

DEVELOPING COMPUTER GAMES IN FIELD METHODS CLASSES:

A tool for language teaching and revitalization

Giorgia Troiani¹, Jeremías Salazar^{1,2}, Guillem Belmar¹, Andrew Hedding^{3,5}, John Duff³,
Matthew Kogan³, Natalia Gracida Cruz³ & Fe Silva Robles^{3,4}

1 – University of California, Santa Barbara
2 – Mixteco Indígena Community Organizing
Project

3 – University of California, Santa Cruz
4 – Senderos
5 – University of Washington



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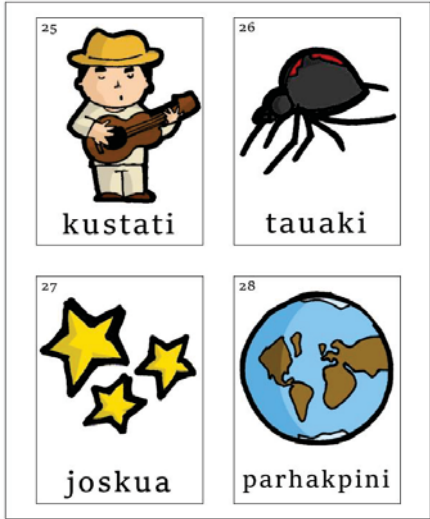
UCSB Field Methods Class 2017/18: Carmen Hernández Martínez, Sandra Auderset, Chris Brendel, Yi-Yang Cheng, Alexia Z. Fawcett, Julia Fine, Simon L. Peters, Adrienne Tsikewa, and Albert Ventayol-Boada.

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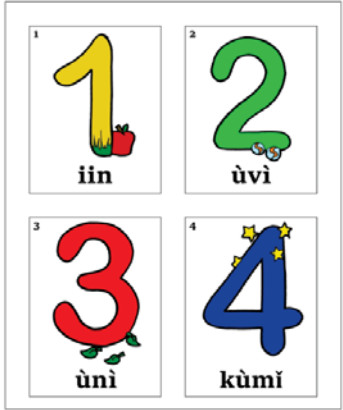
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Gamification



- “There is a need for games in Mixtec”
 - Documenting traditional games
 - Developing new games / newer versions of traditional games
 - Printed materials
 - Video games: online?



- Boardgames (templates ready to use for other languages)
 - Lotería (UCSB Field Methods class 2017/18)
 - Who is who ‘Anà kúu anà?’

Why did we choose to do video games?

- Importance of Digital Presence (Soria 2016)
- There is a growing interest in the digital presence of Indigenous languages, including the availability of video games in these languages
- People use their smartphones and tablets all day long = increasingly THE main entertainment for children
- “It’s a way to ally ourselves with technology and modernity” (Salazar et al. 2021)
- “Books to get children’s attention, games do.”

Why did we choose to do video games?



- Developing independent games is easier than ever
- Gives us control over the data and the presentation of the data
- Appealing to community members
- Can be used as a teaching tool

- Relatively big learning curve
- Long trial and error process



Sà'án Sàvǐ Catch Game & Game of Tones

Sà'án Sàvǐ Catch Game



Sà'án Sàvĭ Catch Game: Story / narrative

- Cultural importance of food (Weller & Turkon 2015)
- Jeremías' involvement in environmental activism
 - Topics of health, pollution, land management...
 - Decision to separate “good” and “bad” (junk) food: Coca Cola & Fries
- More recently, we set up a background story for the game: A storm came and many things flew away with it, and they're now falling down!
 - This opens up the possibility of offering other lexical items (more things are falling down) in the future

Sà'án Sàvǐ Catch Game

- It started as Giorgia and Jeremías's lexicography project for the Field Methods class 2019/20
 - Short deadline, reduced number of target words (Food)
- Why a Catch Game? Ease of coding in Scratch (Maloney et al. 2010), where the game was prototyped
- The game was later developed using GameMaker Studio

Challenge: Accessibility

- How do we balance community ownership of data vs. limited tech literacy?
 - Direct community participation and control in the development and maintenance of the games
 - Creation of games with set ups that are **easy to adapt and localize** to other languages
 - Games designed with **adaptability** in mind: so other language communities can make their own versions without learning how to code
 - **Decreasing the learning curve**

