Section
Translation
Research

Product | Design Strategy | Language Team

Eli Asikin-Garmager
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Introduction

Problem statement & overview
Executive summary
Overview of Section Translation
The communities
Problem Statement & Overview

Small wikis and the future of Wikipedia

Southeast Asia will have roughly 480 million internet users by 2020 (up from 260 million currently). Beyond internet use, we observe increasing populations throughout both Southeast and East Asia.[1] If the Wikimedia Foundation will achieve its goal of removing barriers to knowledge, it must address the needs of this region, home to many small, non-English wikis.

Southeast and East Asia are home to a number of “small” Wikipedias (wikis) with significant growth potential. “Small” defined as wikis with less than 100k articles and less than 100 translations per month. As for growth, there are at least two reasons to posit significant growth potential. First, some of these small wikis have more than 70 editors (>20 active editors), presenting opportunities to quickly grow aided by tools that make contributing easier and more efficient. Secondly, these wikis are in languages with millions of speakers, significant segments of the world’s population that would benefit from content creation and dissemination.[2]

In addition to the benefit of making knowledge more accessible in these communities, the communities would also be able to contribute local knowledge, otherwise not available to the global community. This content could then just as easily be translated into the languages of larger wikis, resulting in mutual benefit. In this way translation can also help counter colonial patterns of knowledge distribution.[3]

One of the Wikimedia Foundation Language Team’s primary goals is to help facilitate the growth of content available in small wikis, particularly in East and Southeast Asia.[4]

Any viable approach/solution must consider:

1. More mobile-first design. 5 of the top 10 countries with the most widespread smartphone use are in Asia.[5] More generally, almost 75% of the world will access the internet exclusively by smartphone by 2050, and - critically - most of this growth will come from India and Indonesia, amongst others.[6] Thus, a solution must not merely be ‘mobile-friendly’, but optimized for mobile use patterns and reading/editing behaviors in Southeast and East Asian communities.

2. Lower barriers to entry. The barrier to editing might be lowered in a number of ways, from making the translation option more discoverable and transparent, to allowing contributors to add content without necessarily creating a new article.

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[2] See analysis here: https://www.google.com/url?q=https://docs.google.com/document/d/1XTMAgHKdz1zeDDlnTyc7fqhHGhz1feIkwzHKBJ6unak/edit#heading=h.735ea-D&ust=1571859110868000&usg=AFQjCNhN3eqDIAIPhioe8Z460X9Chypfl8w
[3] Certainly potential readers and editors are a subset of the total population. Moreover, future research efforts are needed to understand the unique challenges present in these communities.
[5] https://docs.google.com/document/d/1XTMAgHKdz1zeDDlnTyc7fqhHGhz1feIkwzHKBJ6unak/edit#heading=h.vyt1m0p2t0j6
Executive Summary - project overview

Section translation aims to solve current limitations of content translation by

1. Allowing users to create and modify sections, or snack-sized chunks, of articles
2. Prioritizing mobile-friendly design
3. Lowering the barrier to entry for newer contributors.

This project evaluated current mobile prototypes with two targeted small wikis - Bengali and Javanese.

Using the Rapid Iterative Testing and Evaluation Method, Likert scale ratings, and interview data, the project evaluated not only initial prototypes, but also a number of design changes after each round of testing.

The project also supported design exploration by gathering interview data around critical assumptions of Section Translation, including the role of mobile and the relevance of article sections as a meaning unit of translation.
Executive Summary - key takeaways

Top 10 Key Takeaways

1. Users perceive value in being able to expand and create articles by focusing on specific sections. However, the unit of the article still has significant value because it’s how small wikis are measured and track growth.

2. The unit of the article section matches existing editor workflows well, but participants varied in whether they translated at the level of the sentence or at the level of the paragraph (opting to paraphrase). While the desktop version of Section Translation will allow both options, the mobile workflows only currently support the sentence-by-sentence workflow.

3. Completing a section provides an easier, faster feeling of satisfaction. By highlighting progress, and progress towards high quality articles, we can help motivate editors and help them build habits.

4. The bulk of the usability problems discovered and fixed in this project were in the part of the mobile flows when the user is previewing and improving the proposed machine translation (machine translation interaction).

5. Because Section Translation targets a subset of article content, it raises questions around how editors may collaborate and co-translate articles and content. There is an opportunity to explore ‘collaborative translation’ features, such as key concept vocabulary flagging and dialectal variation tracking, among other possibilities.

6. Users are sensitive to content gaps and motivated by closing these gaps and providing access to knowledge not available for monolingual readers in their regions/language communities. There is an opportunity to better surface the impact of translators’ work and progress through features such as translation views and thanks.

7. Current mobile-only users represent a growing segment and are underserved by current translation tools. At the same time, laptop editing is a strong preference among users with access to both types of devices. Section and article recommendations could be more successful by factoring in device type and more user editing patterns.

