

STUDENT/FACULTY
TEAM DEVELOPS
APP TO AID IN
**MANDARIN
LANGUAGE
LEARNING**



Scholars of the Mandarin Chinese language can learn a lot from birds.

That's the premise of a new language learning game, "Picky Birds," designed by an interdisciplinary team of students under the supervision of College of Arts & Letters Associate Professor Catherine Ryu.

Inspired by the varying tones of bird species, the Picky Birds app makes the four main Mandarin tones "visible" so learners can sharpen their tone perception simply by playing the game.

"Mandarin Chinese is a tonal language, which means the same word can mean something entirely different depending on the tone used. This is fundamentally different than how we use tonal inflections in English," said Ryu, who teaches Japanese Literature and Culture in the Department of Linguistics and Germanic, Slavic, Asian, and African Languages (LGSAAAL).

For example, in Mandarin, the word "ma" (English sound equivalent) can mean "mother," "flax," "horse," or "to yell," depending on the tonal inflection used.

Picky Birds teaches users the four main Mandarin tones by helping them associate each tone with a corresponding colored bird. Based on research showing brains are wired to associate high pitches with lighter hues, the birds in the Picky Birds app are yellow for the high even tone, green for the rising tone, blue for the dipping tone, and red for the falling tone.

The app is an outcome of Ryu's Tone Perception Efficacy Study (ToPES), which she conducted with Aline Godfroid, Assistant Professor of Second Language Studies in LGSAAAL, and Chin-Hsi Lin, Assistant Professor in the Department of

Counseling, Educational Psychology, and Special Education. ToPES investigated two related questions regarding language:

- How do people perceive, process, and retain tones as a sensory perception, especially when the tones in question are not an integral aspect of their own language backgrounds?
- To what extent can people learn to differentiate tones and retain that information?

Ryu holds a U.S. patent for the technology on which the Picky Birds game is based and is working with MSU Technologies to market the app to users. She expects to begin commercialization this fall.

In addition to College of Arts & Letters faculty and students, the Picky Birds team includes Media and Information majors who are specializing in Game Design and Development in the College of Communications Arts and Sciences, and a computer music composer who teaches at Mott Community College in Flint. Ryu hopes to expand the team to include neuroscientists, graphic artists, creative writers, game developers, web developers, mechanical engineers, and social media specialists.

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Associate Professor Catherine Ryu worked with several teams of students and faculty to create the Picky Birds app, a language learning game.