

Habble

Virtual Speaking Coach

Spec Status: Draft / Mentor Review / Team Review / **Complete**

Team Name: Habble

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Summary

Habble is a website that allows english learners to practice and improve their conversational skills with access to live responses and proper feedback via AI. Users will be able to practice their verbal skills at their own convenience.

Problem Background

Learning another language is a quintessential skill that allows people to expand not only their job opportunities and networks, but also their insights into other cultures. With English being the most spoken language in the world and one of the most difficult languages to master, the target customer will be non native English speakers seeking to expand their career prospects or cultural awareness. Candidates who possess knowledge of other languages gain a competitive advantage over other candidates by employers seeking to expand their customer base. Whether it be talking to customers, conversing with co-workers, or presenting to stakeholders, conversational skills affect all facets of work. And thanks to the pandemic, there has been a global push towards a virtual work environment, further increasing the ability to interact with people from around the world.

Numerous tools exist to facilitate learning English. People are able to read textbooks, watch online videos, or even practice with applications such as DuoLingo to learn proper vocabulary and grammar. But in order to learn to speak English, the best way is to converse with others. Out of our 20 users surveyed, 75% agree that the most difficult aspect in learning English is speaking with proper syntax, but 65% struggle to find a partner to converse with. According to a study by Kahn "Improving the speaking ability in English: The students' perspective", studying from textbooks give rise to memorizing only for the sake of passing tests as well as scolding and discouragement from teachers for not speaking correctly (Kahn, 2010). This equates to learning only for a better score, rather than a better livelihood. Taking live classes with an instructor or classmates with spoken feedback can be a great way to improve dialogue, but can be costly, intimidating, and difficult to tailor to one's own schedule.

When it comes to dialogue, having a live conversation with proper feedback is critical to learning the nuances of English. 70% of our users strongly value feedback to continuously improve their speaking skills, yet 50% don't receive any feedback at all. With an ever decreasing barrier of entry to computers, 65% of users would prefer to practice with software applications due to convenience, cost, and lack of judgment from others. How might we improve access to verbal conversations with proper feedback for those trying to learn and practice English so that they can improve their conversational speaking skills?

Goals

By creating an easily accessible method for users to practice their verbal communicating skills while receiving live audio feedback about their grammar, vocabulary, and syntax as if they were speaking to a native English speaker:

1. Allow users to converse naturally as if they were speaking with a partner
2. Provide instant feedback about the user's conversation to improve their speaking skills.
3. Provide a judgement free space from peers/teachers
4. Provide an easily accessible platform whenever and wherever based on the user's individual schedule
5. Provide a simple and intuitive way to interact with Habble

Research Questions

- Do you value learning another language?
- Why are you trying to learn a new language?
- What do you currently do to learn a new language?
- What is the hardest part of learning a new language?
- Do you struggle more with reading, writing, speaking?

- Why do you struggle with it?
- Would you rather learn from videos, books, a teacher, apps etc.?
- What is preventing you from spending more time to learn a language?
- How do you practice conversations?
- Is it easy to find partners to converse with?
- Do you value proper feedback about your errors?
- How do you get feedback about your mistakes?
- How comfortable are you practicing with peers?
 - How comfortable are you with being judged and critiqued by a partner? Does that hinder your ability to practice properly?

User Stories

1. As an English language learner, I want to choose the tone of the conversation (like professional or casual) so that I can practice speaking for specific situations
2. As an English language learner, I want to choose my level of difficulty so that I can practice at individual level.
3. As an English language learner, I want to choose when I speak so that I have control of my timing.
4. As an English language learner, I want Habble to reply to me both verbally and written so that I can also read the response.
5. As an English language learner, I want to be able to choose if the feedback is displayed only or both displayed and read aloud so that I can choose to focus on reading or listening to the comments.
6. As an English Language Learner, I want to be able to view my entire script when I am done so that I can visually learn from my conversation.
7. As an English language learner, I want suggestions of what I can say so that I can get the conversation started.
8. As an English language learner, I want to be able to create a login to track my progress
9. As an English language learner, I want to be able to save my conversation so that I can continue up where I left off.
10. As an English language learner, I want to be able to choose to hear my spoken input repeated back to me, but spoken by habble so that I can hear the proper way to pronounce the words.
11. As a native English speaker, I want to be able to say multiple sentences so that I can practice more complex conversations.
12. As an English language learner, I want to be able to hear a playback of myself speak so that I can reflect on my accent.

Proposed Solution

Habble will be a web based application that combines speech transcription/translation software and AI generated language models to provide a simple accessible website to practice spoken conversations. The AI software will evaluate conversations and provide responses and feedback with various improvements. The user will feel as if they were speaking to another person while receiving proper feedback on vocabulary, grammar, and syntax.

