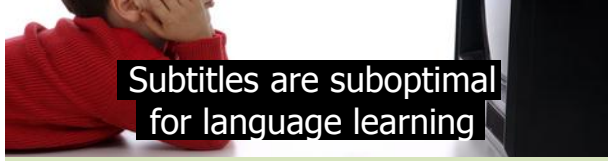




Foreign-language learners often watch subtitled videos

- Anime, East-asian films in the US
- English-language videos abroad



Subtitles are suboptimal for language learning

- Hard to associate words in subtitles with the speech
- Distract attention from the speech



But we need subtitles to understand the video

- Learners have difficulty with unsubtitled authentic videos, due to **unknown vocabulary**

Smart Subtitles for Language Learning

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MIT CSAIL

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hui zhǎng

会长

Shows pinyin pronunciations

Review previous line of dialog

bù yòng **dān xīn** bù huì zuò de
不用**担心**不会做的

翻译

anxious worried; uneasy; to worry; to be anxious

Define words by hovering

hui zhǎng ā hui zhǎng ā
会长啊 会长啊

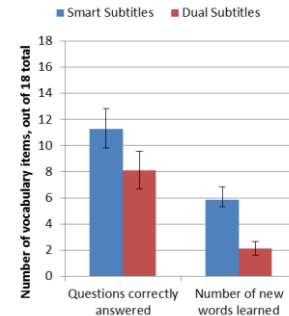
Translate current line

Contribution

- An *interactive transcript* with features to help students studying Chinese learn vocabulary while watching videos
- *Automatically generated* from Chinese captions on DVDs using dictionaries and machine translation

User Study

- 8 intermediate Chinese learners (1.5-2.5 years of study)
- Each watched a pair of 5-minute clips; one with Smart Subtitles, one with Dual Chinese-English Subtitles
- More vocab learned, with similar comprehension and enjoyability, when viewing with Smart Subtitles



Future Work

- Teaching sentence patterns and pronunciations through video
- Enable passive usage by predicting words user doesn't know