8. Device-specific adoption patterns of Section Translation are likely, as are device-specific feedback trends. Analytics and design research should collaborate to anticipate different ways of collecting initial feedback and understanding patterns of adoption, both by new and experienced translators.

9. The social side of contributing may take different forms depending on the cultural context. For example, Javanese editors frequently discussed the importance of this social component, which could be built into translation tools more overtly.

10. Although Content Translation gets equated with machine translation, users note many value props of the CX tool, including automatic references and interlinks as well as vocabulary suggestions and side-by-side presentation of the source and target text for faster translation.
Section Translation

Building on the success of Content Translations

To reduce content gaps and increase the number of articles, Content Translation was introduced in 2015 to make the process of translating an article from one language to another easier.

Previously, any translation had to be done by copying source text in one language, using an external translation service outside of the Wikipedia environment, and then pasting back in the translated content. Moreover, any images, citations, and references had to be provided again, forcing redundant work.

The content translation tool allows users to focus on the quality of their translation by providing a more integrated experience with Wikipedia article creation. For some languages, it also jump starts the translation process by offering up machine translated sections that the user simply needs to review and edit instead of starting from scratch.

Since 2015, more than half a million articles have been created with the Content Translation tool across a number of diverse language communities.

Current limitations of Content Translation

3 key limitations:

1. Not mobile-friendly
2. Must create new articles in their entirety and any additional article editing with CX overrides any changes made after the initial creation via CX
3. Recent preliminary analysis shows the content translation tool appears to have steady growth among experienced contributors, but potential declining use with new contributors.

How Section Translation aims to solve these limitations

1. Section translation was designed and prototyped with mobile-first design. While it won’t initially be developed as part of a native app, it is being designed for responsive web to help prioritize the needs of mobile device users.
2. Section translation allows users to create and modify sections, or snack-sized chunks, of articles. The feature does not require a user to create a new article like current content translation does.
3. By reducing the time commitment and being mobile-friendly, section translation aims to lower the barrier to entry for new contributors, thereby growing the use of translation among more new and inexperienced editors. The time commitment is reduced in so far as users can add content to existing articles and sections of new articles in smaller portions.

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[8] As of 30 October, analysis is not yet complete, so this point remains to be confirmed. https://analytics.wikimedia.org/datasets/reports/Language/key-metrics.html
Section Translation
A helpful visualization of how Section Translation builds on the core experience of Content Translation

(Thanks to Pau Giner for this illustration)
Section Translation - Workflow overview

(1) Select section and review contents....

(2) Learn the process (the first time only)

Translation a new section is easy, quick and fun!

For each sentence, you'll get an initial automatic translation for you to review and improve.

(3) Preview & Improve Machine Translation

(4) Preview, Publish, Repeat...

Wikimedia Foundation
Select section & review contents

(1) Find article to expand with a section
Choose from suggestions, previous translations, or search

(optional) Search for an article
(3) Expand sections to choose from

+ Preview how many sections are missing
(4) Select a section to translate

Pick from multiple options and see what’s already present (out of viewport in screenshot to right)
(5) Review the section contents

Review the section in the source language and full article in target language
Learn the process (first time only)

(6) Human & MT collaboration

The Machine Translation (MT) is there for me to improve, and to help speed up the process.
(7) Section-by-section

I can improve my wiki without having to create an article in its entirety.
(8) Review the automatic MT

Edit the MT, apply the MT (no changes), or skip the content
(9) Edit the MT

The ukulele is commonly associated with music from Hawaii where the name roughly means jumping flea, likely because of the hand movements of the players.

Ukulele umumnya dikaitkan dengan musik dari Hawaii di mana namanya secara kasar diterjemahkan sebagai "jumping flea", mungkin karena gerakan jari-jari pemain.
(10) Finish and preview your completed section

Sejarah

Preview, publish, repeat

(11) Preview your completed section

See your progress and add another section!
The Communities

The Wikimedia Foundation Language Team used a number of criteria to identify which small wikis to focus on for initial efforts. The wikis identified are summarized in the chart to the right.[9]

For this project, for reasons of scope and timeline, we focused on Bengali and Javanese. Bengali and Javanese have the first and second largest speaker bases, respectively.

This means, although not every speaker represents a potential contributor, they may have the best chances for organic growth based on raw numbers alone, and any content creation will benefit the greatest number of people.

In addition, Bengali also has the highest number of users and editors per month. While these figures are lower for Javanese, culturally and geographically Javanese communities share commonalities with other language communities throughout Indonesia (the fourth most populous country in the world with 271,533,810 inhabitants).[10] For this reason, the region should arguably have representation in initial feedback for the tool.

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[9] Chart originally produced: https://docs.google.com/document/d/1XTMAgHkgrf2zDOInTyc7fqbHChzflplkwu0HR36unQkJbud# along with a fuller description of the “small wiki” criteria.

Research Approach

Objectives & Goals
Methodology
Participants
Data Collection Process
Objectives & Goals

Objective
The goal of this research project was to provide concept feedback and testing of current Section Translation designs through qualitative, task-based data collection with users.

