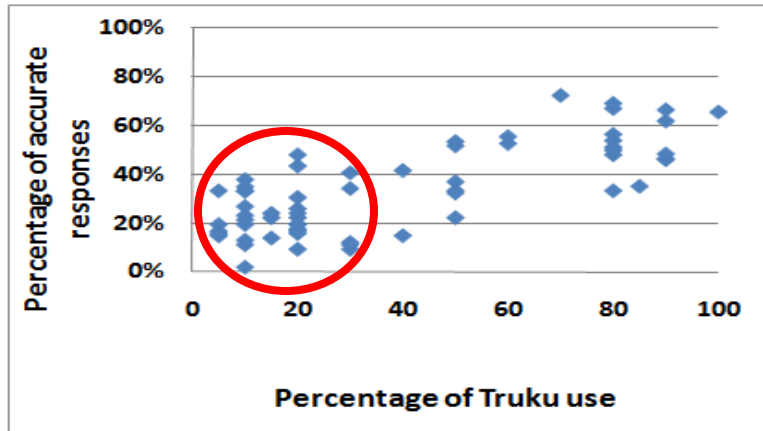
Nature-image: difference in RTs



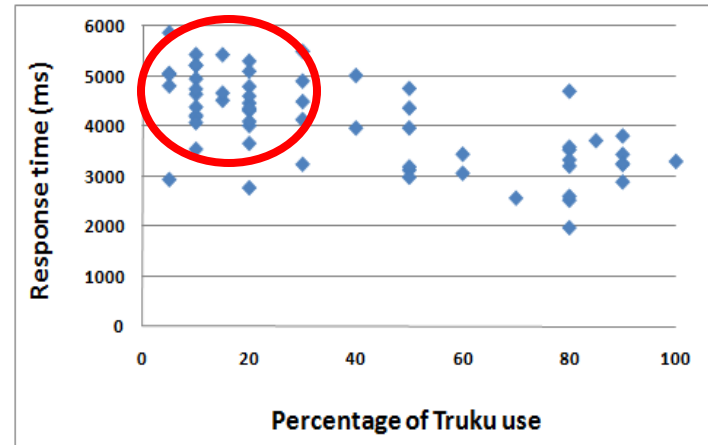
Correlation between accuracy/RTs & **language use**

Each ppt. responded the Q5 in the LEAP-Q "...what % of time would you choose to speak each language?"

