

# 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.

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## 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.

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## 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.

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## 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.

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## 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.

### Partially done - 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.

### partially done - 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.

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## 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.

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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.