Top 3 questions
1. Does Section Translation lower the barrier to entry to content creation and editing by (a) making the editing process easy for mobile users, and (b) requiring a lower commitment threshold (i.e., not requiring full, new article creation)?
2. What usability problems exist in the current prototypes, for editors with a range of experience?
3. Do users perceive value and meaning in editing content as small as an article section? Does a section represent a meaningful unit of contribution?

Hypotheses & related questions

HYPOTHESIS 1: Section translation offers value to contributors by allowing flexibility and less time-intensive tasks.
- Do contributors rate the value of section translation favorably?
- Is translating sections something users want to do? Does it make sense to only translate a specific section, and do users find value in this?
- Does section translation avoid preventable usability pitfalls?
- Does section translation provide the features desired by contributors?

HYPOTHESIS 2: Section translation has high usability on small screens.
- Do users experience difficulty with section translation due to screen size and general workflow, including how options are progressively displayed?
- Are there any mobile-specific pain points for section translation? (How could section translation be better optimized for small screen experiences?)
Methodology

Methods & approach

  
  Prototype v1 → Testing → v2 → Testing → v3 → Testing

- Likert scale ratings[12]
- Pre-/Post-task interviews
- Sample sizes based on studies of probability modeling and usability[13]
- Research Session Protocol[14]
- Progress updates/Executive summaries delivered to design & language team along the way

Research sessions

- Moderated, remote sessions using Zoom
  
  Each session followed the same format: (1) pre-task interview, (2) prototype task, (3) Likert scale rating task, (4) post-task interview
- 14/19 participants joined via mobile device; all 19 used mobile prototype
- ~60 minute duration
- Recorded screenshare during testing of prototype

Evaluate

Identify problems and opportunities; modify designs

Prototype

(Updates per latest round of testing) v1, v2, v3

Test

Task-based user feedback and observation

Iterative Testing & Evaluation

[14] https://docs.google.com/document/d/1dobbL19968wV1tJPFFtisExnFDYfLNC3NvWFlK29F/preview
Participants & Data

Participant recruitment

- Community pump announcements combined with direct recruitment messages to contributor talk pages, all in the local language
- Potential participants identified through Quarry[15]
- Indonesian affiliate provided supplementary support for Javanese recruitment
- Interested participants responded by completing Google Form; researcher then followed up with scheduling details
- Recruitment funnel stats[16]

Data collection & analysis

- Approx. 20 hours of video (observations & interviews) converted into

  814 individual data points organized in spreadsheet

  Data type
  ○ 361 data pts = interview responses and quotes
  ○ 453 data pts = participant observation notes and quotes during prototype interactions

  Data source
  ○ 440 data pts = Bengali participants (~44/participant)
  ○ 374 data pts = Javanese participants (~41/participant)

  ● Set of descriptive and interpretive codes applied to all data points

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Participant Overview

Bengali Wikipedia Contributors (n=10; F=1, M=9)

- Editing frequency:
  ○ daily (3)
  ○ weekly (4)
  ○ monthly (3)

- Time as editor:
  ○ ≤2 years (5); ‘new’
  ○ ≥3 years (5); ‘experienced’

Javanese Wikipedia Contributors (n=9; F=4, M=5)

- Editing frequency:
  ○ weekly (5)
  ○ monthly (3)
  ○ yearly (1)

- Time as editor:
  ○ ≤2 years (5); ‘new’
  ○ ≥3 years (4); ‘experienced’

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[15] https://quarry.wmflabs.org/; thanks to Amir Aharoni for assistance
[16] https://docs.google.com/document/d/1cPsydqtwhiIVGUG7_MOQRY5le_k7scDwX7VXYF5c/edit
* https://docs.google.com/spreadsheets/d/1-0Ltdf-C3UYFGLaz0WTf687zp7jDiom1Vw9mg1zogfQa/edit?usp=sharing
Results

Testing key assumptions
Overview of improvements
Additional themes
Key takeaways
Limitations / Next steps
Role of Mobile

“I don’t have any laptop, I just use my phone” [P9, Bengali]

Consistent with data from the World Advertising Research Center around general internet patterns, there are Wikipedia users who access the internet solely via smartphones.[17] We spoke with some of these users, including those who have used Content Translation (CX) on a mobile device - despite the fact that the CX interface is not currently responsive to device and screen size.

But, there are also new & experienced editors who prefer editing from laptops

At the same time, many users expressed a clear preference for editing from laptops. A few users expressed interest in Section Translation (SX), but concern it would only be available on mobile. The primary concerns about editing on mobile included:

1. Slow speed of typing
2. Errors while typing
3. Small screen size, but an editing task that is ‘complex’

Snackable chunks on mobile

Many participants - even those who strongly prefer to edit from laptops - described using mobile to make small edits. There is a subset of editing tasks that are more compatible with mobile devices.