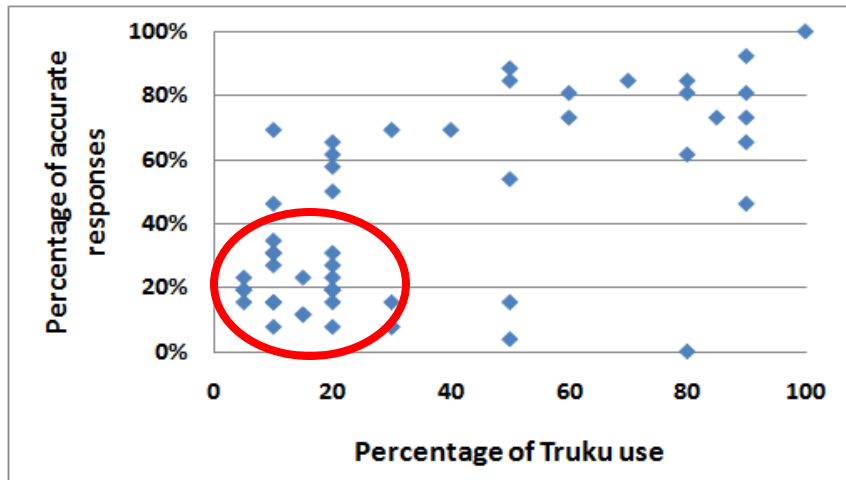
Body-part: accuracy & Truku use



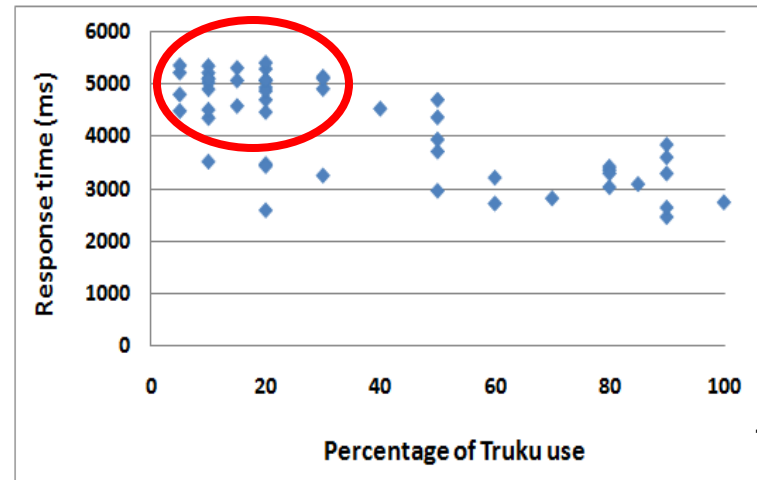
Body-part: RTs & Truku use



Nature-image: accuracy & Truku use



Nature-image: RTs & Truku use



Findings

The results show an **overt intergenerational decline** and