Advice Report for Dutch Learning Web App for Refugees

Abstract

This report gives helpful advice on how to build and improve a web app that helps refugees learn Dutch. The app uses AI to let people learn in their own language, helps them with pronunciation, and will later include sentence practice and fun games. The report looks at what is going well, what can be better, and gives clear tips to make the app easy to use, useful for many people, and ready to grow.

Objectives

- Support language acquisition for refugees in their native language context.

- Focus on pronunciation to improve speaking and listening skills in Dutch.

- Expand learning options with vocabulary, sentence-building, and interactive games.

- Provide advice on technology, user experience, and future-proof development practices.

Methodology

- **User-Centered Design**: We used empathy maps and did interviews with refugees to optimize the design.

- **Figma Prototype Testing**: We did user testing on our prototype in Figma to find out if we could improve things.

- **Team Brainstorming**: We brainstormed together to make the best web app.

- **Comparative Analysis**: We did review on existing language learning apps and the way refugees are learning Dutch.

Current Situation Analysis

Strengths

- You can learn from your own language.

- Clear focus on Dutch **pronunciation**, addressing a critical learning challenge.

- Simple and accessible interface via a web app format.

- A functional Figma prototype already built for user testing and iteration.

Weaknesses

- No actual speech recognition or pronunciation feedback mechanism yet implemented.

- Limited interactivity: current focus is mostly word-based; lacks gamification or sentence practice.

- No current mobile app or offline access, which could be useful for users with limited connectivity.

Opportunities

- Add speech recognition technology for pronunciation feedback.

- Add voiceovers from native Dutch speakers instead of AI for immersive learning.

Threats

- Potential language or cultural misunderstandings if content is not validated.

- Reliance on internet access may limit use in low-connectivity refugee camps.

- Competition from large platforms like Duolingo or Babbel (though they are less customized for refugee needs).

Advice and Recommendations

Overview

To ensure this web app becomes a valuable tool for the refugees, the following areas should be addressed: technology, user experience, development practices, and future scalability.

Specific Recommendations

- **Technology Stack**:

- **Performance**:

- **User Experience**:

  - Provide visual + audio feedback.

  - Include icons and illustrations to refugees who can't read.

- o Enable customization by letting users choose their language of instruction.

- **Development Practices**:
  - o Use Git for version control.

- **Team and Resources**:
  - o Get feedback from actual refugees regularly.

- **Budget and Financing**:

Implementation Plan

Phase	Actions	Timeline	Resources
1	Integrate multilingual UI and vocabulary learning	Week 1–2	Frontend dev, translator
2	Add pronunciation training (text-to-speech first)	Week 3–4	Backend dev, UX designer
3	Add speech recognition (feedback loop)	Week 5–6	Speech tech, dev team
4	Design and implement sentence learning module	Week 7–8	UX + content team
5	Add gamification and reward system	Week 9–10	Game designer, dev
6	Prepare PWA / Offline version + mobile support	Week 11–12	Dev, testers

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Risks and Mitigation Strategies

Risk	Mitigation
Lack of engagement	Add gamification early, gather user feedback
Language inaccuracies	Use community validation or local translators
Connectivity issues	Build offline access (PWA), reduce data usage

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Conclusion

This report gives advice on how to make the Dutch learning web app better, easier to use, and helpful for more people. The app lets refugees learn in their own language and helps them say Dutch words the right way. In the future, it can also include games and lessons with full sentences. If the team follows this advice, the app will be easier to use, work for more people, and help refugees learn Dutch more successfully.

Appendices

- Figma prototype:
  https://www.figma.com/proto/eqIB7zF0VYFbLoV2QlQKQE/DCODE?node-id=2511-9587&p=f&viewport=249%2C135%2C0.05&t=YRpNyGo7P92c3r0N-0&scaling=min-zoom&content-scaling=fixed&starting-point-node-id=2511%3A10311&show-proto-sidebar=1

- List of languages we implemented

🟢	**Arabic** العربية
🔴	**Turkish**
	Kurdish کوردی
	Kurdish سۆرانی
🔴	**Tigrinia**
🔵	**Somalian**
🔴	**Spanish**
🟢	**Urdu**
🔴	**Farsi**
🟢	**Bengali**
🔴	**Chinese**
🟡	**Amharic**
🔵	**Russian**
🟡	**Ukrainian**
🟠	**Punjabi (India)**
🟢	**Punjabi** پنجابی
🇬🇧	**English**

- To do list

Mascot logo 2D	Thursday 10/04/25 finished
Wireframes for the app design	Thursday 17/04/25 finished
Back-end	May finished
Deciding on the name	Wednesday 09/04/25 finished
Game design ideas	Monday start 14/04/25
Different poses for the cow	Not necessary