RECOMMENDATIONS

1. Release SX as responsive web, as planned
2. Article/section recommendations should factor in content size/length based on user/device type
3. Leveraging correlations between topic genre and MT success would benefit mobile users who want to type less. In other words, recommendations should be sensitive to device type.

Sentences, Paragraphs, Sections, and Articles

Before moving into more detailed feedback, let's consider the relationship between different content sizes and how workflows correspond to these. Note how these units are built into designs and to what degree they correspond to existing user workflows.

<table>
<thead>
<tr>
<th>MEANINGFUL UNIT OF CONTENT PER DESIGN</th>
<th>OBSERVED UNITS IN USER WORKFLOWS [18]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Content Translation (CX)</strong></td>
<td><strong>ARTICLE</strong>&lt;br&gt;Used widely and highly valued because wikis are measured by article numbers and small wiki editors are very aware of current content gaps and the perceived benefits of having substantial Wikipedia content.</td>
</tr>
<tr>
<td>Targets only full articles, both for creation and revisions/edits (re-creation)</td>
<td></td>
</tr>
<tr>
<td><strong>(proposed)</strong>&lt;br&gt;<strong>Section Translation (SX)</strong></td>
<td><strong>SECTION</strong>&lt;br&gt;&quot;That’s still a good amount of info,&quot; in one participant’s words [P2].&lt;br&gt;Currently unavailable as a unit of translation in CX, but valued because it’s more easily accomplished and provides a sense of progress.</td>
</tr>
<tr>
<td>Targets sections of articles</td>
<td></td>
</tr>
<tr>
<td><strong>(proposed)</strong>&lt;br&gt;<strong>SX workflow on laptop/desktop</strong></td>
<td><strong>PARAGRAPH</strong>&lt;br&gt;When participants translate on their own, they move paragraph-by-paragraph. Paragraphs are very congruent with existing workflows.</td>
</tr>
<tr>
<td>Workflow moves paragraph-by-paragraph through individual sections</td>
<td></td>
</tr>
<tr>
<td><strong>(proposed)</strong>&lt;br&gt;<strong>SX workflow on mobile</strong></td>
<td><strong>SENTENCE</strong>&lt;br&gt;Participants vary in terms of whether the sentence corresponds to their current unit of translation (in their existing workflows). (more on next slides)</td>
</tr>
<tr>
<td>Workflow moves sentence-by-sentence through paragraphs/sections</td>
<td></td>
</tr>
</tbody>
</table>

[18] Generative research on current and potential editors' workflows is a rich area of investigation.
Sections

Initial reactions to translated sections were positive

Unprompted reactions to the section as a unit of translation came at varying times in the prototype and the idea was generally well met, as noted in a few of these sample quotes. It particularly appeals to users who make many smaller edits and aren’t creating new articles for multiple reasons, often time-related or due to the complexity of publishing an article in its entirety. Participants showed sensitivity to the fact that when translating from larger wikis, articles can be very long. Sometimes these concerns were around translation effort, and other times noted as problematic for reasons such as data availability and speed.

The unit of ‘article’ still has significance for small wiki editors

A few reasons were noted for preferring to translate full articles. Participants discussed the need of increasing article counts on their wiki due to the large content gaps and benefits of being a ‘larger’ wiki. Creation of a full article is also accompanied by a great sense of accomplishment (e.g., P14 Javanese).

Users are thinking a lot about collaboration across sections

Other participants discussed concerns about connections and consistency between sections and paragraphs. For example, how did the author of a previous section translate key topic vocabulary? (e.g., P3 Bengali; P11 Javanese) Most participants expressed these items as concerns; one participant cited such concerns as a reason they prefer not to co-create articles: you don’t have to worry about those other things.

Due to concerns about co-creation of articles with Section Translation, easy access to previously translated sections is particularly important to ensure coherent articles and consistent vocabulary choices. On top of these considerations exist variations in how wikis handle dialectal variation and speech levels. Javanese, for example, allows articles in any dialect, so long as there’s consistency within an article; the same wiki strongly encourages editors write in the lower formality register.
Sections, continued...

There is overlap between SX and existing user workflows

Users workflows already overlap with Section Translation flows around sections and paragraphs (small-mid size article chucks). Users are working at this unit of content largely due to reasons of ease.

It’s giving me to translate the article in each sentence-by-sentence, that’s actually what I’m doing in existing tools by myself one-by-one sentence because doing a sentence translation is easier than doing an entire article”  [P4, Bengali]

“For me, it’s ok, that’s what I do when I edit, I work section-by-section. When I work offline, I copy the whole article and then write the sections, which I later copy and paste into the browser”  [P17, Javanese]

But the sentence-by-sentence mobile flow could be overly-constraining for some users

Other participants reacted positively to the section-by-section nature of the workflow, but noted that being forced to proceed sentence-by-sentence could be overly-constraining because of how they paraphrase paragraphs. For example, multiple participants noted that they are working at the paragraph level when paraphrasing. Sentences may be combined or broken apart when moving from the source to target language. These users would not encounter pain points on the desktop version, but would find the mobile sentence-by-sentence workflow overly-constraining.