the need for **urgent remedial action** if Truku and other indigenous languages in Taiwan are to survive for another generation.

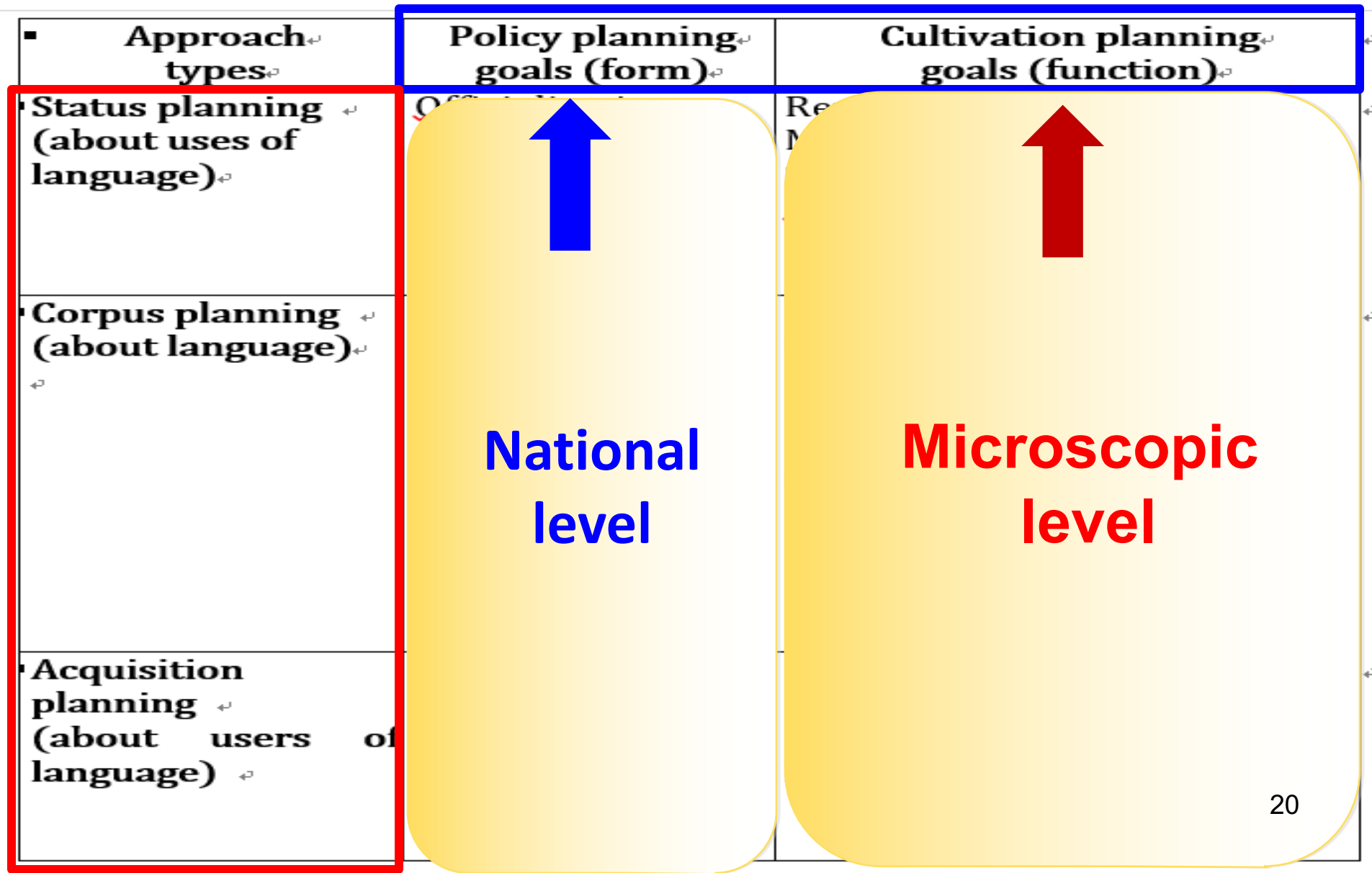
Language maintenance

Crucial factors for language survival

(de Bot 1997:581; Romaine 2007:117, among others)

