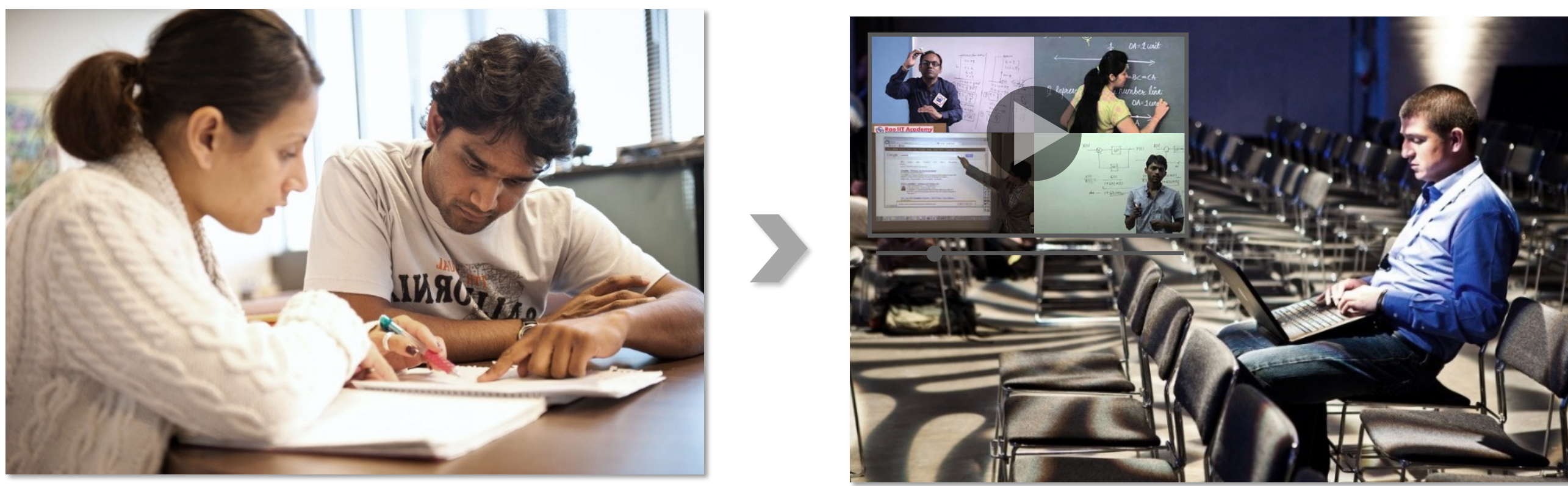


RichReview: a Voice- and Gesture-Based Online Annotation Tool for Facilitating Assessment of Student Speaking in Language Classrooms