OPPORTUNITIES

1. Completion of both sections and articles can be a strong motivator. In addition to celebrating the completion of articles, articles close to a certain level of completion (e.g., ‘5 sections’, ‘same number of sections as other wikis on average’, etc) could be prioritized in recommendations to provide motivational nudges.

2. Co-creation of content is core to Wikipedia. However, for translation-purposes, a set of ‘collaboration’ features could address concerns around consistent language choices. For example, a user might flag a topic-specific vocabulary word of subsequent authors.

3. Implement analytics tracking for mobile and non-mobile use of SX, and collect post-release feedback to identify device-specific pain points. For example, the sentence-by-sentence mobile workflow could warrant further consideration based on additional feedback and initial adoption patterns.
Section Translation - **Workflow overview**

(1) Select section and review contents...

(2) Learn the process (the first time only)

(3) Preview & Improve Machine Translation

(4) Preview, Publish, Repeat...
Section Translation Workflows - Overview of Usability Issues

When and where did users encounter problems? How did the experience of new and experienced editors differ?

(graph shows number of observations, not unique issues)

Key Takeaways

1. For new and experienced editors, the bulk of usability issues arose on the ‘Review and Improve MT’ [08-09] screens.
2. Experienced editors experienced more issues than newer editors on the screen where the user takes their first action upon seeing the proposed MT.
3. Other ‘hotspots’ for usability problems included the screen when users review the contents of the source and target language article [04-05] and land on the final screen [12].
Usability Issues Across Prototype Versions

How did the number of usability issues vary across prototype version?

(graph shows number of observations, not unique issues)

Usability problems by prototype version (average problems per user)

Key Takeaways

1. Usability issues in the early part of the process [01-07] were rarely noted by the time we reached v3 of prototype.
2. Some issues arose immediately (e.g., 08), whereas other issues became more apparent with the observation of additional users (e.g., 05).
3. Issues associated with screens 05 ('Review contents') and 09 ('Edit MT') were reduced across prototypes, whereas some items for screen 08 ('Preview MT') and 12 remained by v3.
Comparing v1 and v3

Comparing where we started and finished for this project
(graph shows number of observations, not unique issues)

Key Takeaway
Number of usability issues reduced overall across v1 and v3 for all screens except screen 12
Tracking successful interactions and patterns

Because the absence of an observed usability problem ≠ a validated interaction. This graph shows observations of expected interactions and designs being used in expected/anticipated ways. In other words, examples of the designs and user expectations aligning.

Validated interactions by screen
Take 1

Highlights

Evaluate
Identify problems and opportunities; modify designs

Prototype
Updates per latest round of testing

Iterative Testing & Evaluation

Test
Task-based user feedback and observation
What we learned along the way...

Highlights of design changes after Round 1 of participants (tested in round 2)\[19\]

Interaction with the proposed machine translation (MT)

When a proposed MT was shown, participants tried to tap the white space, the text in the card, or the text in the article. Navigation options ("<", ">", "apply") were not readily understood, and source of MT was questioned.

**DESIGN CHANGES**

⇒ Created single expanded action area and introduced card jump, triggered by tapping the highlighted sentence in the source language

⇒ Navigation options integrated with "apply" at bottom, and ">" labeled as "skip" to avoid confusion

Accessing the source and target language “side-by-side”

Although it was present, 4 of the first 5 participants did not find the full source sentence. “It’s important to see the whole sentence, otherwise I cannot translate it and do it naturally” [P1, Bengali]

**DESIGN CHANGES**

⇒ Introduced more prominent label for the preview and modified controls to scroll and expand the section. This allows users to both focus on a specific part and give a quick peak to the whole sentence.

\[19\] https://docs.google.com/document/d/10JpqmZ-SB1BMo2tauE5czCvAYqC.8KD3myI5g_mU/edit#
What we learned along the way...

Highlights of design changes after Round 1 of participants (tested in round 2)

Publishing with confidence

Participants were hesitant to click “publish”. As our very first participant put it, “I don’t want to publish before I can see the preview”.

Initial validations

1. Participants viewed sections as meaningful units of translation
2. Clear desire for easier mobile device contributions
3. Insight into new editor challenges (including references and media)

Watchlist after round 1

1. Do (and when) is access to the full article (both languages) most important to participants?
2. ‘Quick tutorial’ skipped by many experienced editors; how do newer editors respond?
3. Follow-up with participants about next steps when landing on final screen.

DESIGN CHANGES

⇒ Replaced “publish” with a more generic done, and simplified the preview screen to avoid the warning message, making it more positive while still encouraging the user to review.
Take 2 Highlights

- Evaluate: Identify problems and opportunities; modify designs
- Prototype: Updates per latest round of testing
- Test: Task-based user feedback and observation

Round 2
Round 2 highlights

Highlights of design changes after Round 2 of participants

Keeping primary Calls-to-action (CTAs) top of mind (and view)

After selecting a section, users access a preview step where they can check the contents in the original and target languages. The ‘translate this section’ button presents discoverability issues. It may not be apparent as the next step, and some users don’t notice it when they scroll out of sight; other users (especially newer) are accustomed to searching for the pencil icon.

