

Accessible Language Learning Platform – Epics and User Stories

This document summarizes the updated epics and user stories for the **Accessible Language Learning Platform for Learners with Learning Disabilities**. Each epic contains at least seven user stories, scoped to be feasible for a semester-long software engineering project while still demonstrating accessibility, intelligence, and social relevance.

EPIC 1: User Onboarding & Accessibility Profiling

Goal:

Enable inclusive onboarding with adaptive defaults and non-stigmatizing flows, so learners can set up accessibility support without feeling labelled or overwhelmed.

User Stories

1. Account creation

As a learner, I want to create an account with email and password so that my learning progress is saved and I can resume from where I stopped.

2. Optional challenge selection

As a learner, I want to optionally select learning challenges (such as dyslexia, ADHD, auditory processing, etc.) via simple checkboxes so that the platform can suggest helpful accessibility features.

3. Skip self-labelling

As a learner, I want a “**Skip this step**” option during challenge selection so that I am not forced to self-label if I am uncomfortable sharing this information.

4. Automatic accessibility defaults

As a learner, I want accessibility features to be automatically enabled based on my selection (for example, dyslexia → font and spacing changes; ADHD → focus mode) so that I don't have to configure everything manually.

5. Accessibility settings panel

As a learner, I want to modify my accessibility settings from a central settings panel at any time so that I can adjust my experience as I discover what works best.

6. Simple, low-cognitive onboarding

As a learner, I want onboarding screens to be simple, with few elements and clear progress indicators, so that I am not cognitively overwhelmed when starting for the first time.

7. Explanations for accessibility options

As a learner, I want clear explanations or tooltips for each accessibility feature (for example, “dyslexia-friendly font”, “focus mode”) so that I understand what each setting does before I enable it.

8. Cross-device preference sync

As a learner, I want my accessibility preferences to be synced across all devices when I log in so that my experience remains consistent wherever I use the platform.

9. Privacy and data reassurance

As a learner, I want to see simple privacy messages about how my learning and

accessibility data is stored and used so that I feel safe sharing my information.

EPIC 2: Attention Regulation & Focus-Oriented Learning

Goal:

Support learners with attention regulation challenges (e.g., ADHD) by reducing cognitive overload and enabling short, resumable, distraction-free learning sessions.

User Stories

1. Focus mode toggle

As a learner with ADHD, I want a **“Focus Mode”** toggle that hides navigation bars, side panels, and non-essential elements so that I see only the current task and am less distracted.

2. Short lesson segments

As a learner who loses focus quickly, I want lessons divided into short, single-objective segments (about 3–5 minutes) so that I can complete tasks before my attention drops.

3. Resume from last position

As a learner whose attention is often interrupted, I want the system to remember exactly which activity and step I was on so that I can resume without re-orienting myself.

4. Show only current step

As a learner who is easily overwhelmed, I want the interface to show only the current step or question with simple “Previous” and “Next” buttons so that I can focus on one thing at a time.

5. Time estimates per segment

As a learner who struggles to estimate time and effort, I want to see short, realistic time estimates (e.g., “2 minutes”) before each segment so that I can mentally prepare and commit.

6. Repetition without penalty

As a learner who needs repeated exposure, I want a clear **“Repeat this step”** button that lets me redo activities without penalties or negative feedback so that repetition feels supportive.

7. Effort-based encouragement

As a learner sensitive to pressure, I want encouragement messages that focus on effort and engagement (e.g., “Nice focus!”) instead of speed or accuracy so that I feel motivated rather than judged.

8. Configurable break reminders

As a learner who struggles with rigid schedules, I want optional, configurable break reminders after a chosen duration so that I can manage my attention and fatigue better.

9. Session summary

As a learner, I want a brief session summary (completed segments, time spent, suggestions) when I finish or exit a session so that I know what I achieved and what to do next.

EPIC 3: Reading, Writing & Text Comprehension Support

Goal:

Reduce reading and writing barriers by providing adaptive text presentation, multimodal support, and gentle feedback to build comprehension and confidence.

User Stories

1. **Dyslexia-friendly typography**

As a learner with dyslexia, I want dyslexia-friendly fonts (such as OpenDyslexic or clear sans-serif fonts) with adjustable font size, line spacing, and letter spacing so that text is easier to read.

2. **Text-to-speech for all content**

As a learner who understands spoken language better than written text, I want “Listen” buttons for all lesson text using text-to-speech so that I can comprehend content through audio.