1. To increase **the domains of use**
2. To increase **the number of speakers**
3. To ensure **intergenerational transmission**

Integrative framework of language planning goals (Hornberger 1994)



Truku language planning

Approach
types

Policy planning goals (form)

Sta

Along the process of making these policy planning goals, many linguists including formal linguists in Taiwan have been involving in different types and approaches of language documentation and revitalization work **at the national level** as well.

Lack of cultivation planning goals

Sense of identity and self-perception

determine the speaker's motivation to continue using his or her mother tongue in the face of marginalization

(Brenzinger, Heine, and Somner 1991; Schmid 2002)

→ Need more efforts at the **microscopic** level or **bottom-up** strategies

Community-based language revitalization projects

(2012-2014, funded by *National Geographic Genographic Legacy Fund* of U.S.A, collaborating with the elder/Bowtung & anthropologist/Man-chiuLin)

Qowgan village, Eastern Taiwan



Participants

- A total of 23 young Truku (6-15 years old) and 10 young adult (20-40 yrs old)
- Conducted in different domains including bamboo pavilion, Presbyterian Church, and homes.

Collaborative ethnographic methods

1. Language assessment and language attitude **survey**
2. **Questionnaire**
3. Focus group **interview**
4. **Observations, field notes, and journals**

Action plans

To raise the awareness & motivation

1. Participatory action research
2. Theater forum for social change
3. Master-Apprentice program
4. Weekly culturally-based and domain-oriented curriculum

To provide sufficient input and interaction & expand the domains of use

5. Language documentation and archiving

1. Participatory action research

a. Identifying **problems**



b. Understanding **status quo**



c. Exploring the challenges and opportunities of *intergenerational transmission*



2. Theater for Social Change

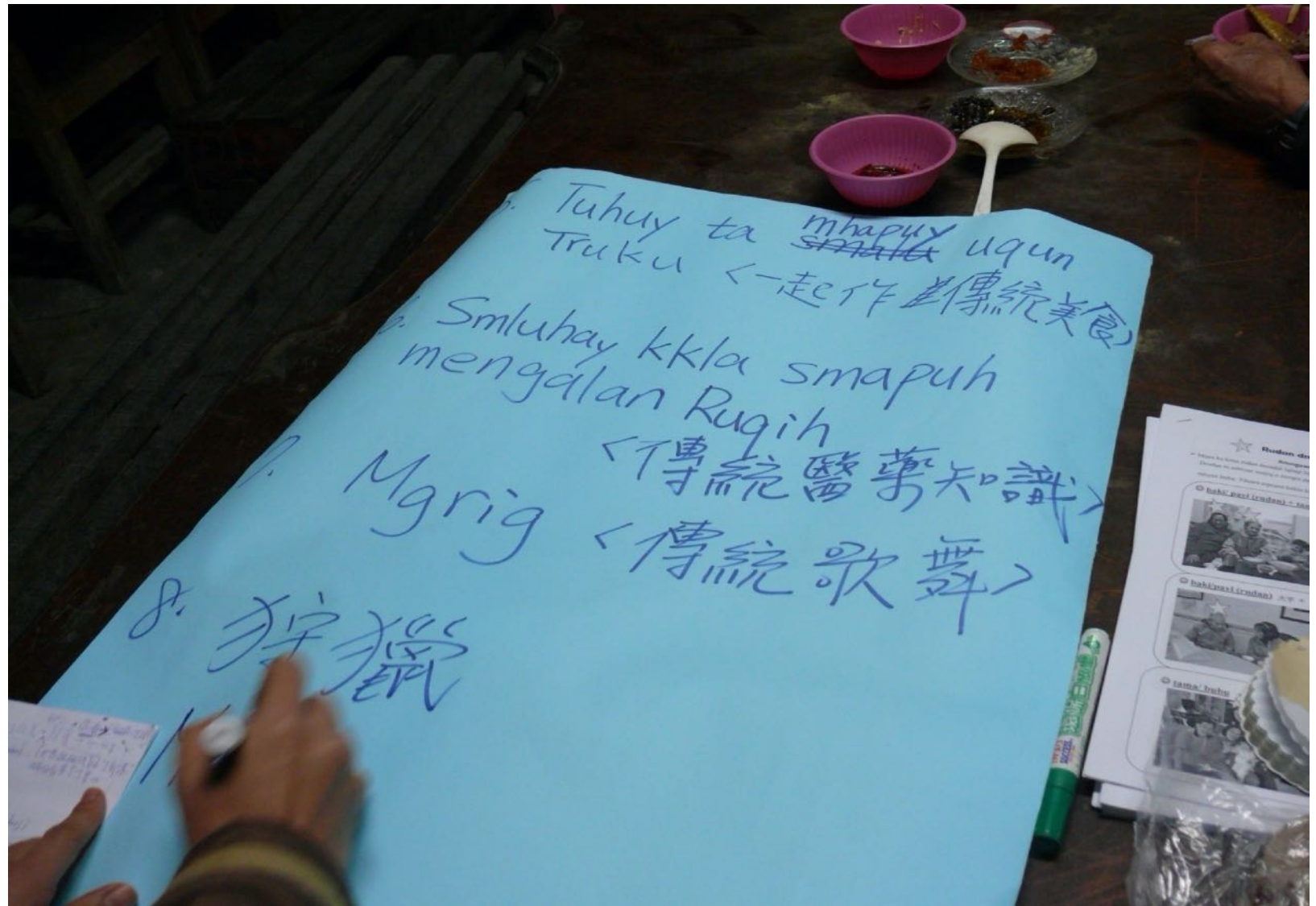
- *Forum Theater* provides a **democratic space** for people of oral culture to collectively look for solution **through improvisation and dialogues** (Boal 2002)
- The audience, who share the same oppression, will be positioned in an **active position**, join the scene as actors, and explore different strategies to **undo the oppression**.