**DESIGN CHANGES**

⇒ Added pencil icon to make it easier to identify as a path to contribute with familiar icon. Introduced a sticky header when the call to action moves out of the viewport.

Access to the full article is important when selecting sections

In the process of selecting the section to translate, it may be useful to have the possibility to open the whole article in a new tab for users to explore on their own. Participants mentioned the importance of seeing how key words had been translated in previous sections, etc... (collaborative translation).

**DESIGN CHANGES**

⇒ Added a ‘more details’ section after the list of sections and ‘open in new window’ action in the section overview page, both which allow options to open source and target articles and inspect contents.
Round 2 highlights

Highlights of design changes after Round 2 of participants

The “I’m ready to start editing the section” problem

The first element selected to translate is the title of the section. In the initial workflow, once clicking ‘edit the translation’, the expectation is to make any changes to the title, then confirm and continue to the next step - the first sentence of the paragraph/section. When clicking the first ‘edit translation’, participants expected to translate the whole section, and got confused because only the source section title appeared.

“I want to translate the section, so that’s why I’m clicking here” [P13 clicks on ‘edit’ and doesn’t realize they’re being prompted only to edit the section title]

Framing the value prop around MT

The initial machine translation requires editing with different perceptions for each participant.

“I think the translation is 90% correct” [P6]
“It’s really bad [...] ok, not as bad as when I first read it; I’d say ¾ accurate” [P7]
P9 notes that MT is 50/50 correct/garbage

While the MT provides speed and vocabulary options (2 most commonly noted advantages of working with MT), participants find it laborious to work with MT output.

DESIGN CHANGES
⇒ Added ‘section title’ label above the content the user is editing to signal it’s only the title they’re translating. Used serif font for the editor when editing the section title to align with their usual look in articles.

DESIGN CHANGES
⇒ Introduced automatic message after saving the edits on the initial translation to congratulate the user on their work and show why it matters.
Take 3 Highlights

Evaluate
Identify problems and opportunities; modify designs

 Prototype
Updates per latest round of testing

Test
Task-based user feedback and observation

Round 3
Round 3 highlights
Results of the most recent round of participants

Revisiting the “I'm ready to start editing the section” problem
This item remained a watchlist item after round 2. Participants in the last round more quickly learned the design of translating the section title first, but still showed some minor confusion. [P17, 18, 19]

“There is no text here after ‘sejarah’ [clicks ‘edit’...] ah, they only do the translation for the heading itself” [P17, Javanese]

“But the paragraph doesn’t appear here, so it just confuses me, I gotta edit this paragraph, but it doesn’t work” [P18, Javanese]

A possible mismatch of workflows for some users
As noted previously, there is evidence that a sentence-by-sentence flow may be incongruent with some users workflows. These users generally paraphrase paragraphs and chunks of 2-3 sentences. This incongruence is specific to the mobile workflow; not desktop version.

“We usually go one paragraph by one paragraph” [P16, 17, Javanese]

“I think some people they will paraphrase the paragraph, not every sentence. Maybe in English it’s 3 sentences, but in another language we use only 1-2 sentences” [P19, Javanese]

DESIGN CHANGES
⇒ As this is the first editing/translating interaction the user has, ensuring it is positive and smooth will provide motivation and positive confirmation that section translation is an easy process.

Possible next steps for this item include exploring further design changes (alternative UI or workflow patterns) and/or monitoring closely upon release, directly collecting feedback from the initial adopters.
Post-task ratings

Overview

After participants finished interacting with the prototype, they immediately rated their response to 4 short statements and responded with a short phrase description for 1 question. The statements addressed article selection, overall ease of process, likelihood of adoption, and translation of sections. The final question asked participants to select a single phrase description of how the demo experience compared to their usual translation process.

These results are presented next, along with highlights of the conversations that followed the post-task ratings. This task was a productive springboard into the post-task interview and allowed a way for participants’ concerns and thoughts to naturally surface.

Post-task questions

1. How easy was it to select the article to translate?
2. How easy was the process you interacted with today?
3. How likely would you be to use this tool if it were fully developed?
4. How strongly do you agree/disagree with this statement: Creating individual sections was a meaningful activity and I didn’t feel the need to reference the entire article.
5. How did this experience compare to how you usually translate articles?
Ease of article selection and overall process

How easy was it to select an article to translate?

Overall, 52% of total respondents responded favorably, with 21% responding neutral. Bengali participants responded more favorably than Javanese participants. 70% of Bengali participants responded favorably, whereas only 33% of Javanese participants gave a favorable response.

In general, Javanese participants showed a greater affinity for laptop editing, whereas Bengali participants were more receptive to mobile options. Although it’s not possible to break down numbers by activity (editing vs. reading), this is consistent with how there are roughly 50% more mobile views on the Bengali Wikipedia than Javanese Wikipedia.