Sà'án Sàvř Catch Game: Localization

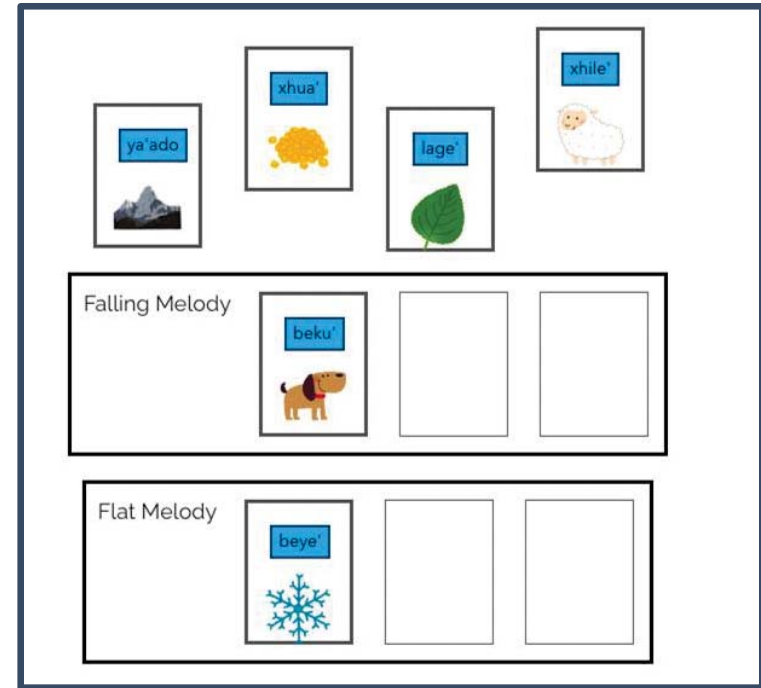
- **Accessibility:** People need to have control over the way their language is represented
- Localization into different languages supported through JSON files (one per language) (YawningDad 2019)
- Our goal is to entirely remove the figure of the *external researcher* = if we streamline the localization process, people can just upload their data and get a game without doing any coding and without negotiating with us!
- **We'll be working on this during the tutorial!**

Game of Tones

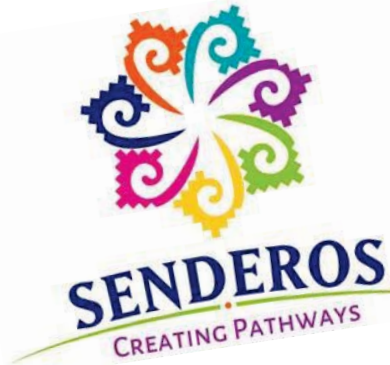
The “Game of Tones”



Multimedia card sorting game developed for in-person classes in Tu'un Nda'vi Ñuu Ka'nu (San Martín Peras Mixtec)



Adapted into a simple web game for Dille' xhunh Laxup (Santiago Laxopa Zapotec) during the COVID-19 pandemic



Games for language outreach

Goal: Public engagement and education about the presence and value of Mixtec and Zapotec languages in Central California.

Simple games featuring words and salient linguistic features of the languages we work with.

- Memoria matching games for animal vocabulary
- Dice-making to learn number vocabulary
- “Guess Who?” games for sentence formation and simple dialogue