Scenarios

1. As an English language learner, I want to choose the tone of the conversation (like professional or casual) so that I can practice speaking for specific situations
 - a. Use predetermined avatars (~4) that have distinct personalities to guide the tone of the conversation
 - b. User will be able select which avatar they would like to converse with
 - c. The picture of the bot will be a stock photo
 - d. The picture of the user will be a blank stock
2. As an English language learner, I want to choose my level of difficulty so that I can practice at individual level.
 - a. This will blend in with the predetermined avatars
3. As an English language learner, I want to choose when I speak so that I have control of my timing.
 - a. Button for start/stop speaking. When pressed, the user can speak. When pressed again, input will be stopped.
 - b. When activated, button will turn into wave form icon to indicate the user is speaking
 - c. Button pressed down, animation
4. As an English language learner, I want Habble to reply to me both verbally and written so that I can also read the response.
 - a. Within the dialogue box, script shows up as a speech bubble, while simultaneously being read aloud by habble.
 - i. Chatbox is a hideaway menu
 - ii. Mobile: swipe up and down
 - iii. Web: slide left and right
 - iv. Chat button to also disable the menu
 - b. Loading ellipsis cue to signal that habble is thinking
5. As an English language learner, I want to be able to choose if the feedback is displayed only or both displayed and read aloud so that I can choose to focus on reading or listening to the comments.
 - a. Feedback of speech will be displayed as text in a different color. Maybe in *italics*
 - b. All feedback will be hidden with the script in the hideaway menu/chat history.
 - c. The feedback will appear directly under Habble's script

6. As an English Language Learner, I want to be able to view my entire script when I am done so that I can visually learn from my conversation.
7. As an English language learner, I want suggestions of what I can say so that I can get the conversation started.
 - a. If the user runs out of ideas of what to say, the bot will speak on a different topic.
8. As an English language learner, I want to be able to create a login to track my progress
 - a. Very low priority
9. As an English language learner, I want to be able to save my conversation so that I can continue where I left off.
 - a. Very low priority
10. As an English language learner, I want to be able to choose to hear my spoken input repeated back to me, but spoken by habble so that I can hear the proper way to pronounce the words.
 - a. A button to have habble speak the user's most recent sentence with the suggested corrections.
11. As a native English speaker, I want to be able to say multiple sentences so that I can practice more complex conversations.
 - a. Chatgpt is already capable of understanding multiple sentences at a time.
12. As an English language learner, I want to be able to hear a playback of myself speak so that I can reflect on my accent.
 - a. Only for the most recently spoken sentence.

Measuring Success

Co.Lab Success Metrics

We would consider the product successful if we create a functioning hi-fi MVP that is capable of listening to and understanding the user's dialogue, while providing verbal responses and written feedback to help the user improve upon their conversational skills.

Product Success Metrics

Some metrics we would consider would be:

1. Total number of conversations
 - a. Implement a way to track amount of times a user starts a conversation
 - b. weekly*
 - c. Non unique users

- d. Future metric: amount of unique user conversations initiated
- 2. Length of conversations
 - a. Internal Implementation of a way to track amount of time spent
 - b. Future metric: track amount of user inputs per conversation

Milestones & Timeline

Week 1: Define a clear problem	Ideate on the problem space and formulate a Problem statement as a team
Week 2: Expand on the problem space	PM: Draft a Spec for the problem space Des: Create initial userflows Dev: Submit a technical one-pager Everyone: Complete customer interviews and synthesize research data
Week 3: Prioritize features and Lo-Fi mockups	PM: Prioritize backlog, attend PM networking event Des: Create lo-fi mockups, attend Designer networking event Dev: Set up the project environment and Github repository
Week 4: Make progress on development and create hi-fis	PM: Recruit more users to test product Des: Create Hi-fi designs Dev: Deploy initial functioning prototype and share URL
Week 5: Demo product so far	PM: Maintaining organization, promptness, and feature backlogs Des: Work with dev to implement designs Dev: Record demo of progress so far, fix bugs and work on backlog All: complete midpoint survey
Week 6: Keep building	PM: Share 3 user feedback, descope as needed, attend PM networking event Des: synthesize user feedback and make improvements, attend Designer networking event Dev: Fix bugs and iterate as needed

Week 7: Submit Product Portfolio	All: complete product portfolio
Week 8: Prepare for Co.Lab Demo Day	All: Prepare for Co.Lab Demo day, submit feedback

Open Questions / Appendix

- Goal-setting part
 - Optional login to save data to measure progress/success
 - Requires login
- Real time transcription
 - AI will speak and show text
- Automatically reveal feedback or hide until revealed by the user
- Keep track of time left to reach their goal
- Beginner vs intermediate
 - No transcriptions for intermediate, to simulate pure conversation
- Ask questions in the beginning to determine type for conversation? For different reasons. Like for work, travel, converse with friends, for a date etc.
 - Tone: professional/formal vs casual
- Ask questions to determine difficulty of beginner vs intermediate
- **Extra goal: Come up with 2 user stories/features that native english speakers would like
- Do we need a way to edit the user's speech for when it is translated incorrectly?

Citation

Khan, N. A., & Ali, A. (2010). Improving the speaking ability in English: The students' perspective. *Procedia - Social and Behavioral Sciences*, 2(2), 3575–3579.

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