

AI Language Learning and Accessibility

with ChatGPT

Background and Introduction

Limited opportunities for verbal practice in traditional language classrooms significantly hinder second language acquisition.

To address this gap, we developed a customized AI-powered language learning assistant designed to provide personalized, interactive, and flexible language practice outside classroom settings, to reinforce the learning done in the classroom.

Technical Overview

The system is built on a custom ChatGPT framework, leveraging Open Educational Resources (OER) to generate accurate, contextually appropriate content.

The assistant employs advanced natural language processing, speech recognition, and synthesis technologies to support interactive, multi-modal learning experiences.

It also integrates PDF resources provided by instructors to ensure consistent and tailored educational content.

Case Studies

I. Inclusive Language Learning: Users with diverse accessibility requirements reported improved proficiency and increased confidence through personalized, multimodal interactions.

II. Enhanced Conversational Fluency: Learners significantly improved their conversational skills by practicing real-life scenarios, such as role-playing, outside traditional classroom settings.

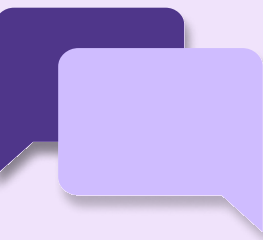
Can you tell me about the Key Features and Capabilities of using a Learning Chat Bot?

Of course! Here are some of the key features:



Accessibility

Supports multiple interaction modes, including text-based and audio interactions, to accommodate diverse learning styles and disabilities (e.g., dyslexia, hearing or vision impairments).



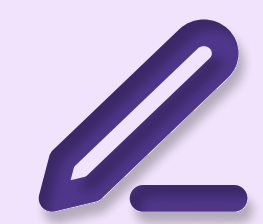
Conversational Practice

Enables realistic conversational practice in the language that the student is acquiring, directly addressing verbal communication skills.



Open-Educational Resources

Uses Open Educational Resources to reduce copyright concerns.



Personalized Learning

Offers pre-loaded, customizable questions at various competency levels, enhancing personalized learning experiences.

Adapts lessons based on individual proficiency levels, learning goals, and specific improvement areas through an initial questionnaire.



Role-Playing & Interactive Activities

Provides engaging scenarios and role-play options.

Would you like me to organize this into a summary sheet?



Ask anything

 Attach

 Search

 Voice

An AI-personalized learning experience through ChatGPT allows students to verbally practice their language learning.

Benefits and Challenges

Benefits

- 1. Efficiency:** *Facilitates extensive language practice to reduce instructor workload.*
- 2. Customization:** *Tailors lessons to specific proficiency levels and learning objectives.*
- 3. Versatility:** *Provides accessible, flexible, and engaging learning experiences which accommodate diverse learner needs.*

Challenges

- 1. Correctness:** *Maintaining accuracy and appropriateness in AI-generated responses.*
- 2. Ethics:** *Ensuring ethical use and critical assessment of AI-generated content by learners.*
- 3. Ease of Use:** *Balancing technological sophistication with usability for diverse learners.*
- 4. Equity:** *Free accounts have limited usage rates while paid tiers have extended rates*
- 5. Multi-Input:** *Users cannot view the written prompts and do audio input simultaneously.*
- 6. Evaluation:** *It is not possible to gather data on how students are interacting with the chatbot.*
- 7. Compliance:** *The tool is **not** FIPPA compliant, so students are encouraged not to share any personal information on the tool.*

We acknowledge that the land on which we gather, teach and learn is the traditional, ancestral, and unceded territory of the **xʷməθkʷəy̓əm** (Musqueam) People.



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