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Crowdsourcing Video Translations for a Global Network for Health Education

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Background
Through its Open.Michigan initiative (http://open.umich.edu), the University of Michigan (U-M) has thousands of learning materials that are available to the public and are free to access. All of these materials are shared under open licenses that allow translations, adaptations, and copies. Some of these learning materials were co-authored by people in multiple countries and reach a large global audience. We had received specific requests to make some of the materials available in other languages. However, up until December 2012, the vast majority were available only in English.

Objective
In January 2013, Open.Michigan launched a campaign to recruit volunteer translators to help make some of our health materials more accessible to non-English speakers. Based on a consultation with the U-M Language Resource Center, we decided to focus on translating short videos rather than long texts. We targeted two video collections:

1. A disaster management course with 19 videos by the East Africa HEALTH Alliance, which is comprised of seven schools of public health.
2. A clinical microbiology module with 12 videos by KNUST in Ghana and University of Michigan.

Methods
The project launch was timed with an on-campus weekend-long volunteer translation event hosted by the U-M Language Resource Center. Open.Michigan also recruited volunteers through other on-campus and external organizations. These included various health departments on campus, alumni networks, visiting and resident international students and academics, language networks, and social networks for Open Educational Resources.

Participants completed a Google Form to sign-up to translate. The form collected the volunteers’ preferred name and title for attribution and contact information. It was also used to track who was working on which videos. All Open.Michigan videos are hosted on YouTube. From January to March 2013, our workflow used the Google Translation toolkit within YouTube.

In May 2013, we switched to Amara. Amara, a free tool, proved to be easier for managing signup of volunteers and versioning of translations than the toolkit in YouTube. Amara offers integration into YouTube. Editing and caption synchronization can be done through Amara, but volunteers may signup from and view the final product on YouTube.

Results
• Over fifty volunteers who signed up, half of whom were from outside U-M.
• Approximately half of those who signed up contributed. Among contributors, the median and mean number of captions per volunteer was 2 and 3.62, respectively.
• Though 31 videos were targeted, 50+ have caption tracks translated into 1+ languages.
• 140+ caption tracks have been translated, covering 12 languages: Spanish, Portuguese, French, Swahili, Ganda, Japanese, Arabic, Chinese (Simplified), Chinese (Traditional), Russian, Danish, and Romanian.
• 43 caption tracks had both a translator and a reviewer for quality.

Analysis
We consulted peers at African Virtual University in Kenya and Siyavula in South Africa, who have similar volunteer translation activities. Jointly, we identified a common framework for effectively recruiting and coordinating volunteer translation:
1. Provide captions in source language.
2. If instructional, review for quality by subject matter experts.
3. Design workflows to accommodate volunteers with varying levels of time commitment, windows of available, levels of subject knowledge and language fluency.
4. Recruit volunteers with the necessary language and subject matter expertise using formal and informal social networks.
5. Develop a lexicon of core technical terms for the given subject.
6. Use software to manage parallel translations and versioning.
7. Arrange proofreading.
9. Recognize or reward the contributions of volunteers.
10. Promote the results to attract more volunteers and more users.

Conclusion
If properly coordinated, crowdsourcing can be an effective method to adapt and to translate learning materials, including ones with highly technical vocabulary. Technology can be used to streamline the translation process, but ultimately it is the community of volunteers who are the essential component to producing a high-quality final product. Community building activities such as in-person translation sessions and public recognition are important motivators. The result is a wide dissemination of materials across language boundaries, including languages that are traditionally underrepresented in education (e.g. Ganda). Based on these initial results, we decided to expand the campaign to other disciplines (most notably family medicine) and to additional languages. Translation has become part of the standard process for Open.Michigan. Now, by default, all Open.Michigan YouTube videos have a corresponding translation link in Amara. We aim to be a regular partner in the annual translation weekend hosted by the Language Resource Center.

Conference Presentation

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