The Effects of Subtitles on Subject Matter Comprehension in English Language Video

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Background

- Every year, online and hybrid-style classes become more common at the university level. In these virtual classrooms, instructors use online videos to present new material instead of physically lecturing in front of students.
- Due to the nature of videos, students have options unavailable to them in traditional classrooms. One of these options is the ability to view subtitles. These subtitles can be a straight transcript or one that has been translated into a different language. This could prove particularly useful to international students who do not natively speak the language in which class material is taught.
- **Primary Research Question:** Do subtitles help students better recall material presented to them in English language lecture videos and does the language of the subtitles or the native language of the student affect recall?

Method

- Participants were recruited through Purdue’s SONA system. All data was collected online using Qualtrics Survey Software.
- ___ participants completed the experiment and provided usable data. Of these, ___ participants were native English speakers while ___ were native Chinese speakers. Native Chinese speakers were chosen as the non-native English speaker group to be examined due to their high population at Purdue University.
- Participants watched three segments, approximately 5 ½ minutes in length each, from a lecture video used in Purdue’s PSY 120 (Elementary Psychology) hybrid course. The segments were all on the topic of industrial-organizational psychology.
- The order of the segments was randomized and each video randomly had either no subtitles, English subtitles, or traditional Chinese subtitles. By the end of the experiment, each participant had been exposed to all three videos and had watched one of the videos without subtitles, one of the videos with English subtitles, and one of the videos with Chinese subtitles.
- After each video, participants were asked to complete a free response section which involved writing down everything they could remember about the video. They then answered 15 multiple choice questions about the content of the video.
- Information regarding noise levels in the environment, level of distractions, effect of distractions, amount of attention paid to subtitles, and whether subtitles were more helpful or distracting was also collected.

Results [Predicted]

![Native Language and Subtitle Type In Relation to Overall Performance](image)

Native English speakers performed well across all subtitle conditions. However, native Chinese speakers performed significantly better in the English and Chinese subtitles conditions.

[For Final Version] Plan to include data regarding how the following moderate performance: noise levels in the environment, intensity of distractions, level of engagement with material, level of fluency in English and Chinese, perception of subtitles as either distracting or helpful, and amount of attention paid to captions.

I will include graphs for the items which significantly moderate performance along with the graph included above in the final version of my poster.

Conclusion [Predicted]

- Native English speakers performed well across all subtitle conditions. However, native Chinese speakers performed significantly better in the English and Chinese subtitles conditions.
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