3. Mater-Apprentice program

- Elders and young adults work together in a **one-on-one** relationship
- Young Truku can develop **conversational proficiency** in the language.



Co-design the contents



Activities as language lessons

- **Picking vegi** (supu ta kmtuy sluheyng)
- **Cooking**(supu ta mhapuy damat)
- **Hunting** (supu ta maduk samat)
- **Having meals** (supu ta mkan hapuy)
- **Sewing** (supu ta smais misin)
- **Weaving**(supu ta tminun kari rudan spiyaw)
- **Dancing** (supu ta mgrig)
- **Singing** (supu ta meuyas uyas Truku)
- **Doing house chores** (supu ta kmalaw sapah)
- **Raising chicken** (supu ta tmabu babuy ni rudux)
- **Working** (supu ta qmpah)
- **Telling traditional stories** (supu ta prngaw gaya)
- **Visiting elders** (supu ta musa sapah rudan sbiyaw)
- **Exploring new route to mountain** (supu ta smalu elug dgiyaq)
- **Building traditional hut/biyi** (supu ta smalu biyi tnsamat hug)

4. Weekly culturally-based and domain-oriented curriculum



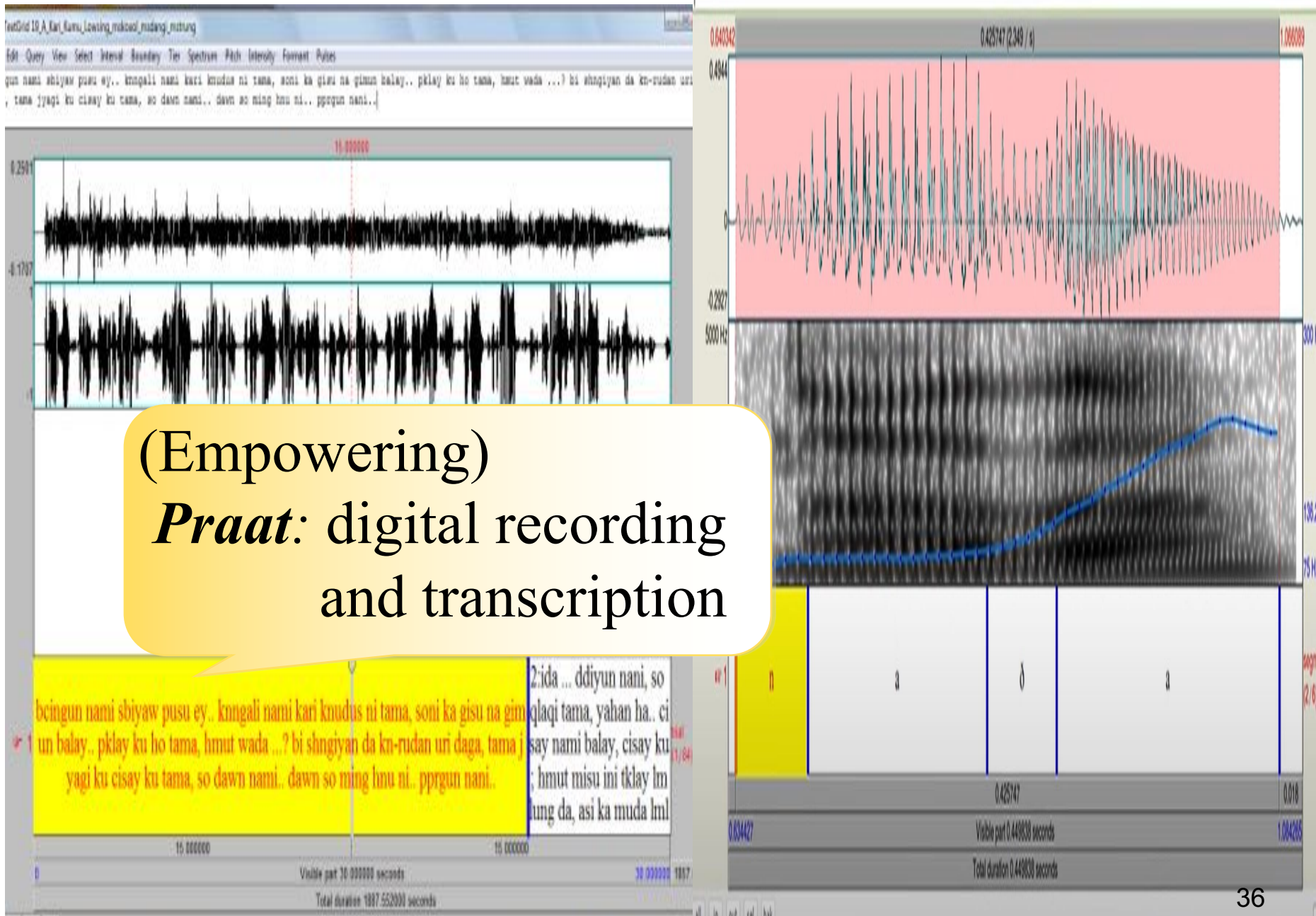
The youth **sing** and **pray** for the elders in Truku.



5. Language documentation and archiving

- Digitalize traditional **linguistic and cultural forms**
- Digitalize **the mutual interaction and language use** in different domains
- Preserve linguistic data in an archival format

(Empowering)
Praat: digital recording
and transcription



Transcriber 1.5.1

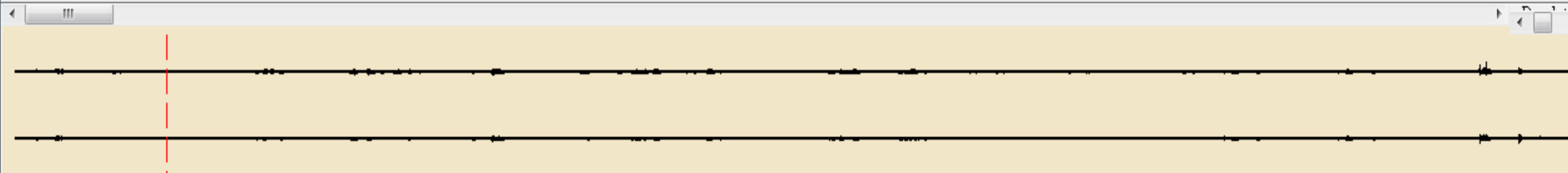
File Edit Signal Segmentation Options Help