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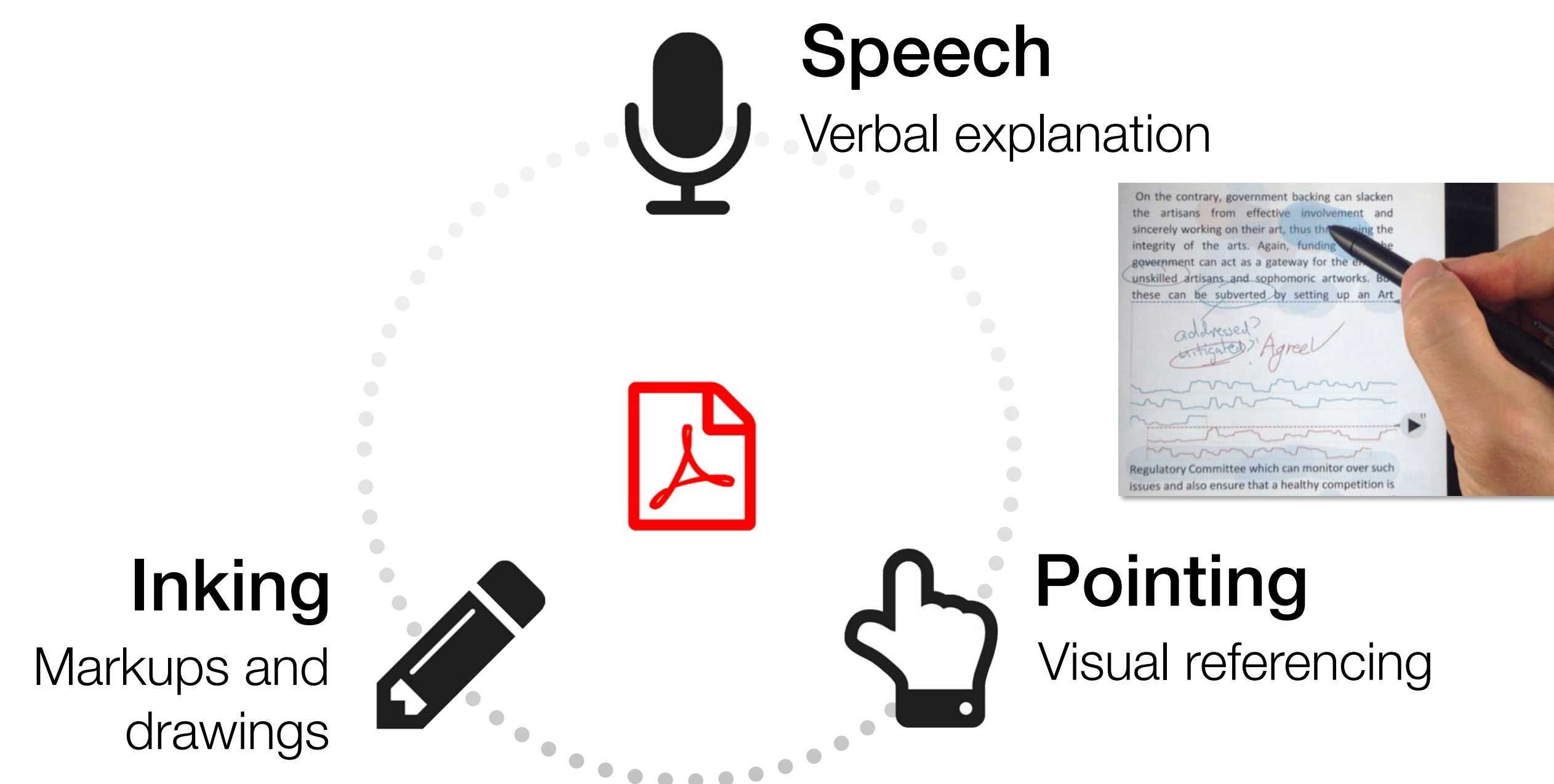
¹Computer Science, Faculty of Science. ²Asian Studies, Faculty of Arts.

How do we bring rich face-to-face learning experience into online tools?



- Need to leveraging rich, communicative interactions, such as talking, writing, and finger-pointing.
- Aims to support instructor feedback to student submissions in a more expressive and contextual manner.