“This is my first time editing on phone, so it takes time to get used to. Usually we directly edit, but here there are some steps to go through”

[PI6, Javanese]

How easy was the process you interacted with today?

Across all participants, 53% of responses were positive, and 26% neutral. Similarly to the first post-task question, Bengali participants responded more favorably than Javanese participants, at 60% and 44%, respectively. This gap was narrower than for the first question.

Most follow-up responses around how the demo could have been easier were around usability issues and preferences noted in previous sections of this document. Again, Javanese participants showed more reluctance to editing on a mobile interface. For example, a common follow-up question from these participants was whether or not Section Translation would be accessible on their laptops and what that experience looked like.
**Likelihood of use**

**How likely would you be to use this tool if it were fully developed?**

Overall, 68% of participants responded favorably. Compared to the other post-task questions, there was less contrast between Bengali and Javanese participant answers.

![Likelihood of use chart]

Again, a noticeable difference between Javanese and Bengali participants was that the former frequently asked about the availability of a desktop version of Section Translation; this question never came up among Bengali participants.

“I want to see the whole section, even if it’s not the whole article”  
Participant wanted to scroll up/down to see the whole section as they translated. (Similarly noted by P11, P19, Javanese)  
[P7, Bengali]

Especially among Javanese participants, there was great interest in seeing what Section Translation looked like on desktop

“It was a mobile view, so I wasn’t really into the interface because it’s mobile view”  
Participant prefers editing on laptop.  
[P13, Javanese]

Other participants specifically called out the step-by-step workflow as the biggest positive for ease of use

“What made it easy for me was the step-by-step each sentence translating feature”  
[P4, Bengali]
Translation of sections & full article availability

How strongly do you agree/disagree: Creating individual sections was a meaningful activity and I didn’t feel the need to reference the entire article.

The Bengali - Javanese differences for this statement were most striking, with Javanese participants responding overwhelmingly neutral or in disagreement, Bengali participants showed more agreement with the statement.

Receptiveness to the section as a unit of translation is positive

“I think it’s more effective because it doesn’t even take more than 15 minutes to publish one section”  
[P18, Javanese]

“I don’t mind editing as a section, but sometimes it helps to have the option to see the full article because maybe if I’m just translating one section, if I don’t see the other sections, it may lose a bit of coherence [...] sometimes it may be a little confusing for the reader”  
[P7, Bengali]

Primary concerns are around article cohesiveness and flow

“I prefer seeing the full article, because when we just see one section, the connection between that section and another needs to be good”  
[P11, Javanese]

‘I didn’t feel the need to reference the entire article’ was the part of this statement that participants disagreed with. Few, if any, disagreed with the first part of the statement. Access to the full article and section was a theme that also came up in observed interactions.

Users want to edit sections but have lingering concerns about article cohesiveness as articles become even more collaborative (compared to current CX experience).
Improving the translation experiences

Overall, most participants rated the experience they had with the demo as easier than their current translation process. This was more pronounced among Bengali participants than Javanese participants. Javanese participants were more divided on whether their current process was easier than the demo.

What made Section Translation **easier** than the participants’ current processes?

1. References are added automatically
2. Source and target language are presented simultaneously
3. Mobile-friendly
   
   “It’s a good experience in doing the translation in this small screen...because I always keep my mobile with me and I can edit it anywhere I want”
4. Builds on how users are accustomed to translating
   
   “It’s giving me each sentence, that’s actually what I’m doing in existing tools by myself, one-by-one sentence...because it’s easier than doing an entire article translation”
5. Lower contribution threshold - translating a section requires a much lower commitment, and users get positive feedback
   
   “It feels good, you can see the result of your work”

What made Section Translation **more difficult** than the participants’ current processes?

1. Process (and steps) required learning a new process
   
   “Easier but I think it should have fewer steps”
2. Freedom to add unique content
   
   “I think we should be able to add a new line that’s not in the English article”
3. General unease editing on a phone
   
   “I don’t feel comfortable on phone”
4. Being required to work at the level of the sentence, not paragraph; some users like paraphrasing paragraphs
5. Lack of across-section collaboration features to ensure article cohesiveness and consistency across sections
Additional Themes

(1) Translation in the context of general editing
(2) Content Translation...it's more than the MT
(3) Social aspects of editing, motivation, and nudges
Translation in the context of general editing

Translation fulfills multiple roles

1. Translation as a ‘fall back’ activity
   Many participants reported that they used translation when they wanted to edit, but not face as high of a barrier to entry. With translation, they don’t feel the pressure to do as much research or think as hard about what to write.

2. Translation as learning
   Translation was even described by one participant as a way they might approach learning about a topic, whose contents were only available in another language.

Uncovering Content Translation value ... it's more than machine translation

Somewhat ironically, a few participants said that machine translation was the biggest problem with CX. Indeed MT limitations are (1) well-known and (2) one of the things most certain to change (for the better!) in the somewhat near future as technology improves.