① mkru balay kimal sida, yasa niqan ka idas gaga rmidax lihaw gaga hki.
 ① ni duri kimal mtaqi sida do o, dha huling na mtaqi srakaw baraw ka Lowking niyi.
 ① kiya ka kiya ni, tlung mtaqi sida do o, qpadul ga dmbgal hiya ka ni mniq yuqow niyi o, wada qduriq da!
 ① kika kiaya do o, babaw na sida do o, wada inu wada qduriq inu msa naqih kuxul naka Lowking niyi ni.
 ① ngarun naka e raimil ni ... hiya uri.
 ① sida do o, dmlung nak ...
 ① rubang sa musa miying ...
 ① kiya ka kiya ni, huli ...
 ① Lowking ni da ga, ida ...
 ① yasa wada gmrung ka y ...
 ① siida.
 ① ya wada inu da hug ms ...
 ① kiya ka kiya ni siida q ...
 ① kiya da ni, Lowking ni da ga, niqan ka bring ni kska e qhowni paru hiya, aji ga hiya qpatul hug mnsa ni,
 ① saan na e miying ka bling e saan na qmita.taay saw, kiya ka kiya ni, towma dgxgal ka ga hiya ga bling towma dxgal o, saan
 ① na qmita kiya uri.
 ① kla su ha, aji ga 'qring' dowma dxgal hini mnsa ni, sa qmita dxgal hiya o, asi bi taay sriyu paah hiya ka kingal qowrit.
 ① kiya ka kiya ni, siida lowking ka huling na niya saan na rmru dgiya da ga, kiya do o, kingal bnunun biya ka ni sngun sida
 ① qhowni hiya o,
 ① vasa snlu na do o, mtucing ka hnu da, tmunan dgiya da ga.

Transcriber



Frog where are you.trs
story.wav



report

(no speaker)

ni hini ka Lowking niyi qmita qpatul tnbgal na nina qrasun qmita. ni dha huling niya, huling naka hangan na ni Kumay. ng

Ki kiya do o, niyi dha qrasun qmita ni ska yuqow ka niyi yu



Pacific and Regional Archive for Digital Sources
in Endangered Cultures

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in Australia's region

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Results: Focus group interview

- These extracts show that the participants found some **positive value** in this type of domain-oriented language program, but also that the **frustration** of not being able to produce the words learned in the class at home still endured.

Observations

- Respondents' comments revealed a nuanced view toward this program. On one hand, **young Truku showed interest** in learning their native tongue, indicating that they could potentially become agents who actively seek opportunities to learn:

(1) *Interviewer: Do you enjoy attending the weekly language program?*

Interviewee 1: Yes, I do because I can learn how to grow different plants and know their names in my mother tongue.

(2) *Grandmother: This is...and that is...(simultaneously speaking Chinese and pointing at the pictures on a sheet of paper to her 6-year old grandson, who was leaning on her arm).*

Grandson: Do not keep using this/Chinese. I do not want to read; I want to read this in the mother tongue (with a tone of intense anger).

Observations (cont.)

- on the other hand, some parents and adults expressed their **frustration and disagreement** about transmitting the native tongue to the younger generations:

(3) *A forty-year-old father:*

We are in a different era; we should let our children learn Chinese and English for better future education.

(4) *A thirty-two-year-old mother:*

As a mother, I don't even know how to speak Truku. How am I able to teach my kids?

(5) *An about forty-year-old male:*

It is alright not to use or learn Truku; speaking Chinese will do. Perhaps we won't be discriminated against this way.

(6) *An about fifty-year-old male:*

Even if we speak Truku to the young ones, they do not understand anyway. Don't waste time!

Findings

- The **community-based** language programs have contributed to raising people's motivation to learn their mother tongue.
- In the context of Taiwan, there is a **continuous conflict** among languages that is fueled by the language ideologies in the current language-in-education policy, and the inability or unwillingness of parents or elders in indigenous language communities to effectively implement language interventions aimed at language revitalization.