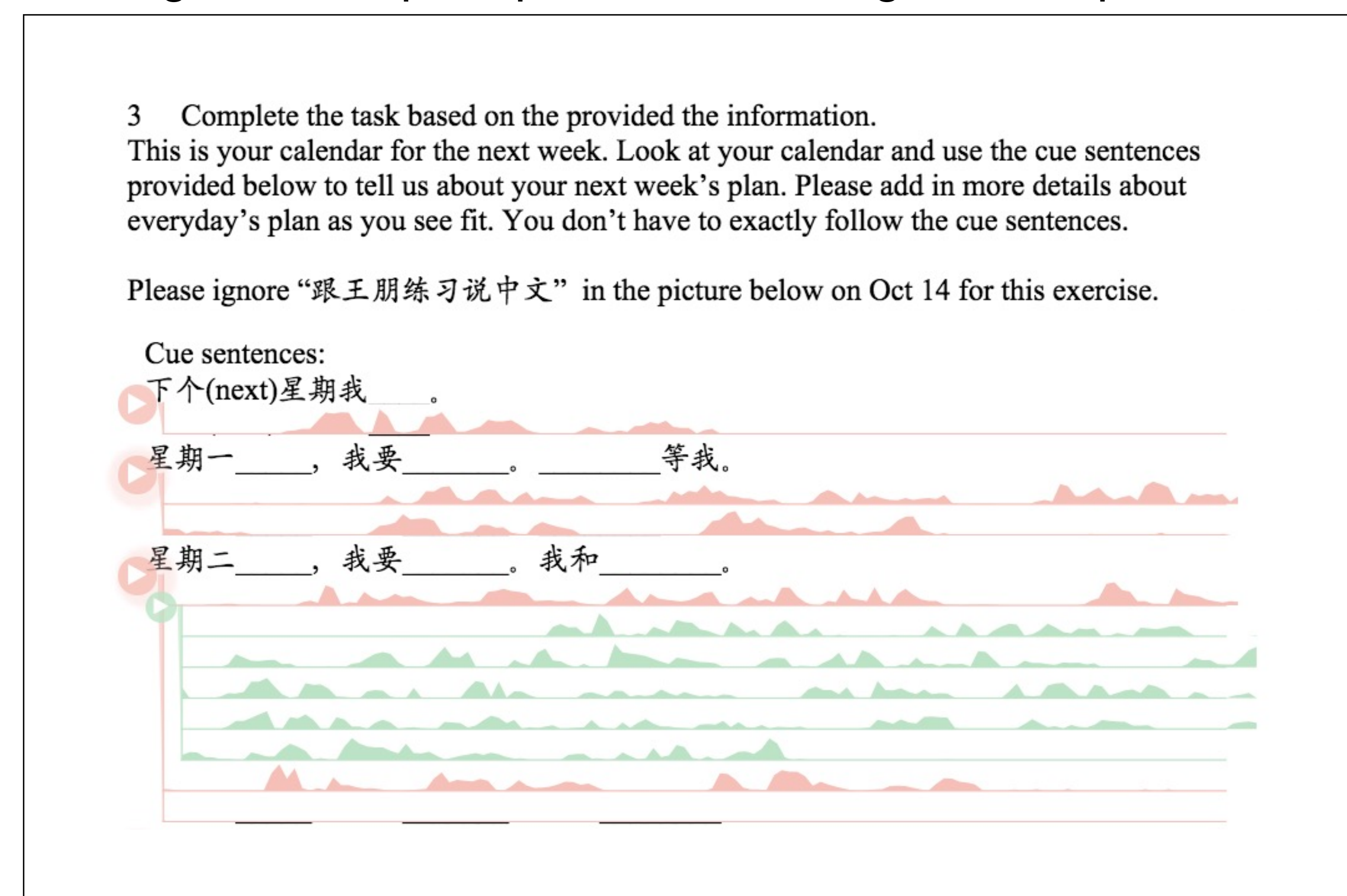
RichReview: A multi-modal commenting system



- Speech conveys complex, nuanced ideas efficiently.
- Inking helps mark-ups and drawing.
- Pointing facilitates referencing (e.g., “Look **this**”).