There are a number of features of CX that highly appeal to users, aside from the translation itself. These are valuable to think about as CX will often get incorrectly equated with MT. For example, P11 referred to CX as ‘Yandex translator’ - by directly referencing the MT. Here are a few of the CX value props we observed appealing to users:

1. Automatic references
2. Interlinks
3. Side-by-side presentation for faster translating
4. Vocabulary suggestions
5. General reduction of cognitive load
The social side of editing and motivation

Social activities appear to help drive editing activity in the Bengali and Javanese wikis

While more research is needed, a social or community theme commonly arose in conversations with Javanese and Bengali editors. They referenced not only online communities and chats as a way of getting onboarding help, but frequently referenced in-person meetups, often monthly in the case of Javanese editors. These in-person gatherings came up as participants spoken not only about finding out about the wiki, but also as a way of getting important onboarding help from a mentor.

Opportunities to leverage what we learn about user motivation to provide nudges

Participants describe editing in order to shorten their bookmarked articles needing action. Most were not only sensitive to the content gap between their wiki and other larger wikis, but highly motivated to help close the gap. As we learn more about motivation among small wiki editors, we'll improve our ability to more successfully build in nudges to edit to translation interfaces and tools.

“...I believe that once I’m working on it...editing, I’m improving myself, I’m learning something, and I’m also helping others to learn”

[5, Bengali]

Motivation can be both altruistic and represent ways users are looking to improve themselves and benefit

“I try to create a lot of health-related articles [...] it’s not possible for people to get free clinical advice...maybe they can get some quick info to know if they want to go to the doctor”

[2, Bengali]

“Bengali Wikipedia doesn’t have many articles, so I like to edit”

[3, Bengali]

“English Wikipedia is richer than Bengali Wikipedia, so actually I want to contribute to Bengali Wikipedia to make it richer”

[4, Bengali]

“When we meet together, we’re more focused on editing”

[1, Javanese]
Key takeaways

Top 10 Key Takeaways

1. Users perceive value in being able to expand and create articles by focusing on specific sections. However, the unit of the article still has significant value because it’s how small wikis are measured and track growth.

2. The unit of the article section matches existing editor workflows well, but participants varied in whether they translated at the level of the sentence or at the level of the paragraph (opting to paraphrase). While the desktop version of Section Translation will allow both options, the mobile workflows only currently support the sentence-by-sentence workflow.

3. Completing a section provides an easier, faster feeling of satisfaction. By highlighting progress, and progress towards high quality articles, we can help motivate editors and help them build habits.

4. The bulk of the usability problems discovered and fixed in this project were in the part of the mobile flows when the user is previewing and improving the proposed machine translation (machine translation interaction).

5. Because Section Translation targets a subset of article content, it raises questions around how editors may collaborate and co-translate articles and content. There is an opportunity to explore ‘collaborative translation’ features, such as key concept vocabulary flagging and dialectal variation tracking, among other possibilities.

6. Users are sensitive to content gaps and motivated by closing these gaps and providing access to knowledge not available for monolingual readers in their regions/language communities. There is an opportunity to better surface the impact of translators’ work and progress through features such as translation views and thanks.

7. Current mobile-only users represent a growing segment and are underserved by current translation tools. At the same time, laptop editing is a strong preference among users with access to both types of devices. Section and article recommendations could be more successful by factoring in device type and more user editing patterns.

8. Device-specific adoption patterns of Section Translation are likely, as are device-specific feedback trends. Analytics and design research should collaborate to anticipate different ways of collecting initial feedback and understanding patterns of adoption, both by new and experienced translators.

9. The social side of contributing may take different forms depending on the cultural context. For example, Javanese editors frequently discussed the importance of this social component, which could be built into translation tools more overtly.

10. Although Content Translation gets equated with machine translation, users note many value props of the CX tool, including automatic references and interlinks as well as vocabulary suggestions and side-by-side presentation of the source and target text for faster translation. To what degree are these benefits currently socialized and promoted?
Next Steps

- Language team discussion of actionable insights identified in this deck to identify additional ideas and variations of proposals made here. This ideation session might be followed by a stack ranking of any such features based on user impact, development feasibility, and engineering resources required.

- Current work should be followed with analytics tracking and user feedback when Section Translation is officially released and live; possibilities include:
  - Targeted banner survey based on key events (successful publish, exit, etc)
  - Focused tracking set-up with assistance from analytics

- This was a primarily evaluative project targeting the Section Translation concept and designs. It has reinforced that additional generative research is needed on the multilingual editor experiences in small wikis. A planned follow-up project examines this topic, including the following topics:
  - SX/CX discovery and entry points
  - Small wiki multilingual editor workflows
  - Barriers to translation, CX use and general editing
Discussion

Questions, Comments, Feedback
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Product | Design Strategy | Language Team

Direct questions & comments to: easikingarmager@wmf.org