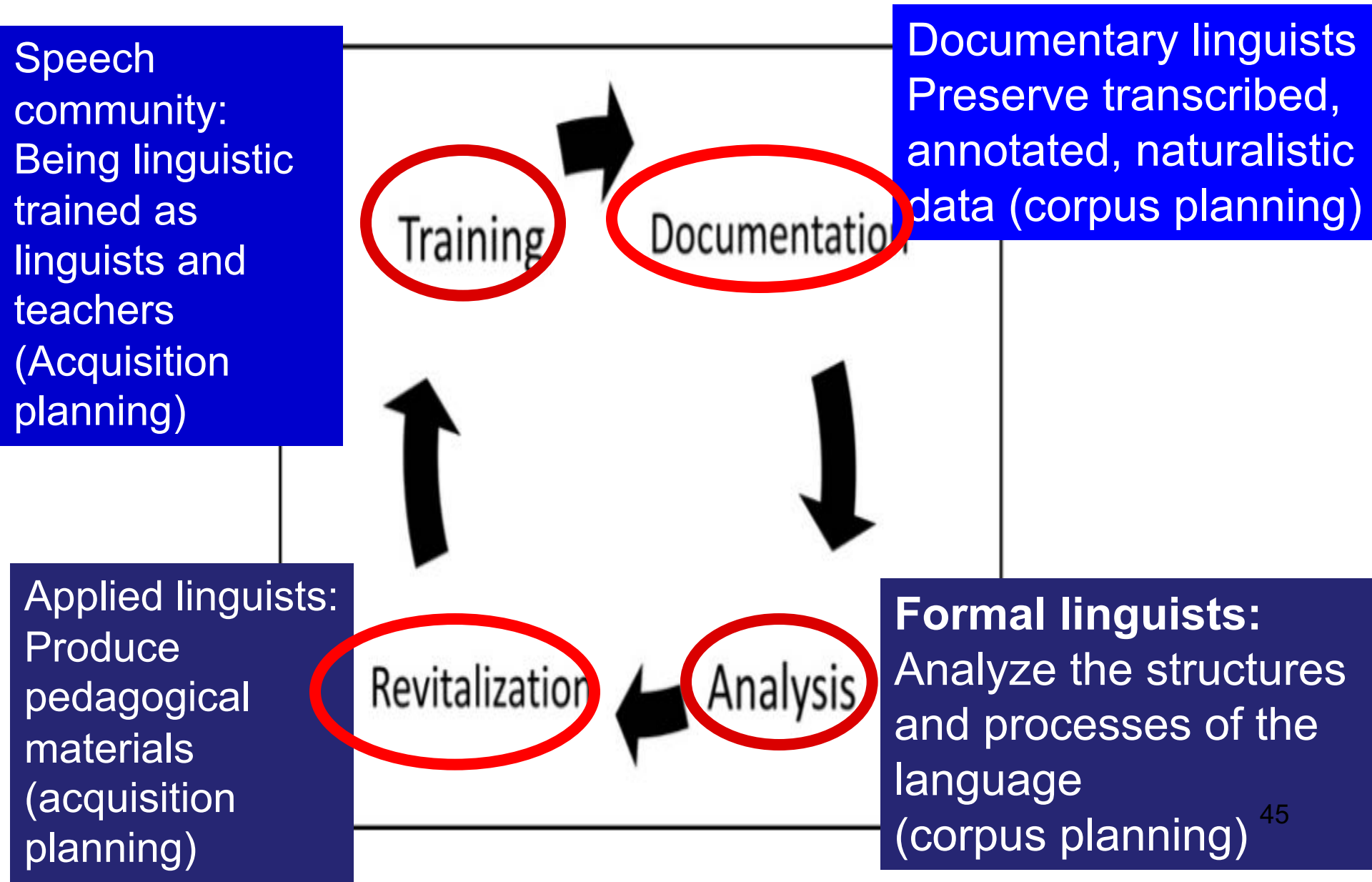
Formal linguists' contributions

Collaboration

- A major obstacle of language revitalization is the lack of user-friendly, workable, and teachable language materials derived from *the scientifically-generated documentation*.
- Require collaboration and interaction among:
 1. Community members
 2. Documentary linguists
 3. **Formal linguists**
 4. Applied linguists

Figure 1. The Chickasaw Model (Fitzgerald & Hinson 2013: 59)

Each component in the **feedback loop** enriches the resulting product (Fitzgerald 2019)




Assisting work in corpus planning

Newly developed



原住民族
語言研究
發展中心
Indigenous Languages Research
and Development Center



語言：繁體中文

malngangaus 參照 ngaus

Malngangaus 參照 ngaus

maltais

bat

語檢中心官網 ilrdc.tw

語檢中心駐紮 原住民族語言研究發展中心

takibulrubulruane pangiradekane ku vaga ki kacalrisilrisiane 魯凱語

最新消息 中心介紹 當前研究 歷年成果 參考資料

New words

族語新詞

Orthography

族語研究目錄

族語書寫系統

族語學習詞表

編譯族語繪本

Corpora

數位族語資料庫

Testing

族語分級認證測驗

族語教材研發及評估

Pedagogical materials

族語發展能力調查

族語推廣人員實施計畫政策檢討

E.g., High involvement work with Indigenous Language Research and Development Center in Taiwan

Enriching linguistic databases/corpora

- Analyzing naturalistic data with rich ethnographic content
- Interpreting and translating data into materials that can be valued by a new generation of speakers and learners (Amery 2009)

Producing grammar books



台灣南島語言叢書將再...
today.line.me



博客來-臺灣南島語言叢書...
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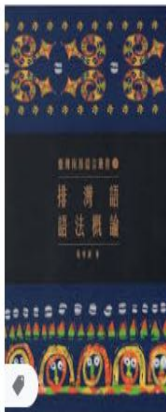
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books.com.tw