Deployment Context & Procedure

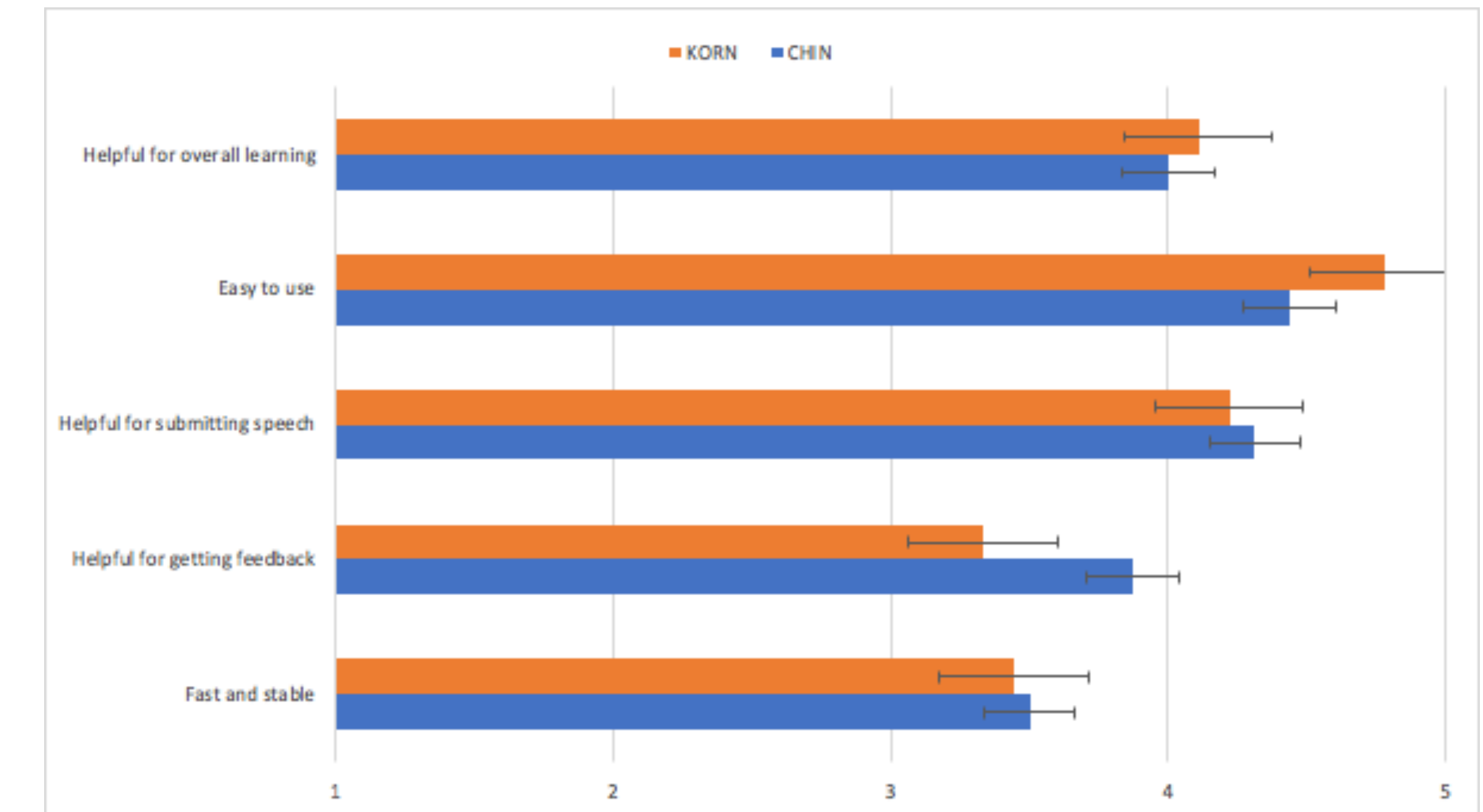
- Formative assessment activity: Instructor and TAs evaluate and give feedback to student speaking practices in foreign language courses
 - 2018/19 - KORN 102, KORN 302, CHIN 131, CHIN 134.
 - 2019/20 - CHIN 131, CHIN 463, CHIN 481, KORN 302, KORN 200, JAPN 101, JAPN 201, LLED 201, VANT 140D
- Oral assignment types
 1. Recording a given dialogue in Korean/Chinese
 2. Listening to Korean questions and recording their responses in Korean
 3. Reading Chinese prompts and recording their responses in Chinese



A finished oral assignment of type 3 from CHIN 131

- Procedure
 1. Instructor creates an assignment by uploading a PDF
 2. Students open the PDF and complete tasks by recording their speech in the foreign language
 3. Instructor (and TAs) listen to students recordings and give feedback by recording their speech
 4. Students listen to the feedback recording
 5. Reading Chinese prompts and recording their responses in Chinese

How did students use RichReview.net?



Post-Deployment Survey Responses for Evaluating RichReview

- Students agreed (>4.0) that RichReview is helpful for their learning in foreign language courses
- They also found it:
 - helpful for submitting speech recordings and getting feedback
 - easy-to-use, fast, and stable.
- Students' awareness of difficult pronunciation increased and students made less mistakes during the oral exam

On-Going and Future Works

- Campus-wide deployment to UBC Foreign Language Courses
- Further implementations
 - UBC Canvas Integration
 - Providing automatic feedback using speech recognition