3. **Simplified text versions**

As a learner who is overwhelmed by complex sentences, I want a toggle for simplified versions of lesson text so that I can focus on meaning instead of decoding difficulty.

4. **Supportive writing feedback**

As a learner lacking confidence in writing, I want feedback on my written responses that emphasizes understanding and improvement (e.g., suggestions and tips) rather than only marking errors.

5. **Word-level highlighting during TTS**

As a learner building sound-letter mapping, I want each word to be highlighted as it is read aloud so that I can connect pronunciation with its written form.

6. **High-contrast themes**

As a learner with visual or cognitive fatigue, I want high-contrast color themes that I can toggle globally so that text remains legible and comfortable for long periods.

7. **Chunked reading layout**

As a learner who gets overwhelmed by long paragraphs, I want text automatically chunked into shorter paragraphs and sections with clear headings so that I can process content in manageable pieces.

8. **Phonetic hints for spelling**

As a learner who makes spelling errors due to sound-letter confusion, I want phonetic hints (e.g., simplified sound-based representations) for common difficult words so that I can learn correct spellings gradually.

9. **Reading progress analytics**

As a learner, I want simple reading analytics (e.g., time spent reading, number of completed reading tasks) so that I can see my improvement and feel encouraged.

EPIC 4: Auditory Comprehension & Speech Interaction Support

Goal:

Improve understanding of spoken language and pronunciation through controlled audio delivery, visual reinforcement, and low-pressure speech practice.

User Stories

1. Captions for all audio

As a learner with auditory processing difficulties, I want captions or transcripts for all lesson audio so that I can read along and reinforce understanding.

2. Audio speed and replay control

As a learner who struggles with fast speech, I want to change playback speed (e.g., 0.5x to 2x) and replay difficult segments easily so that I can listen at my own pace.

3. Short audio segments

As a learner overwhelmed by long instructions, I want audio content divided into short, clear segments (e.g., 10–20 seconds) so that I can process one unit at a time.

4. Speech recording with transcription

As a learner practicing speech, I want to record my responses and see an automatic transcription (speech-to-text) so that I can compare what I said with the expected answer.

5. Combined audio + text presentation

As a learner who benefits from multiple inputs, I want audio, text, and captions presented together in one view so that listening and reading support each other.

6. Clear, neutral voices

As a learner sensitive to distorted or stylized audio, I want TTS voices that are clear and neutral without background effects so that they do not interfere with comprehension.

7. Basic pronunciation result

As a learner anxious about speaking, I want simple pass/fail or “try again” feedback on my pronunciation attempts instead of complex technical scores so that I can focus on gradual improvement.

8. Visual mouth guides

As a learner who benefits from visual cues, I want simple mouth diagrams or icons for difficult sounds so that I can understand how to position my lips and tongue.

9. Speech practice history

As a learner, I want a history of my speech practice attempts with timestamps and simple progress indicators so that I can see how often I am practicing.

EPIC 5: Cloud, NLP & System Intelligence

Goal:

Provide scalable, adaptive, and intelligent support using cloud services for speech, text, and personalized learning.

User Stories

1. Speech-to-text conversion

As a learner, I want my recorded speech to be converted to text using a cloud speech-to-text service so that the system can analyze my spoken responses.

2. Text-to-speech for lesson content

As a learner, I want lesson content read aloud using text-to-speech so that I can listen to lessons in addition to reading them.

3. Basic pronunciation feedback

As a learner, I want feedback comparing my speech (transcription) with the expected sentence, highlighting missing or incorrect words so that I know where to improve.

4. Rule-based difficulty adjustment

As a learner, I want lesson difficulty to change based on my performance (for example, more hints and simpler tasks after repeated errors) so that learning feels achievable.

5. Secure progress storage

As a learner, I want my scores, completed lessons, and preferences stored securely in the cloud so that I can see my progress over time.

6. Responsive performance

As a learner, I want the system to respond quickly (e.g., speech transcription within a few seconds) so that I am not left waiting after every attempt.

7. Automatic data backup

As a learner, I want my learning data to be automatically backed up so that I don't lose my progress if I switch devices or reconnect later.

8. Simplified AI feedback messages

As a learner, I want AI-generated feedback to be simplified into clear, non-technical language so that I can understand what to improve without confusion.

9. Personalized recommendations

As a learner, I want the system to recommend the next lesson or activity based on my weak areas and recent mistakes so that my learning path feels personalized.

These epics and user stories form a complete, consistent requirements document for your accessible language learning platform and can be used directly in your SRS, design documentation, and sprint planning.