臺灣南島語言叢書6布...
alilin.apc.gov.tw

E.g., Widely appreciated grammar books of indigenous languages in Taiwan
(Led by Lilian Huang 2018)

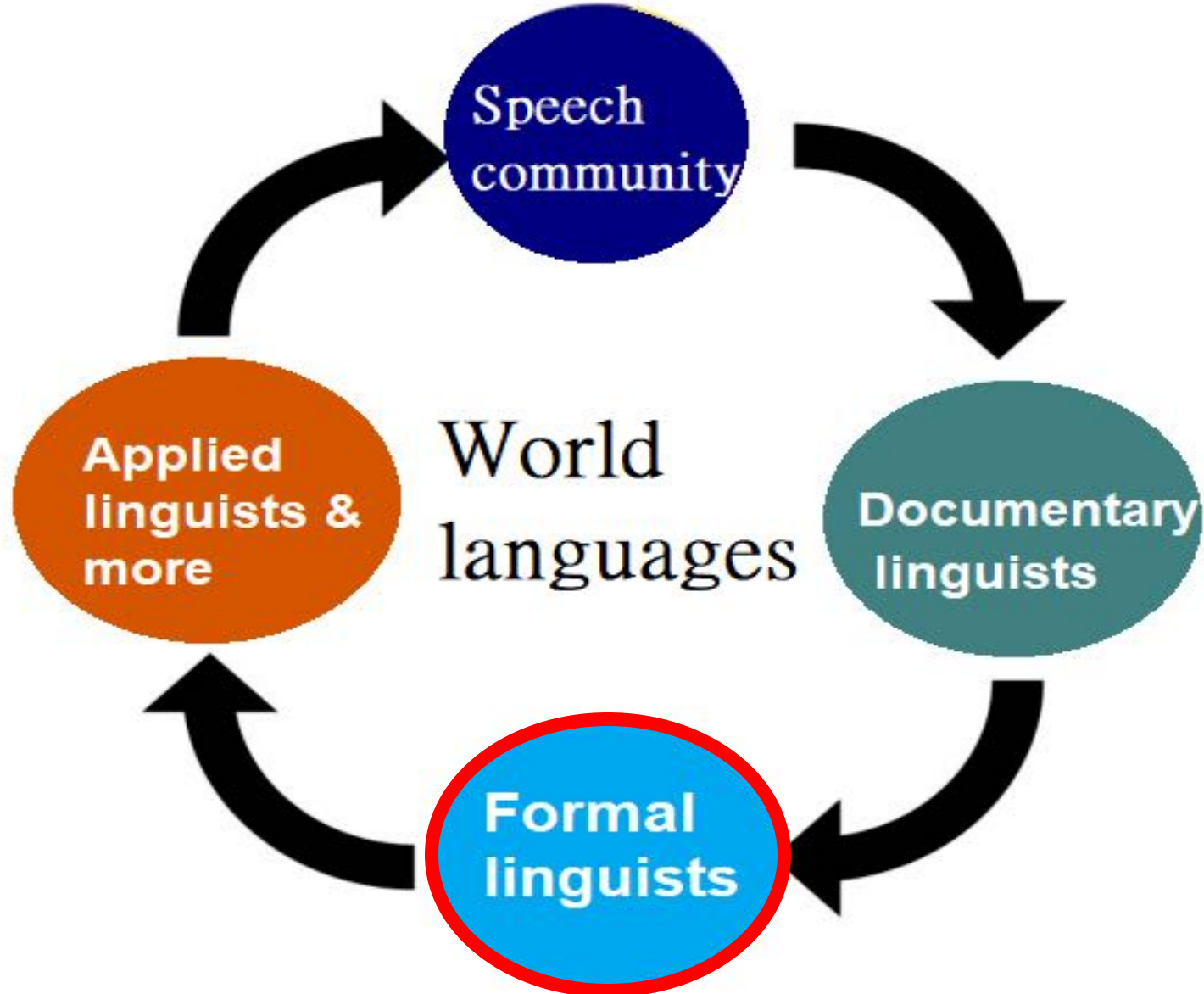
Providing linguistic training

Helping **speakers and applied linguists** to understand

- the various types of available documentation
- linguistic typology
- structure of the target language
- the most efficient way to describe language in general

Collaborating work with other sub-fields of Linguistics





Together, let's feed/support one another to get our languages moving forward!

(Adapted from the picture <https://comprehensibleclassroom.com/2011/06/29/running-dictation/>)

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<http://www.unesco.org/culture/ich/index.php?pg=00139>

Mhuway namu balay!

‘Thank you very much!’