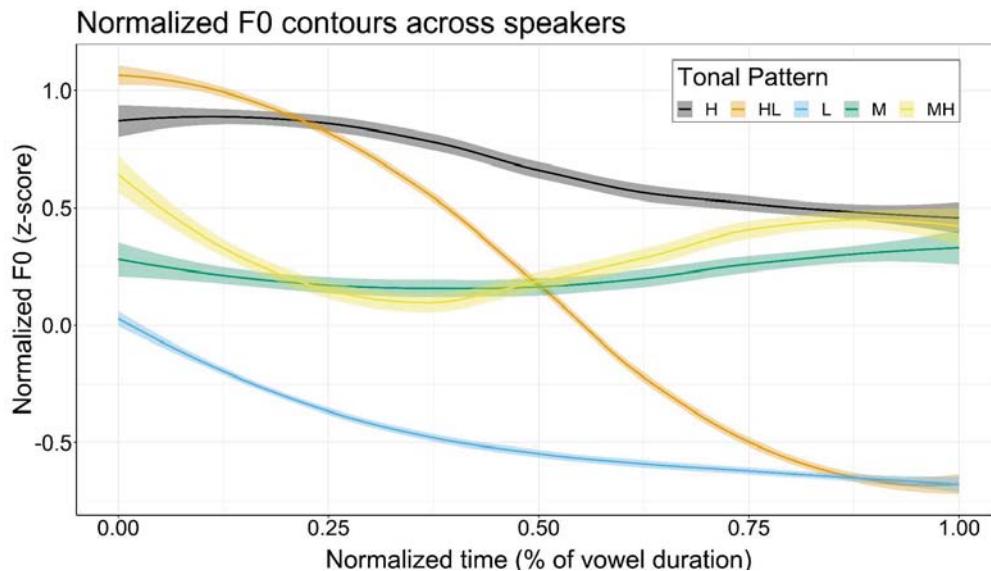
Games for language pedagogy

Goal: Focused opportunities for learners to practice using the language and appreciating what makes it unique.

- Lotería to practice V S O word order
- Question-answering games highlight a tonal minimal pair in Dille' xhunh
Laxup: *o'ó* 'yes' and *ó'ò* 'no'.



Why a game about lexical tone?



For members of the public:

- Tonal distinctions are a salient feature that highlight the complexity and richness of these languages.

For learners in the community:

- Tonal distinctions are sometimes hard to acquire, and sometimes absent from metalinguistic knowledge because of their absence in higher-prestige languages.

Game of Tones

SANTIAGO LAXOPA ZAPOTEC

Learn about tones in Santiago Laxopa Zapotec!

In Santiago Laxopa Zapotec, words have different melodies. For instance, in some words, the pitch will start high and end low, and in others, the pitch will stay low through the whole word.

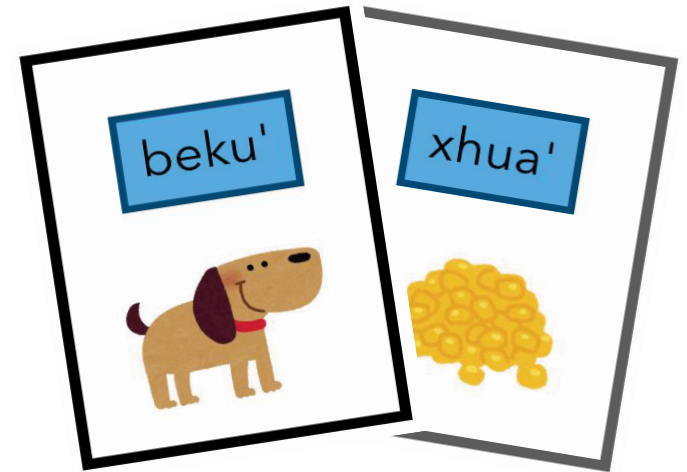
On this page, you can play our "Game of Tones", where Maestra Fe Silva-Robles will teach you some Santiago Laxopa Zapotec words, and you can practice listening to their melodies.

To start, see if you can hear the difference between the two words below: *beku* "dog" and *beye* "snow". Click on the blue boxes to hear Maestra Fe say the words. Listen to their melodies!



Design features

- Staged introduction to complexity:
 - First a binary contrast (HL vs. LL)
 - Then a third category (MH)
- Mixture of self-guided learning and top-down instruction:
 - Free to listen and compare in whatever order
 - Correct groupings are always available via the menu functions



Accessibility and possibility for extensions

- All code available for free download and modification on GitHub!
 - Select and add your own audio and images
 - Follow a step-by-step guide to edit the HTML file
 - In-depth documentation available as needed
 - Spanish guide and documentation coming soon
- JavaScript games are lightweight and easy to host on a simple website
 - One downside: Drag-and-drop features aren't well-suited to mobile.

Conclusion

- Two examples of simple games that combined resources and expertise of language experts and field methods trainees to create a product that meets community goals for outreach and teaching.
- Many in-person learning exercises can be easily digitized as web-games to make resources more accessible.
- Modular approaches to game construction and sharing source materials can put game creation in the hands of language communities without external researchers.

For more details and practicalities about making these games, come to the tutorials in the next block!

¡Tá tsà'vǐ-kue-ní!

¡Tasha'avindo!

¡Duxklhenhu' lhe'!

